SOUTHWALL TECHNOLOGIES INC /DE/ Form 10-K March 31, 2003

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# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# **FORM 10-K**

(Mark One)

ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2002

or

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from	to	
Commission fi	le number 0-15930	

# SOUTHWALL TECHNOLOGIES INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

94-2551470

(I.R.S. Employer Identification Number)

1029 Corporation Way, Palo Alto, California

(Address of principal executive offices)

94303

(Zip Code)

Registrant's telephone number, including area code: (650) 962-9111

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

**Common Stock** 

(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  $\circ$  No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this

Form 10-K or any amendment to this Form 10-K. o

The approximate aggregate market value of the Common Stock held by non-affiliates of the registrant on March 27, 2003 (based upon the closing sales price of the Common Stock on the Nasdaq National Market System on such date) was \$13,529,657. For purposes of this disclosure, Common Stock held by stockholders whose ownership exceeds five percent of the Common Stock outstanding as of March 27, 2003, and Common Stock held by officers and directors of the registrant has been excluded in that such persons may be deemed to be "affiliates" as that term is defined in the rules and regulations promulgated under the Securities Act of 1933, as amended. This determination is not necessarily conclusive.

Indicate by check mark whether the registrant is an accelerated filer (as defined by Rule 12b-2 of the Securities Exchange Act of 1934). Yes o No ý

The number of shares of the registrant's Common Stock outstanding on March 27, 2003 was 12,527,460.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed with the Securities and Exchange Commission in connection with the registrant's 2003 Annual Meeting of Stockholders (the "Proxy Statement") are incorporated by reference in Part III of this Form 10-K. With the exception of the portions of the Proxy Statement expressly incorporated into this Form 10-K by reference, the Proxy Statement shall not be deemed filed as part of this Form 10-K.

## SOUTHWALL TECHNOLOGIES INC.

## 2002 ANNUAL REPORT ON FORM 10-K

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As used in this report, the terms "we," "us," "our," "Southwall" and the "Company" mean Southwall Technologies Inc. and its subsidiaries, unless the context indicates another meaning.

XIR, XUV, Triangle Design, Superglass, Heat Mirror, California Series, Solis, ETCH-A-FLEX, Huper Optik and Southwall are registered trademarks of Southwall. V-KOOL is a registered trademark of Globamatrix Holdings Pte. Ltd. All other trade names and trademarks referred to in this prospectus are the property of their respective owners.

This report contains forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995, that are subject to a number of risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. These statements are identified by terminology such as "may," "will," "could," "should," "expects," "plans," "intends," "seeks," "anticipates," "believes," "estimates," "potential," or "continue," or the negative of such terms or other

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comparable terminology, although not all forward-looking statements contain these identifying words. Forward-looking statements are only predictions and include statements relating to:

our strategy, future operations and financial plans, including, without limitation, our plans to install and commercially produce products on new machines;

future applications of thin film coating technologies and our development of new products;

our expectations with respect to future grants, investment allowances and bank guarantees from the Saxony government;

our projected need for additional borrowings and future liquidity;

statements about the future size of markets;

pending and threatened litigation and its outcome;

our competition; and

our projected capital expenditures.

You should not place undue reliance on our forward-looking statements. Actual events or results may differ materially. In evaluating these statements, you should specifically consider various factors, including the risks outlined under "Risk Factors." These factors may cause our actual results to differ materially from any forward-looking statement. Although we believe the expectations reflected in our forward-looking statements are reasonable as of the date they are being made, we cannot guarantee our future results, levels of activity, performance, or achievements. Moreover, neither we nor any other person assumes responsibility for the future accuracy and completeness of these forward-looking statements.

#### PART I

#### **ITEM 1. BUSINESS**

#### Overview

We are a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. We have developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products, and conserve energy in architectural products. Our products consist of transparent solar-control films for automotive glass; anti-reflective films for computer screens, including flat panel and plasma displays; transparent conductive films for use in touch screen and liquid crystal displays; energy control films for architectural glass; and various other coatings. Based upon our production capacity, we believe we are one of the world's largest producers of sputter-coated, flexible thin film products.

We maintain a website with the address of www.southwall.com. We are not including the information contained on our website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission. In addition, we intend to disclose on our website any amendments to, or waivers from, our code of business conduct and ethics that are required to be publicly disclosed pursuant to the rules of the Securities and Exchange Commission.

## **Industry Background**

Large area, single layer, thin film coatings were developed in the early 1960s using vacuum evaporation, a less precise precursor to sputter coating. As a result of technological developments in the early 1970s, multi-layer coatings for large substrates became possible. Sputtering based on these developments is used today in a large number of applications in which high quality, uniform coatings need to be deposited on large surfaces or on many smaller surfaces simultaneously. Examples of sputter coating include the deposition of various metal and metal oxide layers on wafers in the semiconductor and hard disk industries, and optical coatings on transparent surfaces in the automotive glass, electronic display, and architectural markets.

Thin film coatings are used in a wide variety of surface applications to control the transmission and reflection of light and the flow of energy. Thin film coatings can modify the transmission and reflection of both visible and non-visible light, such as infrared and ultra-violet light, to enhance the performance and characteristics of the surface.

Thin film process technologies

The three most common methods for commercially producing thin film coatings on glass and flexible substrates are:

Wet coating. The wet coating process generally involves depositing a thin layer of material onto glass by a spin coating technique or onto a flexible substrate, or film, by a number of different methods. In the case of spin coating, which is sometimes used for computer display tubes, or CDTs, a small amount of liquid is placed at the center of a spinning CDT, forcing the liquid from the center towards the outside edge. Once a uniform thin layer of liquid is thus applied, the layer is bake-dried at a moderate temperature. In the case of film coating, a thin layer of liquid material is applied to the surface of plastic film and then dried by means of thermal or direct radiation. This process is generally less expensive than sputter-coating, but generally yields coatings with lower quality, optical and mechanical characteristics.

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Direct coating onto glass substrates. Direct coating onto glass can be accomplished by sputtering and by pyrolytic means. Direct-to-glass sputtering is a mature, well-known process for applying thin film coatings to glass. This technology is commonly used to manufacture products that conserve energy in buildings. Pyrolytic coatings are formed directly on the glass as it is produced on a float line. The process uses the heat of the molten glass to make a single layer, metal oxide coating from a solution sprayed onto the glass. Because this technique produces only single layer coatings, the solar

performance is limited.

Sputter coating onto flexible film substrates. The sputter coating process, which is the process we primarily employ, deposits a thin layer of materials, generally metals and metal oxides, onto the surface of a flexible substrate, usually polyester. The substrate can then be either laminated in or applied to glass or suspended between panes of glass. The substrate can be applied to both flat glass and curved glass, such as is used in automotive applications.

The thin film coating process begins with a clear base substrate that is typically glass or a flexible polyester film. When using a flexible film, a hard coat is sometimes applied to prevent undesired interactions between the materials to be deposited and the base substrate, as well as improve the mechanical properties of the coating. Various materials are then deposited in very thin layers on the substrate. The process of building up the various layers results in a "stack." The stack consists of layers of materials that produce the desired optical and performance effects. In some applications, primarily with flexible films, adhesive or protective layers may be applied to the substrate to improve the subsequent application of the product onto a rigid substrate, such as glass.

#### **Our Markets**

Primary markets for the thin film coated substrates that we manufacture are the automotive glass, electronic display and the architectural markets. Advances in manufacturing processes coupled with improved thin film deposition technologies in the automotive glass and electronic display markets are reducing production costs, allowing thin film coated substrates to more cost-effectively address these markets.

#### Automotive glass products

Thin film coated substrates we sell in this market reflect infrared heat. These coatings allow carmakers to use more glass and increase energy efficiency by reducing the demand on a vehicle's air conditioning system, as well as improving thermal comfort in the vehicle. Thin film coated substrates in this market are sold primarily to original equipment manufacturers, or OEMs, that produce glass for sale to European manufacturers of new cars and trucks for worldwide distribution. These substrates are also sold to independent glass manufacturers as part of a large aftermarket for replacement automobile glass. In addition, thin film coated substrates for retrofit application to the inside surface of a vehicle window are sold through resellers who install the film.

Nearly all automotive glass in the world uses some degree of tint or coloration to absorb light and solar energy, thus reducing solar transmission into the vehicle. This tint is usually created through the mixing of inorganic metals and metal oxides into the glass as the glass is produced. The cost of adding these materials is very low, but the solar control benefit is limited by the fact that solar energy is absorbed in the glass, causing the glass to heat up which eventually increases the temperature of the inside of the automobile. We began production for this market in 1996.

## Electronic display products

Thin film coated substrates we sell in this market primarily reduce glare caused by reflection from glass surfaces, improve contrast and image quality, and reduce energy emission from and build up of static charge on the computer display screen. Our thin film coated substrates are used in cathode ray

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tubes, or CRTs, liquid crystal and plasma displays, and in applications such as touch screens, wireless telephones and automated teller machines. In 2002, we started shipping production quantities and sizes of a new anti-reflective film specifically designed for the liquid crystal display and plasma display panel markets. Thin film coated substrates in this market are generally sold to OEMs, which supply the film to flat screens.

We began commercial production for the electronic display market in 1996.

## Architectural products

Thin film coated substrates we sell in this market are primarily used to control the transmission of heat through window glass, as well as to limit ultra-violet light damage. Window glass is a poor thermal barrier. The primary source of heat build-up and loss in buildings is through the glass windows. Our original business, in which we began volume production in 1979, focused on this market.

#### **Technology**

In a sputtering process, a solid target and a substrate are placed in a vacuum chamber. By adding a small amount of process gas, typically argon, to the chamber and negatively charging the target, the process gas is ionized and a plasma discharge is formed. The positively charged gas ions strike the solid target with enough force to eject atoms from its surface. The ejected target atoms condense on the substrate and a thin film coating is constructed atom by atom. By placing a magnet behind the target, the electrons in the ionized plasma are confined to a specific region on the target enhancing the creation of ionized gas atoms and increasing the efficiency of the target atom ejection process. By using different targets as the substrate moves through the vacuum chamber, we can create a multi-layered coating, or stack.

If the process gas is inert, such as argon, the coating will have the same composition as the target material. As an example, many of our coatings have a layer of silver in the stack. However, by adding a reactive gas such as oxygen or nitrogen to the process, it is possible to create metal oxide or metal nitride coatings from a metal target.

The advantages of our sputtering process include the high density of the formed coatings and the high degree of uniformity control that we can achieve.

While predominantly relying on sputter coating technology, we are actively developing new technologies and processes such as PECVD. The PECVD technique uses a gas rather than a solid target as the base material for the coating. The gas in the deposition chamber is excited into a very reactive plasma, using the energy from a microwave source mounted onto the chamber. A chemical reaction involving the excitement of gas molecules at the surface of the substrate then creates the thin film coating. In the past, this technique lacked the uniformity control necessary to make it useful for optical coatings, where uniformities of a few percent are required. New developments in this area have improved PECVD uniformity levels to the point that PECVD can now be explored for optical coatings. We plan to employ our new PECVD technology in one of our production machines (PM 7) in Tempe. However, since this system embodies a completely new technology, we expect and have budgeted for a much slower start-up of this system compared to our standard sputter coating systems. This system is also limited by its ability to process only rolls which are two feet wide or less.

In addition to the vacuum-based deposition techniques described above, we have developed the ability to deposit wet chemistry based coatings under atmospheric conditions. In this technique, the active component of the thin film is in a solution and is applied to the substrate by rotating cylinder. After applying the wet film, the substrate is heated, evaporating the solvent and leaving a thin film of the active component behind. In Tempe, this technology is used to apply an anti-smudge coating on top of our sputtered anti-reflective films. The function of the anti-smudge coating is to make the final

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product more resistant to fingerprints and to make it easier to clean. Other coatings can be applied through this technique as well, and programs are in place to develop adhesive coatings and other coatings that enhance the mechanical durability of our products.

We rely extensively upon trade secrets and know-how to develop and maintain our competitive position. We have 29 patents and seven patent applications pending in the United States and 39 patents and more than 50 patent applications pending outside the United States that cover materials, processes, products and production equipment. Of our existing patents, two U.S. patents and three international patents will expire in the next three years. We also seek to avoid disclosure of our know-how and trade secrets through a number of means, including requiring those persons with access to our proprietary information to execute nondisclosure agreements with us. We consider our proprietary technology, as well as its patent protection, to be an important factor in our business.

## **Products**

The following table describes the markets into which we sell our products, the applications of our products, our product families, key features of our various products and representative customers.

MARKET	KET APPLICATION PI		KEY FEATURES	REPRESENTATIVE CUSTOMERS
Automotive glass	Windscreens, side windows, and back windows	Infrared reflective (XIR 70 and XIR 75)	Transmits 70% or 75% visible light Reflects 85% of infrared heat energy	Saint Gobain Sekurit Pilkington PLC

MARKET	APPLICATION	FILM PRODUCTS	KEY FEATURES	REPRESENTATIVE CUSTOMERS
	After-market installation	Solis/V-KOOL	Transmits 70% or 75% visible light	Globamatrix
		Huper Optik	Reflects 85% of infrared heat energy	Huper Optik
Electronic display	Flat screen monitors and TVs	Anti-reflective absorbing (ARA)	Pigmented film 8X reduction in light reflection High picture quality	Mitsubishi Electric Polar Vision
	Liquid crystal display (LCD) screens LCD reflector for lighting sources	Anti-reflective clear (ARC) Silver reflecting	Clear anti-reflective product	Polar Vision
			95% Reflecting Light-weight mirror	Mitsui Chemicals Marubeni
	Plasma display panels (PDP)	Infrared reflective (XIR 70) Anti-reflective clear (ARC)	Clear and Conductive Clear infrared blocking	Mitsui Chemicals
Architectural	New and retrofit residential and commercial windows and doors	Suspended Heat Mirror	Cool in summer Warm in winter UV blocking Noise reducing	Kensington Hankuk Edge Seal
	Commercial buildings	Laminated (XIR70 HT)	Infrared reflecting UV blocking Cool in summer Noise reducing	Gulf Glass Industries Cristales Curvados
	After-market installation	Solis/V-KOOL Huper Optik	Infrared reflecting UV blocking Cool in summer Noise reducing	Globamatrix Huper Optik
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## Automotive glass products

Direct-to-glass sputtering for automotive windshields has not historically been well developed because of the need to bend the glass before it can be coated and then applied to an automobile. Coating flat glass and then bending it to match complex automobile designs is less difficult. Therefore, coating flat glass and then bending it is the method currently used by most glass producers. Sputter coated flexible substrates that we produce can be applied to windshields with different curvatures and incorporated into most in-line windshield production process used by glass companies today. Our net revenues from sales of automotive glass products were \$20.2 million in 2000, \$37.4 million in 2001 and \$25.7 million in 2002.

*Infrared reflective films*. Our XIR coated solar-control films are transparent, sputter-coated, polyester films used in laminated glass for automobiles. The films have a patented, transparent solar-control coating on one side and a proprietary adhesion-promotion layer on the other.

Applied solar-control films. Our Solis/V-KOOL and Huper Optik solar-control films for aftermarket installation for automotive glass utilizes our XIR and other patented coating technologies. The product is applied to existing windows and has a protective hard coat over the patented, transparent solar-control coating on one side and the adhesion layer on the other. Solis/V-KOOL and Huper Optik are sold through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

## Electronic display products

Our sputter coated substrates offer the high optical quality necessary for higher resolution electronic displays. Our substrates can be easily cut into different shapes and sizes, providing increased flexibility for our customers. In addition, our products can effectively reduce undesirable or potentially harmful emissions without affecting the resolution of the display. Our net revenues from sales of electronic display products were \$47.7 million in 2000, \$29.7 million in 2001 and \$26.6 million in 2002.

Anti-reflective films. Our anti-reflective films minimize reflection of visible light and electromagnetic radiation while allowing high picture quality. Our anti-reflective absorbing, or ARA, films are pigmented and used in flat screen monitors. Our anti-reflective clear, or ARC, films are clear and used in LCD screens.

Silver reflecting films. Our light-weight silver reflecting film is a mirror-like product used as a reflector in LCD backlit screens.

Transparent conductors. XIR films are used in the plasma display panel markets to block near-infrared and electromagnetic radiation from the display. Our ALTAIR-M films are used in products such as touch panels, liquid crystal displays and electroluminescent displays where the circuit or conductive material must not obscure the screen. ALTAIR films are also used in electromagnetic interference shielding, infrared rejection and electrostatic discharge packaging applications.

Architectural products Windows containing our Heat Mirror product have approximately two to five times the insulating capacity of conventional double-pane windows. They also provide high levels of solar shading while transmitting a high percentage of visible light. In addition, our products also offer ultra-violet protection and reduce noise and condensation build-up. Architectural glass manufacturers are looking for ways to improve insulation without adding numerous panes of glass that are impractical to lift and cannot be supported by a structure's frame. This drives the need for thin film inside the glass that is a high performance insulator at a fraction of the weight of the glass. Our net revenues from sales of architectural products were \$17.4 million in 2000, \$15.9 million in 2001 and \$16.5 million in 2002.

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Suspended Heat Mirror films. Our Heat Mirror films provide a variety of shading and insulating properties as well as ultra-violet damage protection. Windows are the primary areas of heat loss in winter and a major source of heat gain in summer. Heat Mirror films, which are sold in rolls to window manufacturers, are suspended in the airspace between sealed double-pane residential and commercial windows. We have developed proprietary film-mounting technology, which we license to window fabricators. There are a total of 66 Heat Mirror licenses in approximately 20 countries. We currently offer 12 different Heat Mirror films for architectural applications.

Laminated films. Our thin film coated flexible substrates are laminated between panes of glass and perform similarly to our XIR solar control films for automobiles. This film is currently sold primarily to fabricators of laminated window glass for large commercial building applications such as airports, office buildings, and museums. We have sold a total of 20 licenses for this architectural film product in approximately 15 countries.

Applied solar-control films. Our XIR coatings for architectural applications are Solis/V-KOOL and Huper Optik solar-control films for the architectural glass aftermarket. This product is applied to existing windows and has a protective hard coat over the patented, transparent solar-control coating on one side and an adhesion layer on the other. Solis/V-KOOL and Huper Optik are sold through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

# Sales and Marketing

## Distribution channels

We sell our automobile and electronic display products primarily to OEMs in North America, Europe, the Middle East and Asia, principally through our own direct sales force and sales representatives. Mitsui Chemicals is our licensee and distributor for certain of our electronic products in Japan and Taiwan. Mitsui Chemicals also has exclusive manufacturing rights for certain of our electronic products in Japan and Taiwan using our proprietary sputtering technology.

We supply our Heat Mirror architectural products to approximately 50 insulated glass and window fabricators and distributors worldwide. Our proprietary mounting technology is licensed to our customers, who use special equipment for the manufacture of Heat Mirror-equipped windows. Our field services organization assists customers in the manufacture of Heat Mirror-equipped windows. In North America, we also promote our Heat Mirror product line through approximately 30 regionally based architectural glass sales representatives.

We sell our Solis/V-KOOL and Huper Optik aftermarket products for the automotive glass and architectural markets through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

International revenues amounted to approximately 85%, 87% and 85% of our net revenues during 2000, 2001 and 2002, respectively. The principal foreign markets for our products in 2002 were Japan (\$24.9 million), and France (\$12.9 million).

#### Warranties

We offer warranties on our products which we believe are competitive for the markets in which those products are sold. The nature and extent of these warranties depend on the product, the market, and in some cases the customer being served. We carry liability insurance. However, our insurance does not cover warranty claims and there can be no assurance that our insurance will be sufficient to cover all product liability claims in the future or that the costs of this insurance or the related deductibles will not increase materially.

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#### Customers

Our customers include many of the world's leading OEMs in the automotive glass and electronic display markets. Our customers in the OEM automotive glass market include Saint Gobain Sekurit and Pilkington PLC, which sell glass to automobile manufacturers including DaimlerChrysler, Renault, Audi, BMW, Volvo, Volkswagen and the PSA Group (which includes Peugot and Citroen). We currently have supply agreements with Saint Gobain Sekurit and Pilkington, which run through December 2003 and 2004, respectively, and may be renewed by mutual consent of the parties. Our failure to produce the required amounts of products under these agreements could result in price penalties on future sales under the agreements.

Our customers in the electronic display market include Mitsubishi Electric Corporation and Mitsui Chemicals. Our customers in 2002 in the architectural market included approximately 60 fabricators of insulated glass units and laminated glass for architectural applications.

Our aftermarket applied film in the automotive and architectural glass markets is sold pursuant to an exclusive worldwide license in our distribution agreement with Globamatrix. Under the Agreement, which is scheduled to expire in 2011, Globamatrix agreed to purchase an aggregate of approximately \$200.0 million of our products during the term of the agreement subject to volume and quality standards. Our failure to produce required amounts of product under the agreement will result in penalties under which we would be required to reimburse Globamatrix for the full cost of any product not timely delivered. In the 2002, Globamatrix' purchases were approximately \$0.2 million less than its minimum commitment. We forgave the shortfall as an accommodation to a long-standing customer.

A small number of customers have accounted for a substantial portion of our revenues. Our ten largest customers accounted for approximately 85%, 85% and 84% of our net sales in, 2000, 2001 and 2002, respectively. During 2002, Saint Gobain Sekurit, Mitsubishi, Mitsui Chemicals and Pilkington PLC accounted for 18.7%, 18.0%, 15.7% and 10.8%, respectively, of our net sales. During 2001, Pilkington, Mitsubishi and Saint Gobain Sekurit accounted for 15.8%, 21.2% and 23.9%, respectively, of our net sales. During 2000, Saint Gobain Sekurit, Mitsubishi and Samsung accounted for 14.1%, 37.3% and 12.2%, respectively, of our net sales. Because of our fixed costs, the loss of, or substantial reduction in orders from, one or more of these customers would have a material adverse affect on our profitability and cash flow. The timing and amount of sales to these customers depends on sales levels and shipping schedules for the OEM products into which our products are incorporated. We have no control over the shipping dates or volume of products shipped by our OEM customers, and we cannot be certain that they will continue to ship products that incorporate our products at current levels or at all. In addition, we rely on our OEM customers to timely inform us of opportunities to develop new products that serve end-user demands.

## **Research and Development**

Our research and development activities are focused upon the development of new proprietary products, thin film materials science, and deposition process optimization and automation and applied engineering. Our research and development expenditures totaled \$6.7 million, \$5.5 million and \$7.7 million, or approximately 7.9%, 6.6% and 11.2% of total net revenues, during 2000, 2001 and 2002, respectively.

Historically, our research and development efforts have been driven by customer requests for the development of new applications for thin film coated substrates. To meet the future needs of our customers, we continually seek to improve the quality and functionality of our current products and enhance our core technology. For example, in 2002 we began shipping production quantities and sizes of an anti-reflective film specifically designed for the liquid crystal display and plasma display panel markets that maintain optical clarity while reducing the reflection of ambient light to improve image quality. We cannot guarantee that we will be successful in developing or marketing these applications.

Although our production systems are built by outside vendors, we work closely with our vendors on the detailed implementation of the production machine designs. Our experience with designing production systems is critical for the proper construction of these machines. Once a new machine is installed and accepted by us, our engineers are responsible for transitioning the system into commercial production to help ensure stable manufacturing yields.

## Manufacturing

The table below provides information about our current production machines and the class of products that each is currently tooled to produce.

Status	Machine Number	Location	Primary Markets For Current Production	Year Commercial Production Initiated/ Expected	Estimated Annual Capacity (Millions of Sq. Ft.) <sup>(1)</sup>
Existing	PM 1	Palo Alto	Research and development	1980	
	PM 2	Palo Alto	Architectural and electronic display	1982	6.0
	PM 3 <sup>(2)</sup>				
	PM 4A	Palo Alto	Automotive, architectural and display	1991	12.0
	PM 4B	Palo Alto	Automotive, architectural and display	1991	12.0
	PM 5	Tempe	Electronic display	1997	6.5
	PM 6	Tempe	Automotive and electronic display	2000	13.0
	PM 7 <sup>(3)</sup>	Tempe	Electronic display	2003	3.0
	PM 8	Dresden	Automotive and architectural	2000	16.0
	PM 9	Dresden	Automotive and architectural	2001	16.0
	PM 10 <sup>(4)</sup>	Dresden	Automotive and architectural	2003	16.0

Estimated annual capacity represents our estimated yields based on our historical experience and anticipated product mix. The amount of product for which we receive orders and which we actually produce in any year may be materially less than these estimates.

We sold PM 3 to an unrelated third party in 1995.

We expect this machine, which uses PECVD-based technology, to be used primarily for research and development in 2003, with limited commercial production in 2003.

PM 10 was ready for commercial production in the first quarter of 2003. Customer approvals of initial products that have been manufactured were received during the quarter.

We also have two small-scale sputtering machines in Palo Alto which are used for pre-production qualification when they are not used for their primary research and development function. In Tempe, we also employ a wet coating and laminating machine, which is used to apply various topcoats and adhesives, and for lamination of liner films.

All of our U.S. production facilities are ISO 9001/2000 certified, and our Dresden facility is ISO 9001/2000 certified.

## **Environmental Matters**

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We use hazardous materials in our research and manufacturing operations and have air and water emissions that require controls. As a result, we are subject to stringent federal, state and local regulations governing the storage, use and disposal of wastes. We contract with outside vendors to

collect and dispose of waste at all of our production facilities in compliance with applicable environmental laws. In addition, we have in place procedures that we believe enable us to deal properly with the gasses emitted in our production process, and we have implemented a program to monitor our past and present compliance with environmental laws and regulations. Although we believe we are currently in material compliance with such laws and regulations, current or future laws and regulations may require us to make substantial expenditures for compliance with chemical exposure, waste treatment or disposal regulations.

#### **Suppliers and Subcontractors**

We manufacture our products using materials procured from third-party suppliers. We obtain certain of these materials from limited sources. For example, we believe the substrates we use in the manufacture of the Heat Mirror product is currently available from one qualified source, Teijin Limited, holder of approximately 5.3% of our common stock as of March 24, 2003. The substrates used in the manufacture of our anti-reflective film are currently available from only two qualified sources, Teijin and Dai Nippon Printing. The loss of these current sources could adversely affect our ability to meet our scheduled product deliveries to customers. In each case, alternative sources of supply are being pursued; however, it takes approximately 18 to 24 months for us to qualify a new supplier and we may not be able to successfully develop alternative sources of supply.

We rely on third-party subcontractors to add properties, such as adhesives, to some of our products. There are only a limited number of qualified subcontractors that can provide some of the services we require. A significant increase in the price charged by one or more of our subcontractors could force us to raise prices on our products or lower our margins, which could have a material adverse effect on our operating results.

Furthermore, our production machines are large, complex and difficult to design and assemble. It can take up to a year from the time we order a machine until it is delivered. Following delivery, it can take us, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a limited number of companies that are capable of manufacturing these machines to our specifications. Our inability in the future to have new production machines manufactured and prepared for commercial production in a timely manner would have a material adverse effect on our business.

## **Backlog**

Our backlog primarily consists of purchase orders for products to be delivered within 90 days. As of March 31, 2002 and March 23, 2003, we had a backlog of orders able to be shipped over the next 12 months of approximately \$15.8 million and \$12.3 million, respectively. None of these orders are firm orders and all are subject to cancellation. For these reasons, these orders may not be indicative of our future revenues.

## Competition

The thin film coatings industry and the markets in which our customers compete experience rapid technological change, especially the electronic display market. Adoption by our competitors of new equipment or process technologies could adversely affect us. We have a number of present and potential competitors, including our customers, many of which have greater financial resources and greater selling, marketing and technical resources than we possess.

Automotive glass market. Solar control products in the automotive OEM market are provided by large, worldwide glass laminators who typically have divisions also selling products to the commercial flat glass industry. Several of these companies, such as PPG, Pilkington PLC, Saint Gobain, Asahi, Guardian, and Glaverbel, have direct-to-glass sputtering capability. In the applied film segment of the

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automotive market, companies such as 3M, Bekeart, CP Films (a subdivision of Solutia), and Lintec Inc. produce competitive solar control products that are widely accepted in the market. In addition, during 2001, 3M entered the automotive solar control market with an all-polymer film. Although this non-metallic film has the advantage of being completely corrosion resistant, its many layers may delaminate. We may also be subject to future competition from companies that are able to infuse glass with solar control properties. We estimate that in 2002 our coated substrates were used in less than 1% of the total worldwide automotive OEM glass produced.

Electronic display market. Competitors in the electronic display market include companies developing new coatings, such as wet coatings, for flat panel displays, as well as competitors who supply sputter coated films similar to those produced by us. Customers' selection of

anti-reflective products is driven by quality, price and capacity. In addition, some of our current and potential customers are capable of creating products that compete with our products. We estimate that in 2002 our coated substrates were applied to less than 4% of the products in the 17 inch and 19 inch worldwide, flat screen CRT market.

Architectural market. Products that provide solar control and energy conservation have been available to this market for almost 20 years. Since our introduction of our Heat Mirror suspended film product in 1979, large glass producers such as Guardian, PPG, Appogee, Pilkington, Saint Gobain Sekurit, and Asahi, have produced their own direct-to-glass sputtered products that provide solar control and energy conservation similar to our Heat Mirror product. We estimate that in 2002 our coated substrates were used in less than 1% of the glass used worldwide in residential and commercial buildings.

Basis of competition

We believe we compete principally on the basis of:

Proprietary thin film sputtering process knowledge and control systems;

Our extensive thin film materials expertise and optical design capabilities;

The world's largest installed base of coating machinery for application of sputter coatings to flexible film;

Our new, state-of-the-art coating facility in a low-cost labor environment, with significant financial support from local and federal governments in Germany; and

Our ability to easily alter the format of our products, providing our customers with inventory versatility and higher production yields.

## **Employees**

As of February 19, 2003, we had 242 full-time employees, of whom 31 were engaged in engineering, 161 in manufacturing, and 50 in selling, marketing, general management, finance and administration. We are highly dependent upon the continuing services of certain technical and management personnel. None of our U.S. employees is represented by a labor union. To our knowledge, none of our German employees are represented by a labor union. We consider our employee relations to be good.

## **ITEM 2. PROPERTIES**

Our administrative, marketing, engineering and manufacturing facilities are located in two buildings totaling approximately 57,000 square feet in Palo Alto, California, and one building of approximately 55,000 square feet in Tempe, Arizona. The buildings in Palo Alto are occupied under leases that expire from 2004 to 2005, with options to extend some of these leases for terms expiring

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through 2009. We have vacated two buildings in Palo Alto, which have lease agreements that expire at December 31, 2004. The lease for the building in Tempe expires in 2007, with options to extend through 2017. We own our 60,000 square foot building in Dresden, which we took possession of in May 2000.

#### ITEM 3. LEGAL PROCEEDINGS

In July 2002, we were served with a complaint in a lawsuit captioned "Hurricane Glass v. Southwall Technologies Inc. and V-Kool, Inc." filed in the Circuit Court of the Twelfth Judicial Circuit in and for Sarasota County, Florida. The complaint alleges that Hurricane was a

distributor of our "Solis" product, that Hurricane's customers experienced various problems and failures with the product and that, as a result, Hurricane was required to perform repairs and replacements under its warranty provisions. The complaint alleges approximately \$440,000 in damages against both defendants. We believe the claims to be without merit and intend to defend the action vigorously. Management believes the ultimate resolution of the matter will not have a material adverse effect on the results of operations, cash flows and financial position.

We have been named as a defendant, along with Bostik, Inc., in an action entitled "WASCO Products, Inc. v. Southwall Technologies Inc. and Bostik, Inc.," (Civ. Action No. C 02-2926 CRB, which was filed in Federal District Court for the Northern District of California on June 18, 2002. We were served with the complaint in this matter on July 1, 2002. The plaintiff has filed the matter as a purported class action on behalf of all entities and individuals in the United States who manufactured and/or sold and warranted the service life of insulated glass units manufactured between 1989 and 1999 which contained our Heat Mirror film and were sealed with a specific type of sealant manufactured by the co-defendant. The plaintiff alleges that the sealant provided by the co-defendant was defective, resulting in elevated warranty replacement claims and costs, and asserts claims against us for breach of an implied warranty of fitness, misrepresentation, fraudulent concealment, negligence, negligent interference with prospective economic advantage, breach of contract, unfair business practices and false or misleading business practices. The plaintiff seeks recovery of \$100 million for damages on behalf of the class allegedly resulting from elevated warranty replacement claims, restitution, injunctive relief, and non-specified compensation for lost profits. We believe all of the claims to be without merit and intend to defend the action vigorously. We have tendered the defense of this matter to our insurers, who have agreed to pay a percentage of our defense costs under reservation of rights. We believe they are also obligated to pay any resulting settlement or judgment. The action is in the early stages, thus an estimate of our loss exposure cannot be made.

We are a defendant in an action entitled "Portfolio Financial Servicing Company v. Southwall Technologies Inc.," which was filed in state court in Utah on May 22, 2002. This action arises out of sale-leaseback agreements which we entered into with an entity formerly known as Matrix Funding Corporation, or Matrix, in 1999 in connection with the acquisition of two of our production machines. Matrix thereafter filed bankruptcy proceedings. Plaintiffs in the action are Bank of America which alleges that it is the successor in interest to Matrix, and Portfolio Financial Servicing Company which claims to be an agent of the successor to Matrix. The plaintiffs demand payment of \$6,468,534, which they allege constitute unpaid lease payments, plus the alleged residual value of the equipment, less monies that Matrix owes to us. The action currently is in the discovery phase. We intend to defend the action vigorously. The action is in its early stages of discovery and the Company is not able to estimate the probability of an adverse outcome; accordingly no additional amounts have been accrued beyond the approximately \$3.3 million of the current portion of capital lease obligations due to uncertainty surrounding the potential additional exposure.

We are a defendant in an action filed on April 5, 1996 entitled "Four Seasons Solar Products Corp. vs. Black & Decker Corp., Bostik, Inc. and Southwall Technologies Inc.," No. 5 CV1695, pending in the United States District Court for the Eastern District of New York. Plaintiff is a manufacturer of

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insulated glass units which incorporate our Heat Mirror film. Plaintiff alleges that a sealant provided by the co-defendant is defective, asserts causes of action for breach of contract, unfair competition, and fraudulent concealment, and seeks monetary damages of approximately \$36 million for past and future replacement costs, loss of customer goodwill, and punitive damages against all defendants. We filed a motion to dismiss. The Court has dismissed the unfair competition and fraudulent concealment claims against us. It has denied our motion to dismiss the breach of contract claim. We believe the claim to be without merit. No adjustment has been recorded due to the uncertainty surrounding the potential exposure.

In October 2000, we were served with a complaint entitled Hurd Millwork, Inc. v. Southwall Technologies Inc., et. al., United States District Court, Northern District of California, Case No. C00-3820 (CRB). Hurd is a manufacturer of insulated glass units, which incorporate Heat Mirror film. Hurd alleged that various failures and deficiencies associated with the insulated glass units gave rise to warranty and other consumer claims. We have reached a settlement with the plaintiff, the terms of which are confidential. Our insurance carriers paid the cash portion of the settlement. We have also provided a discount on the price of future film sales as part of the settlement. During 2002, the plaintiff utilized discounts stemming from the settlement of approximately \$15,000.

The insurance carriers in some of the litigation related to alleged product failures and defects in window products manufactured by others in which we were a defendant paid the defense and settlement costs related to such litigation. Those insurance carriers reserved their rights to recover a portion or all of such payments. As a result, those insurance carriers could seek from us up to an aggregate of \$12.9 million plus defense costs, although any such recovery would be restricted to claims that were not covered by our insurance policies. We intend to vigorously defend any attempts by these insurance carriers to seek reimbursement. We are not able to estimate the likelihood that these insurance carriers will seek to recover any such payments, the amount, if any, they might seek, or the outcome of such attempts.

In addition, we are involved in certain other legal actions arising in the ordinary course of business. We believe, however, that none of these actions, either individually or in the aggregate, will have a material adverse effect on our business, our consolidated financial position, results of

operations or cash flows.

## ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of the security holders during the quarter ended December 31, 2002.

## **EXECUTIVE OFFICERS OF REGISTRANT**

The names, ages and positions of our current directors and executive officers are as follows:

Name	Age	Position
Thomas G. Hood	47	President, Chief Executive Officer and Director
Michael E. Seifert	44	Senior Vice President, Chief Financial Officer and Secretary
Sicco W.T. Westra	52	Senior Vice President, Sales and Marketing
Lois A. Cornell	49	Vice President, Chief Information Officer
Wolfgang Heinze	53	Vice President, General Manager Southwall Europe GmbH
Bruce M. Lairson	40	Vice President and Chief Technology Officer
Nasser A. Lama	42	Vice President, U.S. Operations
John Lipscomb	53	Vice President, Corporate Controller

Thomas G. Hood has served as Southwall's President and Chief Executive Officer since July 1998 and as a member of the board of directors of Southwall since March 1998. From March 1998 until

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July 1998, he served as Interim President and Chief Executive Officer. From July 1996 to March 1998, he served as Senior Vice President, General Manager, Energy Products Division. From January 1995 to July 1996, he was Vice President, General Manager, International Operations, and from October 1991 to January 1995, he was Vice President, Marketing and Sales. He is the inventor of record on ten of Southwall's patents. Mr. Hood has an MS degree in Mechanical Engineering from New Mexico State University.

Michael E. Seifert has been Senior Vice President, Chief Financial Officer and Secretary of Southwall since December 2002. From May 2001 until December 2002, he served as an independent consultant. From March 2000 until May 2001, he served as the Chief Financial Officer of Sitesmith, Inc. From July 1998 until January 2000, he served as the Chief Financial Officer of SmartDB Corporation, Inc. Mr. Seifert holds a B.S.C. degree in Accounting (Magna Cum Laude) from the University of Santa Clara, and he is a Certified Public Accountant (inactive) in the state of California.

Sicco W. T. Westra has been Senior Vice President, Sales and Marketing since June 2002. From August 1998 until June 2002, he was the Senior Vice President, Engineering and Chief Technical Officer of Southwall. From February 1998 until August 1998, he served as the Director of Global Production Management for Applied Materials, Inc. From March 1994 to August 1998, he served as a Manager of Business Development for BOC Coating Technology, Inc. Dr. Westra holds a PhD. from the University of Leiden in the Netherlands.

Lois Cornell has been Vice President, Chief Information Officer since September 2001. Before joining Southwall she served as a Principal Consultant from August 2000 until August 2001 with FutureNext Consulting, Inc. From January 2000 until June 2000, she served as the Vice President of Business Development with Vista Savant, Inc. From November 1998 until January 2000, she served as the Vice President of Information Technology with Asyst Technologies, Inc. Ms. Cornell holds a B.S. in Industrial Engineering from Cleveland State University; a B.S. in Mathematics and History from Allegheny College; and a M.A. in Education from Allegheny College.

Wolfgang Heinze joined Southwall in January 1999 as Plant Manager of our Dresden factory. In December 2000, Mr. Heinze was promoted to the position of Vice President, General Manager Southwall Europe GmbH. Prior to joining Southwall, Mr. Heinze had been the Chief Executive Officer of FUBA Printed Circuits, GMBH from February 1991 to April 1998. Mr. Heinze has a MD of Commercial Science from the Technical University in Merseburg, Germany.

*Bruce M. Lairson* joined Southwall in August 2001 as Director of New Products Engineering. In May 2002, he was promoted to the position of Vice President and Chief Technology Officer. Prior to joining Southwall, Mr. Lairson had been the Engineering Project Manager at Maxtor Inc. from June 2000 to July 2001. From March 1999 to June 2000, he served as a Director of Development at Komag Inc. and

Ultracard Inc. From December 1997 to April 1999, he served as the Director of Advanced Technology at Western Digital Inc. Mr. Lairson holds a ME in Applied and Engineering Physics from Cornell University and a MS and PhD in Materials Science from Stanford University.

Nasser A. Lama joined Southwall in September 1999 as Plant Manger of our Palo Alto factory. He was promoted to Vice President, U.S. Operations in March 2000. Prior to joining Southwall, Mr. Lama was Vice President of Operations of Ink Jet Technology, a subsidiary of FrancoTyp-Postalia, from March 1998 to September 1999. From August 1994 to March 1998, he was Director of Operations of Akashic Memories. Mr. Lama has an MS degree in Mechanical Engineering from Memphis State University.

*John Lipscomb* has been Vice President, Corporate Controller since November 2000. From March 1996 to November 2000, he served as a Finance Director with Informix Software and with ABB LTD. From June 1988 to February 1996, he served in various senior level financial management positions with Apple Computer. Mr. Lipscomb has a B.A. degree in Accounting from the University of Massachusetts at Amherst.

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## **PART II**

## ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Our common stock has been traded on the Nasdaq National Market System under the symbol "SWTX" since the completion of our initial public offering in June 1987. Prices in the following table represent the high and low closing sales prices per share for our common stock as reported by Nasdaq during the periods indicated.

	]	High		Low
			_	
2001				
1st Quarter	\$	11.87	\$	4.68
2nd Quarter		11.25		7.37
3rd Quarter		14.00		6.12
4th Quarter		6.12		2.62
2002				
1st Quarter	\$	12.99	\$	7.19
2nd Quarter		15.45		4.68
3rd Quarter		4.90		1.95
4th Quarter		3.50		2.04

On March 23, 2003 the last reported sale price for our common stock as reported on Nasdaq was \$1.10 per share. On such date, there were approximately 372 holders of record of our common stock, and we believe there were approximately 1,500 beneficial owners of our common stock.

We have never declared or paid any cash dividends on our common stock, and we do not anticipate paying cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, to fund the expansion and growth of our business. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

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## ITEM 6. SELECTED FINANCIAL DATA (in thousands, except per share data)

The following selected consolidated financial data as of and for the five years ended December 31, 2002 are derived from our audited consolidated financial statements. This information should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this report.

# **Consolidated Statements of Operations Data:**

Year-Ended	l Deceml	ber 31,	,
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	1998		1999	2000	2001	2002			
			(in thousa	hare data)					
Net revenues, by product									
Automotive glass	\$	12,845	\$ 19,477	\$ 20,198	\$ 37,385	\$ 25,697			
Electronic display		16,954	16,014	47,734	29,691	26,555			
Architectural		20,234	19,107	17,416	15,900	16,507			
Total net revenues		50,033	54,598	85,348	82,976	68,759			
Cost of sales		44,253	40,706	69,060	60,148	49,614			
Gross profit		5,780	13,892	16,288	22,828	19,145			
Gross profit %		11.6%	25.4%	6 19.1%	27.5%	27.89			
Operating expenses:									
Research and development		3,864	5,249	6,732	5,456	7,685			
Selling, general and administrative		9,046	8,670	12,614	11,036	12,450			
Legal settlement			500	536					
Restructuring costs						2,624			
Total operating expenses		12,910	14,419	19,882	16,492	22,759			
Income (loss) from operations		(7,130)	(527)	(3,594)	6,336	(3,614)			
Interest expense, net		(1,150)	(1,350)	(2,808)	(2,872)	(1,734)			
Other income, net		469	62	350	1,385	1,070			
Income (loss) before provision for income taxes		(7,811)	(1,815)	(6,052)	4,849	(4,278)			
Provision for (benefit from) income taxes		58	50	128	214	(87)			
Net income (loss)	\$	(7,869)	\$ (1,865)	\$ (6,180)	\$ 4,635	\$ (4,191)			

# **Consolidated Balance Sheet Data:**

As of December 31,

	1998		1999		2000		2001		2002
			_	(in t	chousands)				
Cash and cash equivalents	\$ 4,136	\$	1,772	\$	61	\$	3,362	\$	1,998
Working capital (deficit)	(4,256)		(11,699)		(32,148)		(6,471)		488
Property, plant and equipment	29,068		43,533		49,884		47,841		50,251
Total assets	54,019		70,142		80,462		73,158		76,582
Long-term debt including current portion	15,538		24,175		26,430		22,828		16,752
Total liabilities	28,202		45,562		60,324		46,706		36,108
Total stockholders' equity	25,817		24,580		20,138		26,452		40,474
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#### Selected cashflow data:

#### Year-Ended December 31,

		1998		1998 1999		1999	2000		2001		2002
		_			(in t	thousands)			_		
Cash provided by (used in) operating activities	\$	4,347	\$	4,523	\$	1,188	\$	13,791	\$ (2,824)		
Net cash used in investing activities		(7,190)		(25,942)		(12,855)		(5,698)	(6,014)		
Net cash provided by (used in) financing activities		(3,545)		19,055		9,994		(4,628)	7,679		
Quarterly Data											

The following table sets forth statements of operations data for the eight fiscal quarters ended December 31, 2002. This information has been derived from our unaudited consolidated financial statements and has been prepared on the same basis as our audited consolidated financial statements contained in this report. It includes all adjustments, consisting of normal recurring adjustments only, that we consider necessary for a fair presentation of such information when read in conjunction with our audited financial statements and related notes. Operating results for any quarter are not necessarily indicative of results for any future period. This information should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this report.

# Selected Quarterly Financial Information (Unaudited)

#### **Quarters Ended**

	April 1, 2001				Sep. 30, 2001	Dec. 31, 2001		March 31, 2002		June 30, 2002		Sep. 29, 2002		Dec. 31, 2002	
		(in thousands except for per share data)										_			
Net Revenues	\$	17,713	\$ 21,9	46	\$ 22,777	\$	20,540	\$	19,269	\$	19,676	\$	16,290	\$	13,524
Cost of sales		14,849	16,3	20	15,629		13,350		12,425		12,954		11,682		12,553
	_														
Gross Profit		2,864	5,6	26	7,148		7,190		6,844		6,722		4,608		971
Income (loss) before provision															
for income taxes		(1,110)	1,1	04	2,420		2,435		1,234		1,228		137		(6,877)
Net income (loss)		(1,131)	1,1	84	2,409		2,172		1,181		1,394		125		(6,891)
Earnings (loss) per share dilute	d	(0.15)	0.	15	0.28		0.25		0.13		0.15		0.01		(0.55)

Our results of operations have varied significantly from quarter to quarter, and we expect them to continue to do so in the future. As a result of our high fixed costs, if revenues fall below our expectations, we may not be able to reduce our spending sufficiently to prevent a loss from operations. We anticipate that our sales will continue to have long sales cycles. Therefore, the timing of future customer contracts could be difficult to predict, making it very difficult to predict revenues in future quarters, and our operating results may continue to vary significantly.

During 2001, our Dresden facility, including PM 8 and PM 9, commenced production of commercial product for the automotive market. This expansion in our overall manufacturing capacity allowed us to increase significantly our sales to the automotive market in 2001, compared with 2000. Our sales to the automotive market in 2002, however, were significantly lower than in 2001 as a result of competition from alternative technological solutions primarily direct coating onto glass. Direct coating onto glass can be accomplished by sputtering and by pyrolytic means. Direct-to-glass sputtering is a mature, well-known process for applying thin film coatings to glass. This technology is commonly used to manufacture window glass that can conserve energy in buildings, but it is also utilized in the

manufacture of glass products for the automobile market. This manufacturing process is currently being used by two of our automotive customers. Pilkington PLC, and Saint Gobain Sekurit. The use of the direct-to-glass sputtering technique has contributed to the erosion of our sales to the automobile market. The process uses the heat of the molten glass to make a single layer, metal oxide coating from a solution sprayed onto the glass. Because this technique produces only single layer coatings, the solar performance is limited. As a result of its performance limitations we're unable to predict if this technical solution will further erode our sales to the automotive market. A third production machine in Dresden (PM 10) began limited commercial production in the first quarter of 2003.

Other factors that could affect our quarterly operating results include those described elsewhere in this report and the following:

fluctuating customer demand, which is influenced by a number of factors, including market acceptance of our products and the products of our customers and end-users, changes in product mix, and the timing, cancellation or delay of customer orders and shipments;

timing of shipments of our products by us and by independent subcontractors to our customers;

manufacturing and operational difficulties that may arise due to, among other things, quality control, capacity utilization of our production machines, unscheduled equipment maintenance, and the hiring and training of additional staff;

progress and outcome of litigation with which we are involved;

announcement, consummation or integration by us of any acquired businesses, technologies or products;

our ability to introduce new products on a timely basis;

competition, including the introduction or announcement of new products by competitors, the adoption of competitive technologies by our customers, the addition of new production capacity by competitors and competitive pressures on prices of our products and those of our customers; and

product returns and customer allowances stemming from product quality defects.

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## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with Item 6, "Selected Financial Data", our consolidated financial statements and notes thereto appearing elsewhere in this report and the risk factors beginning on page 35. This discussion and analysis contains forward-looking statements that involve risks and uncertainties. You should not place undue reliance on these forward-looking statements. Our actual results may differ materially from those anticipated in these forward-looking statements.

## Overview

We are a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. We have developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products and conserve energy in architectural products. Our products consist of transparent solar-control films for automotive glass; anti-reflective films for computer screens, including flat panel displays, plasma displays, and transparent conductive films for use in touch screen and liquid crystal displays; energy control films for architectural glass; and various other coatings.

From our founding in 1979 through the early 1990s, we developed and produced thin film coated substances primarily for residential and commercial building applications, and for military applications. In the early 1990s, we began to develop products for the automotive and electronic display markets. In 1996, we realized our first material revenue from the automotive and electronic display markets. In 2002, automotive glass products accounted for approximately 37% of our revenues, electronic display products accounted for approximately 39% of our revenues, and architectural products accounted for approximately 24% of our revenues. Revenues from international customers accounted for 85%, 87% and 85% of our net revenues in 2000, 2001 and 2002, respectively.

In the second half of 2000, we restated our previously issued financial statements for the first quarter of 2000 and for the year 1999. The restatement was primarily related to an overstatement of inventory and licensing revenues and under-recognition of expenses. Following the restatement, we implemented additional processes and procedures as well as increased staffing to strengthen our internal accounting controls. In connection with the restatement, Nasdaq suspended trading in our common stock for over three months. In addition, following the announcement of the need to restate our financial statements, we and some of our officers were named as defendants in seven lawsuits, all alleging violations of the federal securities laws. We settled these lawsuits in 2001. The settlement required us and the other defendants to pay the plaintiff class \$4.2 million, which was paid by our insurer.

## Historical Factors Affecting Our Financial Condition and Results of Operations

As described in more detail below, our financial condition and results of operations are affected by a number of factors, including our financing arrangements, expansion of our manufacturing capacity, demand for our customers' products, our relationships with customers and suppliers, product warranty claims, fluctuations in our selling, general and administrative expenses, and the mix of products that we sell. Over the past several years, these factors have contributed to volatility in our results of operations and cash flows and have significantly affected our financial position.

Our financing arrangements. We incurred net losses from operating activities in 1998, 1999, 2000 and 2002. As a result of these net losses, together with the restatement in 2000 of our financial statements for prior periods and the suspension of trading of our common stock on Nasdaq in 2000, we were in default, as of December 31, 2000, under our German bank loans, our sale-leaseback agreement and our Japanese bank loan and the guarantee by Teijin of that loan. As a result, we reclassified all of

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the debt under those arrangements as current liabilities as of December 31, 2000. Accordingly, there was substantial doubt about our ability to continue as a going concern at December 31, 2000.

As of December 31, 2001 and December 31, 2002, we had made all payments required to be made through those dates under our German bank loans and our Japanese bank loan guaranteed by Teijin. At December 31, 2002, we were in default with the financial covenants under the Teijin guarantee. However, we have received waivers from Teijin and the Japanese bank of such defaults for all periods through September 30, 2003. Nonetheless, because the entire remaining balance under the Japanese bank loan is due in 2003, the entire balance of \$2.5 million has been classified as a current liability at December 31, 2002. We are in compliance with all of the covenants of the German bank loans, and we have classified \$9.2 million outstanding under the German bank loans as a long-term liability at December 31, 2002.

During 1999, we entered into a sale-leaseback agreement for two of our production machines with an equipment leasing company. The leasing company has filed bankruptcy proceedings. Because we have an option to purchase the machines at the end of the lease periods, we treat these sale-leaseback arrangements as financings. During 2001, a dispute arose between us and an agent purporting to act on behalf of the leasing company. The agent has recently filed suit against us to recover the unpaid lease payments and alleged residual value of the machines. As a result, we have classified \$3.3 million as short-term liabilities (\$4.3 million outstanding under the sale-leaseback agreement, less \$1.0 million of the amounts due from the leasing company that was not funded).

Expansion of our manufacturing capacity. The expansion of our manufacturing capacity has affected our results of operations, cash flows and financial position. We have invested \$57 million in new production capacity in Tempe and Dresden since 1997. The expansion has been financed by a combination of term loans, investment incentive grants from the government of the State of Saxony, in Germany, short-term borrowings, and cash flows from operating activities. Our results of operations, profitability, cash flows, stockholders' equity and financial position were adversely affected by initial start up costs and the lower production yields we generally experience before our new production machines reach commercial production levels. As a result, our financial position has been weakened by reduced liquidity and higher leverage.

Demand for our customers' products. Volatility in our customers' markets affects our results of operations. Demand for our customers' products has changed rapidly from time to time in the past and may do so in the future. For example, partly as a result of changing demand in the personal computer industry from 1999 through 2002, our electronic display revenues rose from \$16.0 million in 1999 to \$47.7 million in 2000

then declined to \$29.6 million in 2001 and \$26.6 million in 2002. Similarly, our revenues from our automotive segment rose from \$20.2 million in 2000, to \$37.4 million in 2001, and declined to \$25.7 million in 2002, because of competition from alternative technology solutions. Demand for our products can also be affected when the markets for the products in which our films are used evolve to new technologies, such as the evolution from cathode ray tubes, or CRTs, to flat panel displays. Additionally, our results of operations and cash flows can vary significantly from quarter to quarter as we experience seasonal fluctuations in revenue from our customers in the electronic display and architectural markets.

*Product mix.* Product mix affects our gross margins on the products we sell. Our product mix is determined by new products and applications that we have developed, end-customer market demand for products which use our applications, the availability of our production capacity and the allocation of our resources to meet demand for our products in markets we target. Generally, our gross margins on sales of electronic display film are lower than automotive and architectural products due to the additional costs for higher levels of outside processing required for electronic display film.

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Our revenues and gross profit can increase or decrease rapidly reflecting underlying demand for the products of one or a small number of our customers. In addition, a customer relationship may become unprofitable. For example, in the fourth quarter of 1998, we discovered quality issues with product that had been shipped to Sony, a significant customer at that time, and with other film that was still in our inventory. We recorded a \$4.0 million provision in the fourth quarter of 1998 to account for product returned from Sony and the related write-off of inventory. We discontinued the manufacture and sale of film to Sony in 1999. Sony accounted for 33%, 7% and 0% of our total revenues in 1998, 1999 and 2000. We may also be unable to replace a customer when a relationship ends or demand for our product declines as a result of evolution of our customer's products. In 1999, we began our relationship with Mitsubishi Electric Company, or Mitsubishi, which accounted for 21% and 18% of our total revenues in 2001 and 2002, respectively. In 1999, we expanded our relationship with customers in the automotive glass market, including Pilkington PLC, Saint Gobain Sekurit and Globamatrix Holdings Pte. Ltd., or Globamatrix, which collectively accounted for approximately 46% of our total revenues in 2001 and 37% in 2002.

In addition, Teijin, one of our suppliers, has guaranteed our loan from a Japanese bank in the original principal amount of \$10.0 million, the proceeds of which we used to fund capital expenditures. Teijin and Globamatrix are investors in us, over time having purchased a total of 1.1 million shares of our common stock and, as of December 31, 2002, continue to hold 1.1 million shares, or approximately 9% of the outstanding stock. In addition, to assist us with our short-term liquidity needs, some of our key vendors, such as Teijin and Lintec Inc. have, from time to time, extended the amount of time in which we are required to repay amounts we owe to them.

Product warranty claims. Our gross margins and profitability have been adversely affected from time to time by product quality claims. From 2000 to 2002, our warranty provision has averaged approximately 4% of net revenues. In 1998, our gross profit was reduced by \$4.0 million, which was related to product we produced for Sony. In 2002, we had certain quality claims with respect to products produced for Globamatrix, which reduced our gross profit by approximately \$1.5 million.

Fluctuations in our selling, general and administrative expenses. Our selling, general and administrative expenses increased significantly in 2002 from 2001 due to nonrecurring professional fees associated with certain legal defenses, additional reporting requirements associated with the recently enacted Sarbanes-Oxley Act, and the evaluation of a potential acquisition target. In prior years, we have also incurred costs related to legal settlements.

Restructuring costs. Based on lower revenue expectations, we have decided to transfer more of our product manufacturing from our Palo Alto manufacturing site to our Dresden facility, with its lower cost base. As a consequence of this decision, we implemented a reduction in force at our Palo Alto location in December 2002, and elected to vacate certain buildings in Palo Alto. As a result of these actions, we incurred a restructuring charge of \$2.6 million in 2002 relating to employee severance packages and the remaining rents due on excess facilities in Palo Alto no longer occupied. Approximately \$0.2 million of the restructuring costs were paid prior to December 31, 2002.

## **Application of Critical Accounting Policies and Estimates**

The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the amounts of assets and liabilities we report, our disclosure of contingencies, and the amounts of revenue and expenses we report in our consolidated financial statements. If we used different judgments or different estimates, there might be material differences in amount and timing of revenues and expenses we report. See Note 1 of our notes to consolidated financial statements for details of our accounting policies. The critical accounting policies, judgment and

estimates, which we	e believe have the most significant effect on our financial statements, are set forth below:
	Revenue recognition;
	Allowances for doubtful accounts and warranties;
	Valuation of inventories;
	Assessment of the probability of the outcome of current litigation;
	Accrued costs for restructuring; and
	Accounting for income taxes.

Revenue recognition. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, and collectibility is reasonably assured. Accordingly, we generally recognize revenue from product sales when the terms of sale transfer title and risk of loss, which occurs either upon shipment or upon receipt by customers. In connection with product sales, we make allowances for estimated returns and warranties. We adjust these allowances periodically to reflect our actual and anticipated experience. Revenue recognition in each period is dependent on our application of this accounting policy. If any of these conditions to recognize revenue is not met, we defer revenue recognition.

Allowances for doubtful accounts and warranties. We establish allowances for doubtful accounts and warranties for specifically identified, as well as anticipated, doubtful accounts and warranty claims based on credit profiles of our customers, current economic trends, contractual terms and conditions, and historical payment and warranty experience. As of December 31, 2001, our consolidated balance sheet included allowances for doubtful accounts of \$0.4 million and \$2.6 million for warranties. As of December 31, 2002, our consolidated balance sheet included allowances for doubtful accounts of \$0.6 million and \$2.1 million for warranties. During 2000, 2001 and 2002, we charged \$3.0 million, \$3.9 million and \$2.2 million, respectively, against revenue for warranty expense. Bad debt expenses were \$(0.1) million, \$0.4 million and \$0.3 million during 2000, 2001 and 2002, respectively. If we experience actual bad debt and warranty expense different from estimates or we adjust our estimates in future periods, our operating results, cash flows and financial position could be materially adversely affected.

Valuation of inventories. We state inventories at the lower of cost or market. We establish provisions for excess and obsolete inventories after periodic evaluation of historical sales, current economic trends, forecasted sales, predicted lifecycle and current inventory levels. During 2000, 2001 and 2002, we charged \$0.5 million, \$1.1 million and \$0.7 million against cost of sales for excess and obsolete inventories. If we adjust our estimates, such forecasted sales and expected product lifecycle, our operating results, cash flows and financial position could be materially adversely affected.

Assessment of the probability of the outcome of current litigation. In the ordinary course of business, we have periodically become engaged in litigation principally as a result of disputes with customers of our architectural products. In addition, in 2000 seven lawsuits were filed against us, alleging violations of the federal securities laws, which were settled collectively in 2001. We have relied upon insurance coverage to fund the defense of these actions and significant portions of the settlements that were reached. Based on our review of pending litigation, we record accruals for loss contingencies when we believe it is probable that a liability has been incurred and we can reasonably estimate the amount of our share of the loss. In connection with recent settlements related to sales of architectural products, we have been advised by some of our insurers that they have reserved the right, to proceed against us to recoup a portion or all of the settlements paid to plaintiffs.

Restructuring costs. For restructuring activities initiated prior to December 31, 2002 we recorded restructuring costs when we committed to a plan to exit certain facilities, and significant changes to the exit plan were not likely to occur. To determine our excess facility accrual, we estimate expected sublease rental income on each excess facility. For restructuring activities initiated after December 31, 2002, we will follow SFAS No. 146,"Accounting for Costs Associated with Exit or Disposal Activities," as discussed below.

Accounting for income taxes. In preparing our consolidated financial statements, we estimate our income taxes for each of the jurisdictions in which we operate, including Germany. We include differences between our deferred tax assets, such as net operating loss carry forwards, and tax liabilities in our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income, and to the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or increase this allowance in any period, we must include an expense within the tax provision in our statement of operations. To date, we have recorded a full allowance against our deferred tax assets. The valuation allowance was \$11.0 million as of December 31, 2001, and \$14.4 million at December 31, 2002, which fully reserved our net deferred tax assets related to temporary differences, net operating loss carry forwards and other tax credit carry forwards. Future income tax liabilities will be reduced to the extent permitted under federal and applicable state income tax laws, when the future tax benefit can be utilized by applying it against future income.

Significant management judgment is required in determining our provisions for income taxes, our deferred tax assets and liabilities and our future taxable income for purposes of assessing our ability to utilize any future tax benefit from our deferred tax assets. If actual results differ from these estimates or we adjust these estimates in future periods, our financial position, cash flows and results of operations could be materially affected.

## **Results of operations**

The following table sets forth our results of operations expressed as a percentage of total revenues:

		Year Ended December 31,						
	1998	1999	2000	2001	2002			
Net Revenues:								
Automotive glass	25.7%	32.4%	23.7%	45.0%	37.4%			
Electronic display	33.9	33.0	55.9	35.8	38.6			
Architectural	40.4	34.4	20.4	19.2	24.0			
Total net revenues	100.0	100.0	100.0	100.0	100.0			
Cost of sales	88.4	74.6	80.9	72.5	72.2			
Gross profit	11.6	25.4	19.1	27.5	27.8			
Research and development	7.7	9.6	7.9	6.6	11.2			
Selling, general and administrative	18.1	15.9	14.8	13.3	18.1			
Legal settlement		0.9	0.6					
Restructuring costs					3.8			
Total operating expenses	25.8	26.4	23.3	19.9	33.1			
Income (loss) from operations	(14.3)	(1.0)	(4.2)	7.6	(5.3)			
Interest expense, net	(2.3)	(2.5)	(3.3)	(3.5)	(2.5)			
Other income, net	0.9	0.1	0.4	1.7	1.6			
Income (loss) before provision for (benefit from) income taxes	(15.6)	(3.3)	(7.1)	5.8	(6.2)			
Provision for (benefit from)	0.1	0.1	0.1	0.2	(0.1)			
Net income (loss)	(15.7)%	(3.4)%	(7.2)%	5.6%	(6.1)%			
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## **2002** compared to **2001**

Net revenues. Our net revenues decreased \$14.2 million, or 17.1%, from \$83.0 million in 2001 to \$68.8 million in 2002. Our sales to the automotive market decreased by \$11.7 million, or 31.3%, from \$37.4 million in 2001 to \$25.7 million in 2002. The decline in automotive sales was due to lower sales volume due to reductions in our selling prices as a result of increased competition from coated glass manufacturers, and a slowdown in sales by several European automobile manufacturers to which we sell our products. For the foreseeable future, we expect to have on-going competition from glass manufacturers that utilize the direct-to-glass sputtering process as an alternative solution to our coated film products (See "Quarterly Data" in Item 6). Our sales to the electronic display market decreased by \$3.1 million, or 10.4%, from \$29.7 million in 2001 to \$26.6 million in 2002. We experienced a decline in revenue from our cathode ray tube ("CRT") products in 2002 as a result of a shift within the computer industry from CRT technology to other technological alternatives. Mitsubishi Electric is the only CRT manufacturer that buys our anti-reflective ("AR") film, and it has decided to consolidate all of its manufacture of this product to Japan. In connection with that consolidation, Mitsubishi expects to cease production of the 17" AR product in its Mexico plant by the third quarter of 2003. We expect to continue production of AR product in the 22" and 19" sizes for Mitsubishi Electric. In 2002, we realized revenues of approximately \$12.3 million, however, we expect to experience a reduction in revenues of the AR product in 2003 and a further reduction in succeeding years. If the flat display and other electronic display markets in which we sell our products do not recover or experience further slowdowns in the future, it could cause revenues from our electronic display products to decrease further. The decline in our CRT business was partially offset by an increase in sales of our new plasma display film product, which increased from \$3.2 million in 2001, to \$7.4 million in 2002. Our sales to the architectural market increased \$0.6 million, or 3.8%, from \$15.9 million in 2001 to \$16.5 million in 2002. The increase was primarily attributable to additional available manufacturing capacity that had been previously dedicated to the manufacture of products for the automobile market in prior years, partially offset by a reduction in orders from several major architectural customers.

Cost of sales. Cost of sales consists primarily of materials and subcontractor services, labor and manufacturing overhead. Cost of sales decreased \$10.5 million, or 17.5%, from \$60.1 million in 2001, to \$49.6 million in 2002. Cost of sales as a percentage of net revenue decreased from 72.4% in 2001, to 72.1% in 2002. The higher costs in 2001 in dollars were primarily due to variable manufacturing costs associated with higher revenues in 2001. The slight improve in cost of sales as a percentage of revenue was attributable to improved manufacturing yields in our Palo Alto, Tempe and Dresden facilities during 2002, and to producing a greater portion of our products at our Dresden plant, which generally has had lower manufacturing costs than the Company's United States facilities as a result of lower payroll and operating expenses, as well as lower depreciation charges due to the grants and investment allowances for plant and equipment provided to us by the Saxony government. Additionally, our new program to recover expended precious metals used in production resulted in a \$0.5 million reduction in material costs in the 2002 as compared to 2001.

Gross profit and gross margin. Our gross profit decreased \$3.7 million, or 16.7%, from \$22.9 million in 2001, to \$19.2 million in 2002. Our gross margin improved from 27.5% in 2001, to 27.8% in 2002. The decrease in gross profit in 2002 from 2001 was due to decreased revenue from the automotive and electronic display markets, which was partially offset by a higher percentage of revenue generated by our Dresden plant with its lower cost base, a reduction in warranty claims, and a new program implemented in 2002 to recover precious metals expended during production.

Operating expenses

Research and development. Research and development spending increased \$2.2 million, or 40.0%, from \$5.5 million in 2001, to \$7.7 million in 2002. Research and development expenses increased from 6.6% of net revenues in 2001, to 11.2% of net revenues in 2002. The increase in our research and

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development spending in 2002 was primarily attributable to the costs associated with an increase in on-going research and development activities in the U.S. and \$0.3 million of development costs incurred in our Dresden facility to qualify PM8 and PM9 for the production of Heat Mirror products.

Selling, general and administrative. Selling, general and administrative expenses consist primarily of corporate and administrative overhead, selling commissions, advertising costs and occupancy costs. Selling, general and administrative expenses increased \$1.5 million, or 13.6%, from \$11.0 million in 2001, to \$12.5 million in 2002. Selling, general and administrative expenses, as a percentage of revenue, increased from 13.3% in 2001, to 18.1% in 2002. The higher expenses in 2002 were mainly the result of increased outside professional fees resulting from litigation defense, additional reporting requirements associated with the recently enacted Sarbanes-Oxley Act, and the evaluation of a potential acquisition target. The increase in costs was partially offset by a reduction in the Company's labor costs resulting from reduced headcount from 2001.

Restructuring. We incurred restructuring costs of \$2.6 million during 2002 as a result of management's decision to reduce our workforce, consolidate our Palo Alto facilities and shift a greater percentage of our operations to our Tempe and Dresden manufacturing facilities. The

restructuring charges primarily reflected severance packages of \$0.4 million, and the recognition of the remaining lease expense associated with certain buildings we expect to vacate in 2003, in the amount of \$2.2 million.

*Income (loss) from operations.* Income from operations decreased \$10.0 million from income of \$6.4 million in 2001, to a loss of \$3.6 million in 2002. The operating loss was due to lower revenues in 2002, increased research and development costs, higher outside professional fees, and restructuring charges which were partially offset by reduced start-up costs from our Dresden operations, improved manufacturing yields, lower warranty claims, lower labor costs and the recovery of precious metals expended during production.

*Interest expense, net.* Net interest expense decreased \$1.2 million, or 41.4%, from \$2.9 million in 2001, to \$1.7 million in 2002. The reduction in interest expense was primarily attributable to the reduction of our overall debt, including our line of credit, by \$9.0 million from \$25.8 million at December 31, 2001, to \$16.8 million at December 31, 2002, and lower interest rates.

Other income, net. Other income, net includes interest income, rental income and foreign exchange transaction gains and losses. We recorded other income of \$1.4 million in 2001, compared with \$1.1 million in 2002. The reduction was primarily attributable to a decrease on \$0.4 million in foreign currency gains and various tax and insurance refunds received from \$0.6 million 2001, to nothing in 2002. Some of our transactions with foreign suppliers are denominated in foreign currencies, principally the Japanese yen. As exchange rates fluctuate relative to the U.S. dollar, exchange gains and losses occur.

Income (loss) before provision for income taxes. We recorded a pre-tax profit of \$4.8 million in 2001, compared to a pre-tax loss of \$4.2 million in 2002. The decline in income was due to lower revenues in 2002, increased development costs, higher outside professional fees, restructuring charges and a reduction in income derived from foreign currency fluctuations, which were partially offset by reduced start-up costs from our Dresden operations, improved manufacturing yields, lower warranty claims, the recovery of precious metals expended during production, lower labor costs, and a reduction in interest expense.

*Provision for income taxes.* In 2002, the federal government enacted legislation that established a tax holiday on alternative minimum tax obligations for 2001 and 2002. As a result, we received a refund during the second quarter from the Internal Revenue Service for our 2002 alternative minimum tax payment, and we were able to use an operating loss carry-forward to offset fully the federal income taxes incurred during the period.

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# **2001** compared to **2000**

Net revenues. Our net revenues decreased \$2.3 million, or 2.7%, from \$85.3 million in 2000, to \$83.0 million in 2001. Our sales to the automotive market increased by \$17.2 million, or 85.2%, from \$20.2 million in 2000 to \$37.4 million in 2001. In 2001, our Dresden operations began commercial production of film products for the automotive market. The additional production capacity from the Dresden plant was the primary factor in the increase of our sales to the automotive market during 2001. Our sales to the electronic display market decreased by \$18.0 million, or 37.7%, from \$47.7 million in 2000, to \$29.7 million in 2001. The decline in sales was primarily the result of the worldwide slowdown in the sale and manufacture of personal computers and the adoption of lower cost manufacturing alternatives by one of our major customers. Our sales to the architectural market decreased \$1.5 million, or 8.6%, from \$17.4 million in 2000, to \$15.9 million in 2001. The decrease was primarily the result of our using production machines previously used to produce products for the architectural market to manufacture products for the automotive market.

Cost of sales. Cost of sales decreased \$9.0 million, or 13.0%, from \$69.1 million in 2000 to \$60.1 million in 2001. Cost of sales decreased from 80.9% of net revenues in 2000 to 72.5% of net revenues for 2001. The higher costs in 2000, as a percentage of revenues, were due to higher start-up costs in our Tempe and Dresden operations and higher electronic display revenues during 2000, which generally yield lower gross margins as a result of outside processing costs. Additionally, the reduction in the number of employees at our Tempe and Palo Alto facilities effected during the first quarter of 2001 resulted in cost savings. We also realized improved manufacturing yield in our Palo Alto and Tempe facilities during 2001, which further contributed to the improvement in margin from 2000 to 2001. We benefited in 2001 from producing a greater portion of our products at our Dresden plant, which has lower costs as a result of lower payroll and operating expenses, as well as lower depreciation charges due to the grants provided for plant and equipment by the Saxony government.

*Gross profit and gross margin.* Our gross profit increased \$6.5 million, or 39.9%, from \$16.3 million in 2000 to \$22.8 million in 2001. Our gross margin improved from 19.1% in 2000 to 27.5% in 2001. The increase in gross profit and gross margin in 2001 was due to increased revenues from the Dresden plant with its lower cost base and cost savings and yield improvements in our Palo Alto and Tempe facilities.

Operating Expenses

*Research and development.* Research and development spending decreased \$1.2 million, or 17.9%, from \$6.7 million in 2000 to \$5.5 million in 2001. Research and development expenses decreased from 7.9% of net revenues for 2000 to 6.6% of net revenues for 2001. The decrease in our research and development spending during 2001 was primarily attributable to reduced headcount and cost control measures.

Selling, general and administrative. Selling, general and administrative expenses decreased \$1.6 million, or 12.7%, from \$12.6 million in 2000 to \$11.0 million in 2001. Selling, general and administrative expenses, as a percentage of revenue, decreased from 14.8% in 2000 to 13.3% for 2001. The higher expenses in 2000 were mainly the result of accounting, legal and consulting costs incurred relating to our restatement in 2000 of financial statements for prior periods. In 2001, we incurred higher expenses in Dresden as the production machines located there were brought up to commercial production levels. Performance based compensation also increased in 2001 as a result of our improved profitability.

*Legal settlement.* In 2000, we settled employment practices litigation relating to one individual for \$0.5 million. Legal fees and expenses we incur are included in selling, general and administrative expenses, while actual settlements are reported as legal settlements. We incurred no settlement costs in 2001.

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*Income* (loss) from operations. Income (loss) from operations increased from an operating loss of \$3.6 million in 2000 to an operating profit of \$6.3 million for 2001. The improvement was due to reduced start-up costs and increased revenue from our Dresden operations, improved manufacturing yields, cost reduction programs put in place in the Palo Alto and Tempe facilities, and a reduction in professional fees during 2001 compared to 2000.

*Interest expense, net.* We incurred net interest expense of \$2.8 million in 2000 and \$2.9 million in 2001, and capitalized interest incurred in connection with construction in process of \$1.8 million in 2000 and \$0.1 million in 2001. The increase in net interest expense resulted principally from the completion of construction in process related to the Dresden and Tempe facilities in late 2000.

Other income, net. We recorded other income of \$0.4 million in 2000, compared with \$1.4 million for 2001. Some of our transactions with foreign suppliers are denominated in foreign currencies, principally Japanese yen. As exchange rates fluctuate relative to the U.S. dollar, exchange gains and losses occur. We incurred a foreign currency loss in 2000 of \$0.1 million, and a foreign currency gain in 2001 of \$0.7 million. We offset higher rent expense in Palo Alto by subleasing space in this facility, resulting in rental income of \$0.4 million in 2000 and \$0.5 million in 2001.

*Income* (*loss*) before provision for income taxes. We recorded a pre-tax loss of \$6.1 million in 2000, compared to a pre-tax profit of \$4.8 million in 2001. Our improvement from a loss in 2000 to profitability in 2001 was due to higher revenue from the automotive market due to our Dresden operations, improved manufacturing yields and cost reduction programs put into place in our Palo Alto and Tempe facilities, a reduction in professional fees and an increase of other income, partially offset by a decrease in revenue from the electronic display market.

# Liquidity and capital resources

## Liquidity

Our cash and cash equivalents decreased by \$1.4 million from \$3.4 million at December 31, 2001 to \$2.0 million at December 31, 2002. Cash provided by operating activities declined by \$16.6 million, from \$13.8 million provided by operations in 2001 to \$2.8 million used in operations in 2002. The decline in cash from operating activities during 2002 was primarily the result of our net loss for the year, an increase in accounts receivable and inventory and a reduction in accounts payable. We increased cash used in investing activities by \$0.3 million from \$5.7 million in 2001, to \$6.0 million in 2002. The increase in cash used in investing activities was primarily due to increased capital expenditures of \$1.2 million. From \$5.9 million in 2001, to \$7.1 million in 2002. The increase in capital spending was partially offset by \$1.1 million in government grants and investment allowances received, which were used to partially fund capital expenditures in 2002. We increased cash from financing activities by \$12.3 million from \$4.6 million used in 2001, to \$7.7 million generated in 2002. The increase in cash from financing activities was primarily the result of a follow-on public offering of 3,500,000 shares of our common stock at a price of \$4.50 per share on July 8, 2002. On August 5, 2002, we sold an additional 307,300 shares at a price of \$4.50 per share, when our underwriters exercised a portion of their over allotment option. The net proceeds to the Company from the offering and the over allotment option after deducting underwriting discounts and commission and offering expenses, were approximately \$15.1 million. The cash provided by the follow-on offering was used to pay \$3.75 million against our term debt and to pay off borrowings of \$2.9 million under our line of credit. Our working capital increased by \$7.0 million in 2002, from a deficit of \$6.5 million at December 31, 2001, to \$0.5 million in working capital at December 31, 2002. We reduced our total liabilities from \$46.7 million at December 31, 2001 to \$36.1 million at December 31, 2002. Stockholders' equity increased from \$26.5 million at December 31, 2001 to \$40.5 million at December 31, 2002, primarily as a result of our follow-on offering,

We entered into an agreement with the Saxony government in May 1999 under which we receive investment grants. As of December 31, 2002, we had received \$4.7 million of the grants and accounted for these grants by applying the proceeds received to reduce the cost of our fixed assets of our Dresden manufacturing facility. If the Company fails to meet certain requirements in connection with these grants, the Saxony government has the right to demand repayment of the grants. (See Note 5.) During 2000, we also received \$1.0 million in investment allowances, which are reimbursements for capital expenditures, from the Saxony government and those proceeds were also applied to reduce the cost of our fixed assets of our Dresden manufacturing facility. We received an additional \$2.1 million in investment allowances from the Saxony government in 2001, and \$1.0 million in investment allowances in 2002. We expect to receive approximately \$1.0 million in investment allowances in 2003, based on investments made during 2002. Those funds have been applied to reduce the cost of our fixed assets of our Dresden manufacturing facility. Additionally, we have received \$0.6 million of Saxony government grants that as of December 31, 2002 were recorded as an advance until we earn the grant through future expenditures. The total annual amount of investment grants and investment allowances that we are entitled to seek varies from year to year based upon the amount of our capital expenditures that meet certain requirements of the Saxony government. Generally, we are not eligible to seek total investment grants and allowances for any year in excess of 33% of our eligible capital expenditures for that year. We expect to continue to finance a portion of our capital expenditures in Dresden with additional grants from the Saxony government and additional loans from German banks, some of which may be guaranteed by the Saxony government. However, we cannot guarantee that we will be eligible for or will receive additional grants in the future from

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#### Borrowing arrangements

The following table (with dollars in thousands) set forth the material terms of our indebtedness at December 31, 2002:

Description	Rate	Balance at December 31, 2002	Due in 2003
Line of credit	(1)	\$ 0	(1)
Term debt:			
Japanese bank loan guaranteed by Teijin	3.14%(2)	2,500	\$ 2,500
German bank loan dated May 12, 1999	6.13%(3)	2,502	357
German bank loan dated May 28, 1999	7.10%(4)	2,622	
German bank loan dated May 28, 1999	3.75%	1,197	449
German bank loan dated July 25, 2000	7.15%(5)	1,916	247
German bank loan dated August 14, 1999 (due June 30, 2009)	5.75%	1,769	
German bank loan dated June 29, 2000	5.75%	223	179
German bank loan dated July 10, 2000	7.10%	223	179
German bank loan dated December 18, 2000	7.50%	181	90
German bank loan dated December 19, 2000	7.50%	164	83
Note payable dated September 21, 2001	8.00%	70	70
Other equipment financings		118	78
Total term debt		13,485	4,232
Capital leases:			
Sales-leaseback dated July 19, 1999	13.00%	2,321	2,321
Sales-leaseback dated October 19, 1999	13.00%	946	946
Total capital leases		3,267	3,267

Description	Rate	Balance at December 31, 2002	Due in 2003
Total term debt and capital leases		16,75	2 \$ 7,499
Less current portion		7,49	9
Term debt, non current		\$ 9,25	3

- This line of credit expires in June 2003. Under the line, the Company can borrow an amount equal to 80% of eligible accounts receivable. The Company pays a finance fee equal to 0.88% per month of the average daily balance of the amount of accounts receivable against which the Company has borrowed. The Company is required to repay the lender amounts borrowed when it receives payments of these accounts receivable.
- (2) As of December 31, 2002, the interest rate on this loan was 3.14%. The interest rate is reset semi-annually at LIBOR plus 1%.
- (3) Interest rate will be reset to the then prevailing market rate in 2004.
- (4) Interest rate will be reset to the then prevailing market rate in 2009.
- (5) Interest rate will be reset to the then prevailing interest rate in 2005.

At December 31, 2001 and 2002, we were not in compliance with certain of the covenants of the guarantee by Teijin of the Japanese bank loan. Teijin and the Japanese bank waived the defaults under Teijin's guarantee of the loan that may exist for any measurement period through and including September 30, 2003 arising out of our failure to comply with the minimum quick ratio, tangible net worth and maximum debt/tangible net worth covenants. The waiver was conditioned on our agreement to prepay \$2.5 million of the debt out of the proceeds of our follow-on public offering, and the prepayment of \$2.5 million was made on November 6, 2002. Under the terms of the loan agreement, the remaining balance of \$2.5 million outstanding under this loan at December 31, 2002 is due in 2003. Accordingly, we have classified it as current.

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We are in compliance with all of the covenants of the German bank loans, and we have classified \$9.2 million outstanding under the German bank loans as a long-term liability at December 31, 2002, and we classified \$1.6 million as current at December 31, 2002.

We are in default under a master sale-leaseback agreement with respect to two of our production machines. We have withheld lease payments in connection with a dispute with the leasing company. An agent purporting to act on behalf of the leasing company has recently filed suit against us to recover the unpaid lease payments and the alleged residual value of the machines. The leasing company holds a security interest in the production machines and may be able to repossess them. As a result, we have classified all \$3.3 million outstanding under those agreements as short-term capital lease liabilities, as of December 31, 2002.

Under the terms of our grant agreement with the Saxony government, we are required to meet investment and hiring targets by June 30, 2006. If we fail to meet those targets, the Saxony government is permitted to require us to repay all grants and investment allowances from the Saxony government previously received by us.

## Equity transactions

In April 2001, we raised \$1.0 million from the sale of 422,119 shares of common stock to Globamatrix, a customer. In addition, the exercise of stock options and employee purchases under our employee stock purchase plan generated cash proceeds to us of \$0.7 million during 2001.

On July 8, 2002, we completed a follow-on public offering of 3,500,000 shares our common stock at a price of \$4.50 per share. On August 5, 2002, we sold an additional 307,300 shares at a price of \$4.50 per share, when our underwriters exercised a portion of their over allotment option. The net proceeds to the Company from the offering and the over allotment option, after deducting underwriting discounts and commission and offering expenses, were approximately \$15.1 million. Additionally, the exercise of stock options and employee purchases under our employee stock purchase plan generated cash proceeds to us of \$1.9 million during 2002.

## Capital expenditures

During 2001, we spent \$5.9 million for capital expenditures, primarily for production equipment and computer information system resources. In the fourth quarter of 2001, we placed an order to purchase PM 10 for our Dresden facility, to be paid for by progress payments aggregating \$6.6 million beginning in 2001 through the second quarter of 2003, when all of the payment milestones are expected to be achieved. We do not currently have financing in place to fund the remaining progress payments of \$1.2 million for PM 10 but expect to fund the remaining progress payments through a combination of investment allowances from the Saxony government, and cash from operating activities.

We spent approximately \$7.1 million in capital expenditures in 2002, which consisted primarily of approximately \$3.2 million in progress payments for PM 10 in Dresden, approximately \$1.3 million for an enterprise resource planning system, and approximately \$1.5 million to maintain and upgrade our production facilities in Tempe and Dresden.

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Our future payment obligations on our borrowings pursuant to our term debt, capital lease obligations, non-cancelable operating leases and other noncancellable contractual commitments at December 31, 2002 were as follows (in thousands):

## Payments Due by Period

Contractual Obligations		Total		Less than 1 year		1-3 years		4-5 years		After 5 years	
Term debt(1)	\$	13,299	\$	4,085	\$	2,069	\$	1,359	\$	5,786	
Capital lease obligations(2)		3,453		3,414		39					
Operating leases(3)		8,205		3,237		3,992		976			
Other noncancellable contractual commitments(4)		1,200		1,200							
Total contractual cash obligations	\$	26,157	\$	11,936	\$	6,100	\$	2,335	\$	5,786	

- (1) Represents loan agreements with a Japanese bank and several German banks. (See Note 4 to consolidated financial statements.)
- (2) Primarily represents our sales-leaseback agreements, which are currently in default. (See Note 4 to consolidated financial statements.)
- (3)

  Represent the remaining rents owed on buildings we rent in Palo Alto and Tempe.
- (4) Represents remaining progress payments on PM 10.

We have prepared our consolidated financial statements assuming we will continue as a going concern and meet our obligations as they become due. We incurred a net loss and negative cash flows from operations in 2002 and expect to incur net losses through at least the first quarter of 2003. Our current credit agreement expires in June 2003 and we are in discussions with potential lenders regarding establishing a new credit facility. These factors together with our working capital position and our significant debt service and other contractual obligations at December 31, 2002, raise substantial doubt about our ability to continue as a going concern.

In December 2002, we restructured our operations to reduce our cost structure by reducing our work force in Palo Alto and vacating excess facilities after consolidating our operations in Palo Alto. These actions are expected to help improve our operating results in 2003 but will continue to impact our operating cash flows until our lease commitments for the excess facilities expire in December 2004.

## Alternative financing sources

Our current bank credit facility expires on June 30, 2003, and we are in discussions with potential lenders regarding the establishment of a new credit facility to meet our projected working capital and capital expenditure needs in 2003. We cannot provide any assurance that alternative sources of financing will be available at all or on terms acceptable to us. Our ability to raise additional funds may be adversely affected by a number of factors relating to us, as well as factors beyond our control including the receipt of a going concern qualification in connection with the audit of our 2002 consolidated financial statements. We anticipate spending between \$2.0 million and \$6.0 million in 2003 on capital expenditures, including \$1.2 million for the final progress payments for PM 10, the completion of our ERP system implementation and the maintenance and upgrade of our production facilities in Palo Alto, Tempe and Dresden. If we are unable to obtain additional financing sources, we may be unable to satisfactorily meet all of our cash commitments required to fully implement our business plans.

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## Recently issued accounting pronouncements

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," which addresses the recognition, measurement and reporting costs associated with exit or disposal activities, and supersedes previous authoritative guidance, Emerging Issues Task Force ("EITF") No. 94-3. The principal difference is that the new standard requires that a liability for a disposal activity (including those related to the employee termination benefits and obligations under operation leases and other contracts) be recognized when a liability is incurred, and not necessarily the date of an entity's commitment to an exit plan, as under EITF No. 94-3. SFAS No. 146 also establishes that the initial measurement of a liability recognized under SFAS No. 146 be based on fair value. The provisions of SFAS No. 146 are effective for exit or disposal activities that are initiated after December 31, 2002, with early application encouraged.

In November 2002, the FASB issued FASB Interpretation ("FIN") No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." FIN No. 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN No. 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN No. 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002, irrespective of the guarantor's fiscal year-end. The disclosure requirements of FIN No. 45 are effective for financial statements of interim or annual periods ending after December 15, 2002. The Company does not expect the adoption of FIN No. 45 to have any significant impact on its consolidated financial position, results of operations or cash flows.

In November 2002, the Emerging Issues Task Force ("EITF") reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

In December 2002, the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 148, "Accounting for Stock-Based Compensation, Transition and Disclosure." SFAS No. 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. SFAS No. 148 also requires that disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation be displayed more prominently and in a tabular format. Additionally, SFAS No. 148 requires disclosure of the pro forma effect in interim financial statements. The transition and annual disclosure requirements of SFAS No. 148 are effective for fiscal years ended after December 15, 2002. The interim disclosure requirements are effective for interim periods beginning after December 15, 2002. The company believes that the adoption of this standard will have no material impact on its financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51." FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the end of the first annual period beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

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#### RISK FACTORS

#### **Financial Risks**

## Our working capital position, financial commitments and historical performance may prevent us from obtaining additional financing.

We have prepared our consolidated financial statements assuming we will continue as a going concern and meet our obligations as they become due. We incurred a net loss and negative cash flows from operations in 2002 and expect to incur net losses through at least the first quarter of 2003. Our current credit agreement expires in June 2003 and we are in discussions with potential lenders regarding establishing a new credit facility. These factors together with our working capital position and our significant debt service and other contractual obligations at December 31, 2002, raise substantial doubt about our ability to continue as a going concern without restoring profitable operations, generating cash flow from operating activities and obtaining additional financing. These and other factors related to our business during recent years, including the restatement in 2000 of our financial statements for prior periods, operating losses in 1998, 1999 2000 and 2002, our past failure to comply with covenants in our financing agreements and suspension of trading of our common stock on NASDAQ in 2000, may make it difficult for us to secure additional borrowings on favorable terms or at all. We intend to seek additional borrowings, or alternative sources of financing and difficulties in borrowing money or raising financing could have a material adverse effect on our operations, planned capital expenditures, ability to comply with the terms of government grants and future growth.

#### Covenants or defaults under our credit agreements may prevent us from borrowing or force us to curtail our operations.

As of December 31, 2002, we had total outstanding obligations under our credit agreements of \$16.8 million. Our inability to make timely payments of interest or principal under these facilities could materially adversely affect our ability to borrow money under existing credit facilities, to secure additional borrowings or to function as a going concern. Our current credit facilities contain financial covenants that will require us to meet certain financial performance targets and operating covenants that limit our discretion with respect to business matters. Among other things, these covenants restrict our ability to borrow additional money, create liens or other encumbrances, and make certain payments including dividends and capital expenditures. Many of these loans contain provisions that permit the lender to declare the loans immediately due if there is a material adverse change in our business. These credit facilities also contain events of default that could require us to pay off indebtedness before its maturity. The restrictions imposed by these credit facilities or the failure of lenders to advance funds under these facilities could force us to curtail our operations or have a material adverse effect on our liquidity.

## Our ability to borrow is limited by the nature of our equipment and some of our accounts receivable.

Our equipment is custom designed for a special purpose. In addition, a large portion of our accounts receivable are from foreign sales, which are often more difficult to collect than domestic accounts receivable. As a result of the nature of our equipment and accounts receivable, lenders will generally allow us to borrow less against these items as collateral than they would for other types of equipment or domestic accounts receivable, or require us to provide additional credit enhancements.

If we default under our secured credit facilities and financing arrangements, the lenders could foreclose on the assets we have pledged to them requiring us to significantly curtail or even cease our operations.

In connection with our current borrowing facilities and financing arrangements, we have granted security interests in and liens on substantially all of our assets, including our production machines and our Dresden facility, to secure the loans. We are currently being sued under a master sale-leaseback agreement with respect to two of our production machines because we have withheld lease payments in

connection with a dispute with the leasing company. The leasing company holds a security interest in the production machines and may be able to repossess those machines. If the leasing company were to repossess one or more of those machines, our ability to produce product would be materially impaired. Our revenues, gross margins and operating efficiency would also be materially adversely affected. Our obligations under our secured credit facilities contain cross-default and cross-acceleration provisions and provisions that allow the lenders to declare the loans immediately due if there is a material adverse change in our business. If we default under the credit facilities or financing arrangements the lenders could declare all of the funds borrowed there under, together with all accrued interest, immediately due and payable. If we are unable to repay such indebtedness, the lenders could foreclose on the pledged assets. If the lenders foreclose on our assets, we would be forced to significantly curtail or even cease our operations.

Our quarterly revenue and operating results are volatile and difficult to predict. If we fail to meet the expectations of public market analysts or investors, the market price of our common stock may decrease significantly.

Our quarterly revenue and operating results have varied significantly in the past and will likely vary significantly in the future. Our revenue and operating results may fall below the expectations of securities analysts or investors in future periods. Our failure to meet these expectations would likely adversely affect the market price of our common stock.

Our quarterly revenue and operating results may vary depending on a number of factors, including:

fluctuating customer demand, which is influenced by a number of factors, including market acceptance of our products and the products of our customers and end-users, changes in product mix, and the timing, cancellation or delay of customer orders and shipments;

the timing of shipments of our products by us and by independent subcontractors to our customers;

manufacturing and operational difficulties that may arise due to, among other things, quality control, capacity utilization of our production machines, unscheduled equipment maintenance, and the hiring and training of additional staff;

our ability to introduce new products on a timely basis; and

competition, including the introduction or announcement of new products by competitors, the adoption of competitive technologies by our customers, the addition of new production capacity by competitors and competitive pressures on prices of our products and those of our customers.

#### We expect to be subject to increased foreign currency risk in our international operations.

In 2002, approximately 15% of our revenues were denominated in euros, primarily related to sales from our Dresden operation, including sales to one of our largest customers, a European automotive glass manufacturer. As a result, our operating results and cash flows may vary due to fluctuations of the euro against the dollar. In addition, other customers may request to make payments in foreign currencies. Also, certain transactions with foreign suppliers are denominated in foreign currencies, primarily yen.

The majority of our international sales are currently invoiced and collected in U.S. dollars. A strengthening in the dollar relative to the currencies of those countries in which we do business would increase the prices of our products as stated in those currencies and could hurt our sales in those countries. Significant fluctuations in the exchange rates between the U.S. dollar and foreign currencies could cause us to lower our prices and thus reduce our profitability and cash flows. These fluctuations could also cause prospective customers to cancel or delay orders because of the increased relative cost of our products.

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## **Operational Risks**

We depend on a small number of customers for nearly all of our sales, and the loss of a large customer could materially adversely affect our revenues or operating results.

Our ten largest customers accounted for approximately 85%, 85% and 84% of net sales in 2000, 2001 and 2002, respectively. We have contracts extending past 2003 with only three of these customers. We expect to continue to derive a significant portion of our net sales from this relatively small number of customers. Accordingly, the loss of a large customer could materially hurt our business, and the deferral or loss of anticipated orders from a large customer or a small number of customers could materially reduce our revenue and operating results in any

period. Some of our largest automotive glass customers have used a technology direct-to-glass sputtering as an alternative to our window films, which in 2002 resulted in a decrease in orders from these customers. The continued or expanded use of this technology by our automotive glass customers would have a material adverse effect on our results of operations and financial position.

We must continue to develop new products or enhance existing products on a timely basis to compete successfully in a rapidly changing marketplace.

Our future success depends upon our ability to introduce new products, improve existing products and processes to keep pace with technological and market developments, and to address the increasingly sophisticated and demanding needs of our customers, especially in the electronic display and automotive markets. Technological changes, process improvements, or operating improvements that could adversely affect us include:

the development of competing technologies to our anti-reflective and silver reflector films for liquid crystal displays in the flat panel display industry;

changes in the way coatings are applied to alternative substrates such as tetra acetate cellulose, or TAC;

the development of new technologies that improve the manufacturing efficiency of our competitors;

the development of new materials that improve the performance of products that could compete with our products; and

improvements in the alternatives to the sputtering technology we use to produce our products, such as plasma enhanced chemical vapor deposition, or PECVD.

Our research and development efforts may not be successful in developing products in the time, or with the characteristics, necessary to meet customer needs. If we do not adapt to technological changes, or process or operating improvements, our competitive position, operations and prospects would be materially adversely affected.

Our ability to successfully identify suitable target companies and integrate acquired companies or technologies may affect our future growth.

A potential part of our continuing business strategy is to consider acquiring companies, products, and technologies that complement our current products, enhance our market coverage, technical capabilities or production capacity, or offer other growth opportunities. Our ability to successfully complete acquisitions requires that we identify suitable target companies, agree on acceptable terms, and obtain acquisition financing on acceptable terms. In connection with these acquisitions, we could incur debt, amortization expenses relating to identified intangibles, impairment charges relating to goodwill, or merger related charges, or could issue stock that would dilute our current shareholders' percentage of ownership. The success of any acquisitions will depend upon our ability to integrate acquired operations, retain and motivate acquired personnel, and increase the customer base of the

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combined businesses. We cannot assure you that we will be able to accomplish all of these goals. Any future acquisitions would involve certain additional risks, including:

difficulty integrating the purchased operations, technologies, or products;

unanticipated costs, which would reduce our profitability;

diversion of management's attention from our core business;

potential entrance into markets in which we have limited or no prior experience; and

potential loss of key employees, particularly those of the acquired business.

Failure to meet the volume requirements of our customers may result in a loss of business or contractual penalties.

Our long-term competitive position will depend to a significant extent on our manufacturing capacity. The failure to have sufficient capacity, to fully utilize capacity when needed or to successfully integrate and manage additional capacity in the future could adversely affect our relationships with customers and cause customers to buy similar products from our competitors if we are unable to meet their needs. For example, we believe that we lost substantial potential architectural products sales in 2001 because we did not have the capacity to manufacture the required amounts of products. Also, our failure to produce required amounts of products under some of our contracts will result in price reductions on future sales under such contracts or penalties under which we would be required to reimburse the customer for the full cost of any product not delivered in a timely manner, either of which would reduce our gross margins.

## We depend on our OEM customers for the sale of our products.

We sell a substantial portion of our products to a relatively small number of original equipment manufacturers, or OEMs. The timing and amount of sales to these customers ultimately depend on sales levels and shipping schedules for the OEM products into which our products are incorporated. We have no control over the volume of products shipped by our OEM customers or shipping dates, and we cannot be certain that our OEM customers will continue to ship products that incorporate our products at current levels or at all. We currently have long-term contracts with only two of our OEM customers. Failure of our OEM customers to achieve significant sales of products incorporating our products and fluctuations in the timing and volume of such sales could be harmful to our business. Failure of these customers to inform us of changes in their production needs in a timely manner could also hinder our ability to effectively manage our business.

# We rely upon our OEM customers for information relating to the development of new products so that we are able to meet end-user demands.

We rely on our OEM customers to inform us of opportunities to develop new products that serve end-user demands. If our OEM customers do not present us with market opportunities early enough for us to develop products to meet end-user needs in a timely fashion, or if the OEMs fail to anticipate end-user needs at all, we may fail to develop new products or modify our existing products for the end-user markets for our products. In addition, if our OEM customers fail to accurately anticipate end-user demands, we may spend resources on products that are not commercially successful.

## We depend on a distributor for the sale of our after-market products.

We primarily use one independent distributor to sell our after-market products. We have a distribution agreement with Globamatrix Holdings Pte. Ltd., or Globamatrix, under which we granted an exclusive worldwide license to distribute our after-market applied film in the automotive and architectural glass markets. Failure of Globamatrix to achieve significant sales of products incorporating our products and fluctuations in the timing and volume of such sales could be harmful to our business. We believe that the success of our after-market products will continue to depend upon this distributor.

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# We face intense competition, which could affect our ability to increase our revenue, maintain our margins and increase our market share.

The market for each of our products is intensely competitive and we expect competition to increase in the future. Competitors vary in size and in the scope and breadth of the products they offer. We compete both with companies using technology similar to ours and companies using other technologies or developing improved technologies. Many of our current and potential competitors have significantly greater financial, technical, marketing and other resources than we have. In addition, many of our competitors have well-established relationships with our current and potential customers and have extensive knowledge of our industry. In fact, some of our current and potential customers currently produce, or are capable of creating, products that compete with our products.

# We may not be able to expand our manufacturing capacity efficiently which could lead to lower gross margins.

We have a new production machine (PM 10) for our Dresden manufacturing facility, which began commercial production in the first quarter of 2003. In addition, we anticipate that PM 7 in our Tempe facility will be available for limited commercial production during 2003. Additionally, PM 7 is currently being used in several, customer paid, research projects on products we expect to become commercially available in 2003. During the processes of bringing PM 7 and PM 10 up to commercial production levels, we expect to have decreased manufacturing yields and higher costs, which will lower our gross margins.

We are dependent on key suppliers of materials, which may prevent us from delivering product in a timely manner.

We manufacture all of our products using materials procured from third-party suppliers. We do not have long-term contracts with our third-party suppliers, except for an agreement with a third-party supplier to purchase Indium metal through the second quarter of 2003. Certain of the materials we require are obtained from a limited number of sources. Delays or reductions in product shipments could damage our relationships with customers. Further, a significant increase in the price of one or more of the materials used in our products could have a material adverse effect on our cost of goods sold and operating results.

## We are dependent on a few qualified subcontractors to add properties to some of our products.

We rely on third-party subcontractors to add properties, such as adhesives, to some of our products. There are only a limited number of qualified subcontractors that can provide some of the services we require and we do not have long-term contracts with any of those subcontractors. Qualifying alternative subcontractors could take a great deal of time or cause us to change product designs. The loss of a subcontractor could adversely affect our ability to meet our scheduled product deliveries to customers, which could damage our relationships with customers. If our subcontractors do not produce a quality product, our yield will decrease and our margins will be lower. Further, a significant increase in the price charged by one or more of our subcontractors could force us to raise prices on our products or lower our margins, which could have a material adverse effect on our operating results.

We are dependent on key suppliers of production machines, which may prevent us from delivering an acceptable product on a timely basis and limit our capacity for revenue growth.

Our production machines are large, complex and difficult to manufacture. It can take up to a year from the time we order a machine until it is delivered. Following delivery, it can take us, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a very limited number of companies that are capable of manufacturing these machines. Our inability in the future to have new production machines

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manufactured and prepared for commercial production in a timely manner would prevent us from delivering product on a timely basis and limit our capacity for revenue growth.

#### Fluctuations or slowdowns in the overall electronic display industry have and may continue to adversely affect our revenues.

Our business depends in part on sales by manufacturers of products that include electronic displays. The markets for electronic display products are highly cyclical and have experienced periods of oversupply resulting in significantly reduced demand for our products. For example, due to the deteriorating economic environment, sales by flat cathode ray tube manufacturers decreased in 2001 and further in 2002, contributing to our electronic display product revenues declining by 38% 2001, and another 11% for 2002. Mitsubishi Electric is the only CRT manufacturer that buys our anti-reflective ("AR") film and it has decided to consolidate all of its manufacture of this product to Japan. In connection with that consolidation, Mitsubishi expects to cease production of the 17" AR product in its Mexico plant by the third quarter of 2003. We expect to continue to produce AR product in the 22" and 19" sizes for Mitsubishi Electric. We expect a reduction in revenues of the AR product in 2003 and a further reduction in succeeding years. If the flat display and other electronic display markets in which we sell our products do not recover or experience further slowdowns in the future, it could cause revenues from our electronic display products to decrease further.

## Performance, reliability or quality problems with our products may cause our customers to reduce or cancel their orders.

We manufacture our products based on specific, technical requirements of each of our customers. We believe that future orders of our products will depend in part on our ability to maintain the performance, reliability and quality standards required by our customers. If our products have performance, reliability or quality problems, then we may experience:

delays in collecting accounts receivable;

higher manufacturing costs;

additional warranty and service expenses; and

reduced or cancelled orders.

For example, in 1998, our operating results were materially adversely affected by quality problems associated with the electronic display film produced by us for one of our largest customers.

If we fail to recruit and retain a significant number of qualified technical personnel we may not be able to develop, enhance and introduce our products on a timely basis, and our business will be harmed.

We require the services of a substantial number of qualified technical personnel. Intense competition and aggressive recruiting, as well as a high-level of employee mobility characterize the market for skilled technical personnel. These characteristics make it particularly difficult for us to attract and retain the qualified technical personnel we require. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate technical qualifications. It is especially difficult for us to recruit qualified personnel to move to the location of our Palo Alto, California offices because of the high-cost of living. If we are unable to recruit and retain a sufficient number of qualified technical employees, we may not be able to complete the development of, or enhance, our products in a timely manner. As a result, our business may be harmed and our operating results may suffer.

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#### We may be unable to attract or retain the other highly skilled employees that are necessary for the success of our business.

In addition to our dependence on our technical personnel, our success also depends on our continuing ability to attract and retain other highly skilled employees. We depend on the continued services of our senior management, particularly Thomas G. Hood, our President and Chief Executive Officer. We do not have employment contracts with any of our officers or key person life insurance covering any officer or employee. Our officers have technical and industry knowledge that cannot easily be replaced. Competition for similar personnel in our industry where we operate is intense. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. If we do not succeed in attracting or retaining the necessary personnel, our business could be adversely affected.

If we are unable to adequately protect our intellectual property, third parties may be able to duplicate our products or develop functionally equivalent or superior technology.

Our success depends in large part upon our proprietary technology. We rely on our know-how, as well as a combination of patent, trademark and trade secret protection, to establish and protect our intellectual property rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Policing unauthorized use of our products is difficult. Our means of protecting our proprietary rights may not be adequate. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States. During 2001, one of our U.S. patents relating to our architectural products expired. In the next three years, two more U.S. patents will expire. Expiration of these patents or our failure to adequately protect our proprietary rights may allow third parties to duplicate our products or develop functionally equivalent or superior technology. In addition, our competitors may independently develop similar technology or design around our proprietary intellectual property.

#### Our business is susceptible to numerous risks associated with international operations.

We have expanded our operations and hired additional personnel to address international markets for the thin film coatings industry. International revenues amounted to approximately 85%, 87% and 85% of our net revenues during 2000, 2001 and 2002, respectively. The distance between Palo Alto and Dresden creates logistical and communications challenges. In addition, to achieve acceptance in international markets, our products must be modified to handle a variety of factors specific to each international market as well as local regulations. We may also be subject to a number of other risks associated with international business activities. These risks include:

unexpected changes in and the burdens and costs of compliance with a variety of foreign laws and regulatory requirements; potentially adverse tax consequences; and

global economic turbulence and political instability.

## If we fail to comply with environmental regulations, our operations could be suspended.

We use hazardous chemicals in producing our products and have air and water emissions that require controls. As a result, we are subject to a variety of local, state and federal governmental regulations relating to the storage, discharge, handling, emission, generation, manufacture and

disposal of toxic or other hazardous substances used to manufacture our products, compliance with which is expensive. Our failure to comply with current or future regulations could result in the imposition of substantial fines on us, suspension of production, alteration of our manufacturing processes, increased costs or cessation of operations.

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## We rely on our domestic sales representatives, without whom our architectural product sales may suffer.

We use independent sales representatives to promote our Heat Mirror products to architects in the United States. If some or all of our sales representatives experience financial difficulties, or otherwise become unable or unwilling to promote our products, our business could be harmed. These sales representatives could reduce or discontinue promotion of our products. They may not devote the resources necessary to provide effective marketing support to us. In addition, we depend upon the continued viability and financial resources of these representatives, many of which are small organizations with limited working capital. These representatives, in turn, depend substantially on general economic conditions and other factors affecting the markets for the products they promote. We believe that our success in this market will continue to depend upon these sales representatives.

# We may experience unanticipated warranty or other claims with respect to our products which may lead to extensive litigation costs and expenses.

In the ordinary course of business, we have periodically become engaged in litigation principally as a result of disputes with customers of our architectural products. We have settled some of these suits and others are pending. We may become engaged in similar or other lawsuits in the future. For example, we have recently received a letter that threatens litigation based upon the allegation that a sealant provided by a third party and used with our film was defective, and as a result the plaintiff has suffered elevated warranty replacement claims and costs. Some of our products that have been the basis for lawsuits against us could be the basis for future lawsuits. An adverse outcome in the defense of a warranty or other claim could subject us to significant liabilities to third parties. Any litigation, regardless of the outcome, could be costly and require significant time and attention of key members of our management and technical personnel.

# We may face extensive damages or litigation costs if our insurance carriers seek to have us indemnify them for settlements of past and outstanding litigation.

Several of our insurance carriers have reserved their rights to seek indemnification from us for substantial amounts paid to plaintiffs by the insurance carriers as part of settlements of litigation relating to our architectural products. Our insurance carriers in a case in which the plaintiff alleged we were responsible for defects in window products manufactured by others have advised us that they intend to seek reimbursement for settlement and defense costs. Any claims, with or without merit, could require significant time and attention of key members of our management and result in costly litigation.

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Financing risk Our exposure to market rate risk for changes in interest rates relates primarily to our term loan, specifically our loan from Sanwa Bank, which is tied to the London Interbank Offered Rate, and our line of credit which bears a finance fee equal to 0.88% per month of the average daily balance of the accounts receivable against which we have borrowed. In addition, the interest rate on one of our German loans will be reset to the prevailing market rate in 2004 and on another of our German loans will be reset to the prevailing market rate in 2009. Fluctuations or changes in interest rates may adversely affect our expected interest expense. The effect of a 10% fluctuation in the interest rate on our loan from Sanwa Bank would have an effect of less than \$25,000 and \$10,000 on our interest expense for the years ended December 31, 2001 and 2002, respectively. The effect of interest rate fluctuations during 2001 and 2002 was not material.

Investment risk We invest our excess cash in money market accounts and, by practice, limit the amount of exposure to any one institution. Investments in both fixed rate and floating rate interest earning instruments carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely affected due to a rise in interest rates, while floating rate securities may produce less income

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than expected if interest rates fall. The effect of a 10% fluctuation in the interest rate of any floating rate securities would have had an adverse effect of less than \$75,000 for 2002.

Foreign currency risk International revenues (defined as sales to customers located outside of the United States) accounted for approximately 85% of our total sales in 2002. Of this amount, approximately 16% was denominated in euros relating to sales from our Dresden operation. The other 85% of our international sales were denominated in US dollars. In addition, certain transactions with foreign suppliers are denominated in foreign currencies (principally Japanese Yen). The effect of a 10% fluctuation in the euro exchange rate would have had an effect of \$1.1 million on net revenues for the year ended December 31, 2002 and the effect on expenses of a 10% fluctuation in the Yen exchange rate would have been approximately \$0.9 million for 2002.

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#### ITEM 8. FINANCIAL STATEMENTS

#### REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Southwall Technologies Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Southwall Technologies Inc. (the "Company") and its subsidiaries at December 31, 2001 and 2002, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States of America. These consolidated financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits of these consolidated financial statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether these consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in these consolidated financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company incurred a net loss and negative cash flows from operating activities in 2002 and has significant debt service and other contractual obligations at December 31, 2002. These factors raise substantial doubt about its ability to continue as a going concern. Management's plans are outlined in Note 2. The consolidated financial statements do not include any adjustments that may result from the ultimate resolution of this matter.

PricewaterhouseCoopers LLP

San Jose, California February 25, 2003

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#### SOUTHWALL TECHNOLOGIES INC.

#### CONSOLIDATED BALANCE SHEETS

(dollars and shares in thousands, except for per share data)

	December 31, 2001		December 31, 2002
ASSETS			
Current assets			
Cash and cash equivalents	\$ 3,	362 \$	1,998

Restricted cash         1,602           Accounts receivable, net of allowance for bad debts of \$389 and \$552         8,448           Inventories, net         6,151           Other current assets         23,606           Property, plant and equipment, net         47,841           Restricted loan proceeds         738           Other assets         973           Total assets         \$ 73,158           LIABILITIES AND STOCKHOLDERS' EQUITY           Current portion term debt         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding         8,323,20           Capital in excess of par value         \$2,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         (172           Translation gain (loss) on subsidiary         (172	I	December 31, 2002
Inventories, net		531
Other current assets         4,043           Total current assets         23,606           Property, plant and equipment, net         47,841           Restricted loan proceeds         738           Other assets         973           Total assets         \$ 73,158           LIABILITIES AND STOCKHOLDERS' EQUITY           Current liabilities:           Current portion term debt         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         \$2,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910	3	8,995
Total current assets   23,606		8,537
Property, plant and equipment, net         47,841           Restricted loan proceeds         973           Other assets         973           Total assets         \$ 73,158           LIABILITIES AND STOCKHOLDERS' EQUITY           Current liabilities:           Current portion term debt         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         52,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         (172           Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910		4,310
Restricted loan proceeds         738           Other assets         973           Total assets         \$ 73,158           LIABILITIES AND STOCKHOLDERS' EQUITY           Current liabilities:           Current portion term debt         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         52,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910	í	24,371
Other assets         \$ 73,158           LIABILITIES AND STOCKHOLDERS' EQUITY           Current liabilities:           Current portion term debt         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         52,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910		50,251
Total assets \$ 73,158  LIABILITIES AND STOCKHOLDERS' EQUITY Current liabilities:  Current portion term debt \$ 8,315 Line of credit \$ 2,974 Accounts payable \$ 10,338 Accrued compensation \$ 2,794 Other accrued liabilities \$ 5,656  Total current liabilities \$ 30,077  Term debt \$ 14,513 Government grants advanced \$ 941 Other \$ 1,175  Total liabilities \$ 46,706  Stockholders' equity: Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding \$ 8,332 and 12,527 Capital in excess of par value \$ 52,614 Notes receivable \$ 48 Accumulated other comprehensive income (loss) Translation gain (loss) on subsidiary \$ (172 Accumulated deficit \$ (25,910)		885
LIABILITIES AND STOCKHOLDERS' EQUITY           Current liabilities:         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         \$           Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         \$2,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         (172           Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910		1,075
Current liabilities:         \$ 8,315           Line of credit         2,974           Accounts payable         10,338           Accrued compensation         2,794           Other accrued liabilities         5,656           Total current liabilities         30,077           Term debt         14,513           Government grants advanced         941           Other         1,175           Total liabilities         \$ 46,706           Stockholders' equity:         Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527         \$ 8           Capital in excess of par value         52,614           Notes receivable         (88           Accumulated other comprehensive income (loss)         (172           Translation gain (loss) on subsidiary         (172           Accumulated deficit         (25,910	\$	76,582
Line of credit       2,974         Accounts payable       10,338         Accrued compensation       2,794         Other accrued liabilities       5,656         Total current liabilities       30,077         Term debt       14,513         Government grants advanced       941         Other       1,175         Total liabilities       \$ 46,706         Stockholders' equity:       Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527       \$ 8         Capital in excess of par value       52,614         Notes receivable       (88         Accumulated other comprehensive income (loss)       (172         Translation gain (loss) on subsidiary       (172         Accumulated deficit       (25,910		
Accounts payable 10,338 Accrued compensation 2,794 Other accrued liabilities 5,656  Total current liabilities 30,077  Term debt 14,513 Government grants advanced 941 Other 1,175  Total liabilities \$46,706  Stockholders' equity: Common stock, \$0,001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$8  Capital in excess of par value 52,614 Notes receivable (88 Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172 Accumulated deficit (25,910	\$	7,499
Accrued compensation 2,794 Other accrued liabilities 5,656  Total current liabilities 30,077  Term debt 14,513 Government grants advanced 941 Other 1,175  Total liabilities \$ 46,706  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614 Notes receivable (88 Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172 Accumulated deficit (25,910	ļ	
Total current liabilities  Total current liabilities  30,077 Term debt 14,513 Government grants advanced 941 Other 1,175  Total liabilities \$ 46,706  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8 Capital in excess of par value Notes receivable Accumulated other comprehensive income (loss) Translation gain (loss) on subsidiary  (172 Accumulated deficit  (25,910	}	9,244
Total current liabilities 30,077  Term debt 14,513 Government grants advanced 941 Other 1,175  Total liabilities \$ 46,706  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8 Capital in excess of par value 52,614 Notes receivable (88 Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172 Accumulated deficit (25,910	ļ	1,254
Term debt Government grants advanced Other  Total liabilities  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527  Capital in excess of par value Notes receivable Accumulated other comprehensive income (loss) Translation gain (loss) on subsidiary Accumulated deficit  14,513 941 941 941 941 941 941 941 941 941 941	Ó	5,886
Term debt Government grants advanced Other  Total liabilities  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527  Capital in excess of par value Notes receivable Accumulated other comprehensive income (loss) Translation gain (loss) on subsidiary Accumulated deficit  14,513 941 941 941 941 941 941 941 941 941 941	,	23,883
Government grants advanced 941 Other 1,175  Total liabilities \$ 46,706  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8 Capital in excess of par value 52,614 Notes receivable (88 Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172 Accumulated deficit (25,910		23,003
Other  Total liabilities  \$ 46,706  Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527  Capital in excess of par value Notes receivable Accumulated other comprehensive income (loss) Translation gain (loss) on subsidiary  Accumulated deficit  (172  Accumulated deficit		9,253
Total liabilities \$ 46,706  Stockholders' equity:  Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614  Notes receivable (88  Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910		604
Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614  Notes receivable Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910	i	2,368
Stockholders' equity: Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614  Notes receivable Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910		
Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614  Notes receivable (88  Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910	\$	36,108
Common stock, \$0.001 par value, 20,000 shares authorized; issued and outstanding 8,332 and 12,527 \$ 8  Capital in excess of par value 52,614  Notes receivable (88  Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910		
Capital in excess of par value 52,614  Notes receivable (88  Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary (172  Accumulated deficit (25,910		
Notes receivable  Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary  Accumulated deficit  (25,910		12
Accumulated other comprehensive income (loss)  Translation gain (loss) on subsidiary  Accumulated deficit  (25,910		69,657
Translation gain (loss) on subsidiary (172 Accumulated deficit (25,910	3)	(126)
Accumulated deficit (25,910		
		1,032
Total stockholders' equity 26,452	))	(30,101)
	2	40,474
Total liabilities and stockholders' equity \$ 73,158	\$ \$	76,582

The accompanying notes are an integral part of these consolidated financial statements.

## SOUTHWALL TECHNOLOGIES INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS

(dollars and shares in thousands, except per share data)

		Year Ended December 31,					
		2000		2001		2002	
Net revenues	\$	85,348	\$	82,976	\$	68,759	
Cost of sales		69,060		60,148		49,614	
Gross profit		16,288		22,828		19,145	
Operating expenses							
Research and development		6,732		5,456		7,685	
Selling, general and administrative		12,614		11,036		12,450	
Restructuring expenses						2,624	
Legal settlements		536					
Total operating costs and expenses		19,882		16,492		22,759	
Income (loss) from operations		(3,594)		6,336		(3,614)	
Interest expense, net		(2,808)		(2,872)		(1,734)	
Other income, net		350		1,385		1,070	
Income (loss) before provision for (benefit from) income taxes		(6,052)		4,849		(4,278)	
Provision for (benefit from) income taxes		128		214		(87)	
Net income (loss)	\$	(6,180)	\$	4,635	\$	(4,191)	
Net income (loss) per share:							
Basic	\$	(0.81)	\$	0.58	\$	(0.40)	
Diluted	\$	(0.81)	\$	0.57	\$	(0.40)	
Weighted average shares of common stock and dilutive potential common stock:							
Basic		7,642		8,032		10,418	
Diluted		7,642		8,186		10,418	
The accompanying notes are an integral part of these con-	solidated		teme			·	
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SOUTHWALL TECHNOLOGIES INC.

# CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

## (in thousands)

	Comm	on Stock	Capital in			Accumulated Other			Comprehensive
	Shares	Amount	Excess of Par Value	Treasury Stock	Notes Receivable	Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity	Income (Loss)
Balance at Dec. 31, 1999 Exercise of options	7,889	8	51,771 (175)	(1,888) 640	(906)	(40)	(24,365)	24,580 465	(1,905)
Sales to employees under stock purchase plan				(69)	209				140
Issuance of stock for bonuses			(23)	149				126	
Repayments of notes receivable					807			807	
Translation loss on foreign subsidiary						(111)		(111)	(111)
Issuance of stock for legal settlement			260	51				311	
Net loss							(6,180)	(6,180)	(6,180)
Balance at Dec. 31, 2000	7,889 22	8	51,764	(839) 644	(99)	(151)	(30,545)	20,138 537	(6,291)
Exercise of options		070	(107)	044					
Sale of stock, net	422	970	(10=)	400				970	
Sales to employees under stock purchase plan			(107)					85	
Issuance of stock for bonuses			(1)	3				2	
Accelerated vesting on exercise of stock option			94					94	
Repayments of notes receivable					11			11	
Translation loss on foreign subsidiary						(21)		(21)	` ´
Net income							4,635	4,635	4,635
Balance at Dec. 31, 2001	8,333 328	8	52,613 1,642	0	(88)	(172)	(25,910)	26,451 1,642	4,614
Exercise of options  Net proceeds from follow-on public	3,807	4	15,129					15,133	
offering Sales to employees under stock	59		231					231	
purchase plan Stock-based compensation			42					42	
Issuance of notes receivable					(14)			(14)	
Interest accrued on notes receivable					(24)			(24)	
Translation gain on foreign subsidiary					(21)	1,204		1,204	1,204
Net loss							(4,191)	(4,191)	(4,191)
Balance at Dec. 31, 2002	12,527	\$ 12	\$ 69,657	\$ 0	\$ (126)	\$ 1,032	\$ (30,101)	\$ 40,474	\$ (2,987)

The accompanying notes are an integral part of these consolidated financial statements.

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#### SOUTHWALL TECHNOLOGIES INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

# (in thousands)

Vacan	Ended	December	21
rear	ranaea	December	.71.

		2000	2001		2002	
Cash flows (used in) or provided by operating activities:						
Net income (loss)	\$	(6,180)	\$	4,635	\$	(4,191)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		( , ,		ŕ		
Depreciation and amortization		5,662		5,982		6,053
Stock based charge						42
Interest on note receivable						(24)
Change in assets and liabilities:						
Accounts receivable, net		(2,188)		4,297		(547)
Inventories, net		(2,953)		4,023		(2,385)
Other current and non-current assets		(573)		(610)		(560)
Accounts payable, and accrued liabilities		7,420		(4,535)		(1,212)
Cash provided by (used in) operating activities		1,188		13,792		(2,824)
Cash flows from investing activities:						
Restricted cash		34		247		1,071
Expenditures for property, plant and equipment and other assets		(12,889)		(5,945)		(7,085)
2portation for property, praint and equipment and outer assets		(12,00)		(0,5.0)		(7,000)
Net cash used in investing activities		(12,855)		(5,698)		(6,014)
Cash flows from financing activities:						
Proceeds from foreign government grants		1,007				
Proceeds from investment allowances		1,085		2,050		1,044
Proceeds from borrowings		5,151		1,710		
Principal payments on borrowings		(2,896)		(4,311)		(7,383)
Borrowings (payments) on line of credit		3,799		(5,745)		(2,974)
Proceeds from sale of stock in follow-on offering				970		15,128
Repayment of stockholder's note receivable		807		11		
Proceeds from stock options and employee stock purchases		1,041		706		1,879
Issuance of note receivable		, 		(19)		(15)
Net cash provided by (used in) financing activities		9,994		(4,628)		7,679
Effect of foreign exchange rate changes on cash		(38)		(165)		(205)
		(1.711)		2.201		(1.264)
Net increase (decrease) in cash and cash equivalents		(1,711) 1,772		3,301 61		(1,364) 3,362
Cash and cash equivalents, beginning of year		1,772		01		3,302
Cash and cash equivalents, end of period	\$	61	\$	3,362	\$	1,998
Supplemental cash flow disclosures:	Φ.	4.500	Ф	0.071	Ф	1 401
Interest paid	\$	4,598	\$	2,971	\$	1,401
Income taxes paid Supplemental schedule of non-cash investing and financing activities:	\$	156	\$	111	\$	86
	¢	126				
Treasury stock issued for payment of bonuses and legal settlements	\$	436				

Year Ended December 31,

Exercise of stock options with issuance of stockholders notes receivable	\$	19	\$ 14
Offset deposit to reduce sales and leaseback commitments	\$	1,000	
The accompanying notes are an integral part of these consolidated financial	statements.		
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#### SOUTHWALL TECHNOLOGIES INC.

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(dollars and shares in thousands, except per share data)

#### NOTE 1 THE COMPANY AND A SUMMARY OF ITS SIGNIFICANT ACCOUNTING POLICIES:

The Company

Southwall Technologies Inc. is a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. The Company has developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products and conserve energy in architectural products. The Company's products consist of transparent solar-control films for automotive glass, anti-reflective films for computer screens, including flat panel and plasma displays, transparent conductive films for use in touch screen and liquid crystal displays, energy control films for architectural glass, and various other coatings.

#### Principles of consolidation

The consolidated financial statements include the accounts of Southwall and its wholly-owned subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

## Foreign currency translation

The Company's German subsidiary used the EURO as its functional currency in 2002. Accordingly, the financial statements of this subsidiary are translated into U.S. dollars in accordance with SFAS No. 52, "Foreign Currency Translation." Assets and liabilities are translated at exchange rates in effect at the balance sheet date and revenue and expense accounts at average exchange rates during the quarter. Exchange gains or losses from the translation of monetary assets and liabilities that are not denominated in U.S. dollars are recorded directly to a separate component of stockholders equity. Where the functional currency is U.S. dollars, gains and losses for re-measuring foreign currency denominated balances into U.S. dollars are included in other income.

#### Management estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates

#### Cash and cash equivalents

The Company deposits its cash in a money market account and an interest bearing bank account. The Company had cash equivalents of \$0.0 million and \$0.3 million at December 31, 2001 and 2002, respectively.

#### Restricted cash

Restricted cash consists of the unapplied portion of grants received from the Saxony government to co-finance the costs of the construction of the Company's Dresden facility. In the event the Company fails to meet certain conditions related to the grants, the Saxony government has

the right to reclaim the total grants. (See Note 5). In addition, at December 31, 2001 restricted cash included a

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\$0.5 million irrevocable standby letter of credit secured by a certificate of deposit. On January 2, 2002, the holder drew on the letter of credit to reduce outstanding amounts related to leases of production machines. (See Note 5).

#### Revenue recognition

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, and collectibility is reasonably assured. Accordingly, we generally recognize revenue from product sales when the terms of sale transfer title and risk of loss, which occurs either upon shipment or upon receipt by customers. In connection with product sales, we make allowances for estimated returns and warranties. We adjust these allowances periodically to reflect our actual and anticipated experience. Revenue recognition in each period is dependent on our application of this accounting policy. If any of these conditions to recognize revenue is not met, we defer revenue recognition.

The Company has agreements under which it receives fees for certain licensing rights to technology and products. The Company does not allocate cost of sales to license revenues because such costs are insignificant. License revenues associated with these agreements are recognized ratably over the period of the contract when collection of the resulting receivable is probable. License revenues were \$503, \$211 and \$287 for the years 2000, 2001 and 2002 respectively.

Allowances for doubtful accounts and warranties.

We establish allowances for doubtful accounts and warranties for specifically identified, as well as anticipated, doubtful accounts and warranty claims based on credit profiles of our customers, current economic trends, contractual terms and conditions, and historical payment and warranty experience. As of December 31, 2001, our balance sheet included allowances for doubtful accounts of \$0.4 million and \$2.6 million for warranties. As of December 31, 2002, our balance sheet included allowances for doubtful accounts of \$0.6 million and \$2.1 million for warranties. During 2000, 2001 and 2002, we charged \$3.0 million, \$3.9 million and \$2.4 million, respectively, against revenue for warranty expense. Bad debt expenses were \$(0.1) million, \$0.4 million and \$0.3 million during 2000, 2001 and 2002, respectively. If we experience actual bad debt and warranty expense different from estimates or we adjust our estimates in future periods, our operating results, cash flows and financial position could be materially adversely affected.

#### Concentration of credit risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and trade accounts receivable.

The Company invests in a variety of financial instruments such as certificates of deposits and money market funds. By policy, the Company limits the amount of credit exposure to any one financial institution or commercial issuer.

The Company sells its products throughout the world. The Company performs ongoing credit evaluations of its customers' financial condition and, generally, requires no collateral from its

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customers. The Company maintains an allowance for uncollectible accounts receivable based upon anticipated collectibility of all accounts receivable.

The Company's ten largest customers accounted for approximately 85%, 85% and 84% of net product sales in 2000, 2001 and 2002 respectively. During 2002, Saint Gobain, Mitsubishi, Mitsui and Pilkington PLC, each accounted for more than 10% of its net revenues. The Company expects to continue to derive a significant portion of its net product sales from a relatively small number of customers. Accordingly, the loss of a large customer could materially hurt the Company's business, and the deferral or loss of anticipated orders from a small number of customers could materially reduce its revenue, operating results and cash flows in any period. At December 31, 2002, receivables from two customers represented 31% and 21% of the Company's accounts receivable, respectively.

#### Inventories

Inventories are stated at the lower of cost (determined by the first-in, first-out method) or market. Cost includes materials, labor and manufacturing overhead. Southwall establishes provisions for excess and obsolete inventories to reduce such inventories to their estimated net realizable value. Such provisions are charged to cost of sales.

#### Property and equipment

Property and equipment are stated at cost. The Company uses the units-of-production method for calculating depreciation on certain of its production machines and the straight-line method for all other property and equipment. Estimated useful lives of the assets range from five to ten years. On its large-scale production machines for which the units-of-production depreciation method is used, the Company records minimum annual depreciation of at least one-half of the depreciation that would have been recorded utilizing the straight-line depreciation method over a ten-year life. Leasehold improvements are amortized using the term of the related lease or the economic life of the improvements, if shorter.

Additions, major renewals and betterments are included in the asset accounts at cost. Ordinary maintenance and repairs are charged to expense as incurred. Gains or losses from disposal are included in earnings.

Depreciation and amortization expense related to property and equipment for the years ended December 31, 2000, 2001 and 2002 was \$5.7 million, \$6.0 million and \$6.1 million respectively.

#### Interest capitalized

Interest incurred during the construction of long-lived assets is capitalized as part of the cost of acquiring property and equipment, in accordance with SFAS No. 34, "Capitalization of Interest Cost". Capitalization of interest is discontinued when the assets are ready for their intended use, which is generally upon completion of construction. The Company capitalized interest of \$1.8 million, \$0.1 million and \$0.0 million in 2000, 2001 and 2002, respectively.

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#### Intangible assets

Patents, licenses and trademarks relating to the Company's commercial products are stated at cost less accumulated amortization. Amortization is computed on the straight-line basis over terms of up to 17 years. At December 31, 2001 and 2002, patents, licenses and trademarks are included in other assets in the amount of \$0.7 million and \$0.7 million, respectively net of accumulated amortization of \$1.3 million and \$1.4 million, respectively. Amortization expense for 2000, 2001 and 2002 was \$0.2 million, \$0.1 million and \$0.1 million respectively.

#### Impairment of long-lived assets

We routinely consider whether indicators of impairment of long-lived assets are present. If such indicators are present, we determine whether the sum of the estimated undiscounted cash flows attributable to the assets in question is less than their carrying value. If less, we recognize an impairment loss based on the excess of the carrying amount of the assets over their respective fair values. Fair value is determined by discounted future cash flows, appraisals or other methods. If the assets determined to be impaired are to be held and used, we recognize an impairment charge to the extent the present value of anticipated net cash flows attributable to the asset are less than the asset's carrying value. The fair value of the asset then becomes the asset's new carrying value. We may incur impairment losses in future periods if factors influencing our estimates change. The Company adopted the provisions of SFAS 144 "Accounting for Impairment or Disposal of Long-Lived Assets" in 2002.

## Fair value disclosures of financial instruments

The Company has estimated the fair value amounts of its financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, debt and accrued liabilities using available market information and valuation methodologies considered to be appropriate and have determined that the book value of those instruments at December 31, 2001 and 2002 approximates fair value.

Stock-based compensation expense

The Company accounts for stock based compensation to employees using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25, ("APB 25"), "Accounting for Stock Issued to Employees," as permitted under the provisions of SFAS 148, "Accounting for Stock-Based Compensation." The Company also provides additional pro forma disclosures as required under SFAS 148.

Research and development expense

Research and development costs are expensed as incurred.

Comprehensive income (loss)

The Company has adopted the provisions of Statement of Financial Accounting Standards No. 130 "Reporting Comprehensive Income," ("SFAS No. 130"). SFAS No. 130 establishes standards for reporting and display in the financial statements of total net income and the components of all other

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non-owner changes in equity, referred to as comprehensive income (loss). Accordingly, the Company has reported the translation loss from consolidation of its foreign subsidiary in comprehensive income (loss).

#### Restructuring costs

For restructuring activities initiated prior to December 31, 2002 Southwall recorded restructuring costs when the Company committed to a plan to exit certain facilities, and significant changes to the exit plan were not likely to occur. The excess facility accrual is determined based on estimates of expected sublease rental income for each excess facility. For restructuring activities initiated after December 31, 2002 the Company will follow SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," as discussed in Note 2.

#### Income taxes

The Company accounts for deferred income taxes under the liability approach whereby the expected future tax consequences of temporary differences between the book and tax basis of assets and liabilities are recognized as deferred tax assets and liabilities. A valuation allowance is established for any deferred tax assets for which realization is uncertain.

#### Suppliers

The Company manufactures all of its products using materials procured from third-party suppliers. Certain of these materials are obtained from a limited number of sources. Delays or reductions in product shipments could damage the Company's relationships with customers. Further, a significant increase in the price of one or more of the materials used in the Company's products could have a material adverse effect on the Company's cost of goods sold and operating results.

The Company relies on third-party subcontractors to add properties, such as adhesives, to some of its products. There are only a limited number of qualified subcontractors that can provide some of the services the Company requires. Qualifying alternative subcontractors could take a great deal of time or cause the Company to change product designs. The loss of a subcontractor could adversely affect the Company's ability to meet its scheduled product deliveries to customers, which could damage its relationships with customers. If the Company's subcontractors do not produce a quality product, the Company's yield will decrease and its margins will be lower. Further, a significant increase in the price charged by one or more of the Company's subcontractors could force it to raise prices on its products or lower its margins, which could have a material adverse effect on its operating results.

The Company's production machines are large, complex and difficult to manufacture. It can take up to a year from the time the Company orders a machine until it is delivered. Following delivery, it can take the Company, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a very limited number of companies that are capable of manufacturing these machines. The Company's inability in the future to have new production machines manufactured and prepared for commercial production in a timely manner would

prevent the Company from delivering product on a timely basis and limit the Company's capacity for revenue growth.

Net income (loss) per share

Basic net income (loss) per share is computed by dividing income available to common shareholders (numerator) by the weighted average number of common shares outstanding (denominator) for the period. Diluted net income (loss) per share gives effect to all dilutive potential common shares outstanding during the period. The computation of diluted earnings per share uses the average market prices during the period. For the year ended December 31, 2001, the dilutive stock options were 8,186 shares for dilutive earnings per share, and 8,032 shares for basic earnings for share. The total amount of the difference in the basic and diluted weighted average shares of common stock and common stock equivalents in the periods where there is net income is attributable to the effect of dilutive stock options. In net loss periods, the basic and diluted weighted average shares of common stock and common stock equivalents are the same because inclusion of stock options would be anti-dilutive. At December 31, 2002, there was no difference between the denominators used for calculation of basic and diluted net income (loss) per share.

#### Reclassifications

Certain costs in the 2001 consolidated financial statements have been reclassified to conform to the current year's presentation. These reclassifications did not change previously reported net income, stockholders' equity, or cashflows.

#### Recently issued accounting pronouncements

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," which addresses the recognition, measurement and reporting costs associated with exit or disposal activities, and supersedes previous authoritative guidance, Emerging Issues Task Force ("EITF") No. 94-3. The principal difference is that the new standard requires that a liability for a disposal activity (including those related to the employee termination benefits and obligations under operation leases and other contracts) be recognized when a liability is incurred, and not necessarily the date of an entity's commitment to an exit plan, as under EITF No. 94-3. SFAS No. 146 also establishes that the initial measurement of a liability recognized under SFAS No. 146 be based on fair value. The provisions of SFAS No. 146 are effective for exit or disposal activities that are initiated after December 31, 2002, with early application encouraged.

In November 2002, the FASB issued FASB Interpretation ("FIN") No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." FIN No. 45 requires that a liability be recorded in the guarantor's balance sheet upon issuance of a guarantee. In addition, FIN No. 45 requires disclosures about the guarantees that an entity has issued, including a reconciliation of changes in the entity's product warranty liabilities. The initial recognition and initial measurement provisions of FIN No. 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002, irrespective of the guarantor's fiscal year-end. The disclosure requirements of FIN No. 45 are effective for financial

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statements of interim or annual periods ending after December 15, 2002. The Company does not expect the adoption of FIN No. 45 to have any significant impact on its consolidated financial position, results of operations or cash flows.

In November 2002, the Emerging Issues Task Force ("EITF") reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

In December 2002, the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 148, "Accounting for Stock-Based Compensation, Transition and Disclosure." SFAS No. 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. SFAS No. 148 also requires that disclosures of the pro forma effect of using the fair value method of accounting for stock-based employee compensation be displayed more prominently and in a tabular format. Additionally, SFAS No. 148 requires disclosure of the pro forma effect in interim financial statements. The transition and annual disclosure requirements of SFAS No. 148 are effective for fiscal years ended after December 15, 2002. The interim disclosure requirements are effective for interim periods beginning after December 15, 2002. The company believes that the adoption of this standard will have no material impact on its financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51." FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective immediately for all new variable interest entities created or acquired after January 31, 2003. For variable interest entities created or acquired prior to February 1, 2003, the provisions of FIN 46 must be applied for the end of the first annual period beginning after June 15, 2003. The company believes that the adoption of this standard will have no material impact on its financial statements.

#### **NOTE 2 LIQUIDITY**

These consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company incurred a net loss and negative cash flows from operating activities in 2002 and is expecting to incur net losses through at least the first quarter of 2003. The Company's current credit agreement expires in June 2003 and it is in discussions with potential lenders regarding establishing a new credit facility. These factors together with its working capital position and its significant debt service and other contractual obligations at December 31, 2002, raise substantial doubt about the Company's ability to continue as a going concern.

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In December 2002 the Company restructured its operations to reduce its cost structure by reducing its work force and vacating excess facilities after consolidating operations in Palo Alto. These actions are expected to help improve its operating results in 2003 but will continue to impact the Company's operating cash flows until its lease commitments for excess facilities expire in December 2004.

While the Company believes that its existing liquidity sources, including its expected cash flows from operations, its existing cash reserves and existing credit facilities, will satisfy its cash requirements for the next twelve months, Southwall may need to raise additional funds if management's estimates change or prove inaccurate or to respond to unforeseen technological, marketing or other problems, or to take advantage of unanticipated opportunities. In 2002, four customers each represented more than 10% of our annual revenue. A significant decrease in revenues from one or more of these customers could negatively affect our liquidity and impair our ability to fully implement our business plans. Our annual revenue and operating results have varied significantly in the past and will likely vary significantly in the future due to fluctuating customer demand; manufacturing and operational difficulties; our ability to introduce new products on a timely basis; and competition, including the introduction or announcement of new products by competitors, or the use by its customers of alternate technologies.

#### NOTE 3 LINE OF CREDIT

The Company has a \$10 million receivable financing line of credit with a financial institution that expires on June 30, 2003. Availability under the line of credit is based upon 80% of the eligible accounts receivable balances and bears a finance fee of 0.88% per month of the average daily accounts receivable against which the Company is borrowing during the settlement period. In connection with the line of credit, the Company granted to the bank a continuing lien upon and security interest in, and right of set off with respect to all of the Company's interest in all accounts receivable, inventory, monies, remittances and fixed assets. As of December 31, 2002, the Company had approximately \$7.0 million of availability under the line of credit but had no borrowings outstanding.

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## NOTE 4 TERM DEBT

The Company's term debt consists of the following:

Description	Rate	Balance at December 31, 2002	
Term debt:			
Japanese bank loan guaranteed by Teijin	3.14%(1)\$	2,500	\$ 2,500
German bank loan dated May 12, 1999	6.13%(2)	2,502	357
German bank loan dated May 28, 1999	7.10%(3)	2,622	

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Description	Rate	Balance at December 31, 2002	Due in 2003
German bank loan dated May 28, 1999	3.75%	1,197	449
German bank loan dated July 25, 2000	7.15%(4)	1,916	247
German bank loan dated August 14, 1999 (due June 30, 2009)	5.75%	1,769	
German bank loan dated June 29, 2000	5.75%	223	179
German bank loan dated July 10, 2000	7.10%	223	179
German bank loan dated December 18, 2000	7.50%	181	90
German bank loan dated December 19, 2000	7.50%	164	83
Note payable dated September 21, 2001	8.00%	70	70
Other equipment financings		118	78
	_		
Total term debt		13,485	4,232
Capital leases:			
Sales-leaseback dated July 19, 1999	13.00%	2,321	2,321
Sales-leaseback dated October 19, 1999	13.00%	946	946
	_		
Total capital leases		3,267	3,267
	_		
Total term debt and capital leases		16,752	\$ 7,499
	_	,	
Less current portion		7,499	
	_	.,	
Term debt, non current	\$	9,253	

- (1) The interest rate is reset semi-annually at LIBOR plus 1.0%. As of December 31, 2002, the interest rate on this loan was 3.14%.
- (2) Interest rate will be reset to the then prevailing market rate in 2004.
- (3) Interest rate will be reset to the then prevailing market rate in 2009.
- (4) Interest rate will be reset to the then prevailing interest rate in 2005.

The Japanese bank loan, dated May 6, 1997, is guaranteed by Teijin Limited (Teijin), a Japanese company. Teijin is a stockholder of and supplier of substrate materials to the Company. In consideration of the guarantee, Teijin also received warrants in 1997 to purchase 158,000 shares of Southwall's common stock at \$9 per share. These warrants were not exercised and expired on May 30, 2000. The Teijin guarantee is collateralized by certain equipment located in Southwall's Tempe manufacturing facility and inventory, to the extent necessary to provide 120% net book value coverage of the outstanding loan balance. The interest rate on the loan is re-set semi-annually at LIBOR plus 1.0%, (3.16% at December 31, 2001, and 3.14% at December 31, 2002). The Company is also subject

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to certain financial covenants under the guarantee. The Company pays Teijin semi-annually a loan guarantee service fee equal to 0.5625% of the outstanding balance. The loan requires semi-annual payments of interest only during the first four years, followed by semi-annual installments plus interest, beginning in May 2001, for the remaining three and one half year term. At December 31, 2001 and 2002, the Company was not in

compliance with certain of the financial covenants with Teijin pertaining to this promissory note. Southwall has received a waiver from Teijin and the Japanese bank of any defaults that may exist through and including September 30, 2003 arising out of its failure to comply with the financial covenants of the guarantee agreement relating to minimum quick ratio, tangible net worth and maximum debt/tangible net worth. The waiver was conditioned on the Company's agreement to prepay \$2.5 million of the debt from the proceeds of its public offering. The Company paid \$2.5 million, in addition to the scheduled principal payment of \$1.25 million, on November 6, 2002. All payments due on the loan have been paid when due (including the scheduled principal payment of \$1.25 million due and paid in May 2002). The Company has classified the remaining balance outstanding of \$2.5 million as current debt on the balance sheet at December 31, 2002.

During 1999, Southwall entered into a master equipment sale-leaseback agreement with a leasing company ("lessor"). Because the Company has an option to purchase the equipment at a price to be determined between Southwall and the lessor at the end of the lease period, the sale-leaseback agreements have been treated as a financing. One lease has a lease term of three years and the other lease has an initial lease term of two years with an option to extend it for an additional year. At December 31, 2002, the Company had a total of \$3.3 million outstanding and due under these leases. The leased equipment and certain other production equipment owned by the Company collateralize the sale-leaseback agreements. The effective interest rate of both is approximately 13% per annum and the leases are repayable over the lease term commencing in May 2000. The Company is in dispute with the lessor over interpretation of certain terms of the lease agreement and has withheld lease payments due since March 2001. The lessor has notified the Company that it considers the Company to be in default and in January 2002 drew down on a letter of credit in the amount of \$0.5 million that collateralized the Company's obligations; in May, 2002, a suit was filed against the Company demanding payment of unpaid lease payments and alleged residual values. (See Note 9.) The Company classified the \$3.3 million due under the leases, net of a \$1.0 million holdback not funded by the lessor, as a current liability in the accompanying balance sheet at December 31, 2002.

On May 12, 1999, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 3.1 million (\$3.1 million). Under the terms of this agreement, the funds were used solely for the purpose of capital investment by Southwall's German subsidiary. The term of the loan is for a period of 10 years and the principal is repayable in euros after the end of one year in 36 quarterly payments. The loan bears interest at 6.125% per annum for the first five years, and will be revised to the prevailing rate at the end of the fifth year. Of the borrowings outstanding of \$2.5 million under this bank loan at December 31, 2002, \$2.1 million was classified as noncurrent in the accompanying balance sheet.

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On May 28, 1999, the Company entered into a general loan agreement with a German bank. Under the terms of the loan agreement, funds were made available in three tranches, and were used solely for the purpose of capital investment by the Company's German subsidiary. The agreement contains various covenants with which the Company was in compliance at December 31, 2002; the Company is current with respect to all principal and interest payments due under the loan agreement. Under the first tranche, the Company borrowed euro 2.5 million (\$2.6 million) for a term of twenty years beginning on May 28, 1999. The principal is repayable in euros beginning after ten years in ten equal, semi-annual payments. The loan bears fixed interest of 7.1% per annum for the first ten years, after which time the rate will be adjusted to a current prevailing rate. Of the borrowings outstanding under this tranche of \$2.6 million at December 31, 2002, \$2.6 million was classified as noncurrent in the accompanying balance sheet. Under the second tranche, the Company borrowed euro 1.7 million (\$1.7 million) for a term of seven years beginning May 28, 1999 and the principal is repayable after one year in twelve equal, semi-annual payments. The loan bears fixed interest at 3.75% per annum for the period of seven years. At December 31, 2002, the amount due under this second tranche was \$1.2 million, and \$0.7 million was classified as a noncurrent liability. Under the third tranche, of the Company borrowed euro 2.1 million (\$2.1 million) for a term of ten years beginning on July 25, 2000, and the principal is repayable after one year, in thirty-six equal quarterly payments. The loan bears fixed interest of 7.15% per annum for the first five years, after which time the rate will be adjusted to a current prevailing market rate. At December 31, 2002, the amount due was \$1.9 million; of this amount, \$1.7 million was classified as noncurrent.

On August 14, 1999, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 1.7 million (\$1.8 million). As required by this agreement, the funds were used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is due in a single payment on June 30, 2009 and bears interest at a rate of 5.75% per annum. The interest is payable quarterly in euros. Fifty percent of the loan proceeds are restricted in an escrow account for the duration of the loan period and are classified as non-current "Restricted loan proceeds." The amount due under this bank loan at December 31, 2002 was \$1.8 million, which was classified as noncurrent.

On June 29, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.5 million (\$0.5 million). As required by this agreement, the funds were used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning June 2001 and bears interest at a rate of 5.8% per annum. The interest is payable quarterly in euros. The agreement contains various covenants with which the Company was in compliance at December 31, 2002. The amount due under this bank loan was \$0.2 million at December 31, 2002; of this amount, \$0.1 million was classified as noncurrent.

On July 10, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.5 million (\$0.5 million). As required by this agreement, the funds were used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning June 2001 and bears interest at a rate of 7.10% per annum. The interest is payable quarterly in euros. The amount due under this bank loan was \$0.2 million; of this amount, \$0.1 million was classified as noncurrent at December 31, 2002.

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On December 18, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.2 million (\$0.2 million). As required by this agreement, the funds were used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in nine quarterly payments beginning March 2002 and bears interest at a rate of 7.5% per annum. The interest is payable quarterly in euros. At December 31, 2002, the amount outstanding under this bank loan was \$0.2 million; of this amount, \$0.1 million was classified as noncurrent at December 31, 2002.

On December 19, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.3 million (\$0.3 million). As required by this agreement, the funds were used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning March 2002 and bears interest at a rate of 7.5% per annum. The interest is payable quarterly in euros. At December 31, 2002, the amount outstanding under this bank loan was \$0.2 million; of this amount, \$0.1 million was classified as noncurrent at December 31, 2002.

The preceding German bank loans are collateralized by the production equipment, building and land owned by the Company's German subsidiary. The dollar equivalent value for the preceding German bank loans has been calculated using the euro exchange rate as of December 31, 2002.

On September 21, 2001, the Company entered into a note payable agreement with the manufacturer of one of the Company's production machines, PM 7, located at the Company's Tempe facility, for the remaining balance of \$0.96 million owed on the machine. The first installment on the note was paid on September 26, 2001 in the amount of \$0.14 million. The remaining balance of the note is payable in 16 monthly installments, with the final payment due on January 23, 2003. The note bears interest at 8.0% per annum. At December 31, 2002, the amount outstanding under this note was \$0.1 million; this entire amount was classified as current at December 31, 2002.

Other term debt consists of capitalized leases related primarily to certain computer equipment used by the Company.

Scheduled principal reductions of term debt for the next five years and thereafter, are as follows:

Year	Amount
2003	\$ 7,499
2004	1,204
2005	904
2006	754
2007	605
Thereafter	5,786
Total	\$ 16,752

The Company incurred total interest on indebtedness of \$4.6 million, \$2.9 million and \$1.7 million in 2000, 2001 and 2002, respectively. Of these amounts, Southwall capitalized \$1.8 million in 2000, \$0.1 million in 2001 and \$0.0 million in 2002 as part of the costs related to the construction of new production machines and facilities.

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The Company has an agreement to receive cash grant awards (the "Grant"), which was approved by the Saxony government in May 1999. As of December 31, 2002, the Company had received approximately euros 5.6 million (\$4.7 million) under this Grant and accounted for the Grant by applying the proceeds received to reduce the cost of fixed assets of the Dresden manufacturing facility. Additionally, as of December 31, 2002, the Company has a balance remaining from the government grants received in May 1999 of euros 0.8 million (\$0.8 million) which has been recorded as an advance and held as restricted cash until the Company receives approval from the Saxony government to apply the funds to reduce its capital expenditures.

Giving effect to an amendment of the terms of the Grant in 2002, the Grant is subject to the following requirements:

- (a)

  The grant was earmarked to co-finance the costs of the construction of a facility to manufacture XIR® film for the automotive glass industry.
- (b) The construction period for the project is from March 15, 1999 to June 30, 2006.
- (c)
  The total investment during the construction period should be at least euros 47.0 million (\$39.2 million).
- (d)
  The project must create at least 143 permanent jobs and 7 apprenticeships by June 30, 2006.

If the Company fails to meet the above requirements, the Saxony government has the right to demand repayment of the Grant.

In addition to the Grant, the Company is further eligible for cash investment allowances from the Saxony government calculated based on the total projected capital investment by the Company in its Dresden facility of euros 47.0 million (\$39.2 million), subject to European Union regulatory approval. During 2000, the Company received euros 1.2 million (\$1.0 million) in investment allowances from the Saxony government, and those proceeds were applied to reduce the capitalized construction cost of the Dresden facility. The Company received an additional euros 2.5 million (\$2.1 million) in investment allowances from the Saxony government in 2001, and those proceeds were applied to reduce the capitalized construction cost of the Dresden facility. The Company received approximately euros 1.2 million (\$1.0 million) in investment allowances in the second quarter of 2002, which were also applied to reduce the capitalized construction cost of the Dresden facility. These investment allowances are subject to the following requirements:

- (a)

  The movable and immovable assets, the acquisition costs of which are taken into account in determining the investment allowance, shall be employed within the subsidized territory for a period of at least five years following the acquisition or production.
- (b)

  The movable assets, the acquisition costs of which are taken into account in determining the increased investment allowance, shall remain in a business that is engaged in the processing industry, or in a similar production industry, for a period of at least five years following the acquisition or production.

If the Company fails to meet the above requirements, the Saxony government has the right to demand repayment of the allowances.

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The Grants and investment allowances, if any, that the Company is entitled to seek from the Saxony government varies from year to year based upon the amount of capital expenditures that meet the above requirements. Generally, Southwall is not eligible to seek total investment grants for any year in excess of 33% of its eligible capital expenditures for that year. The Company cannot guarantee that it will be eligible for or receive additional grants or allowances in the future.

#### NOTE 6 INCOME TAXES

The income tax provision in 2001 and 2002 relates primarily to foreign withholding taxes on royalty payments and federal statutory and state alternative minimum tax obligations. The effective income tax rate differs from the federal statutory rate as a result of valuation allowances established for deferred tax assets. The Company believes that sufficient uncertainty exists with regard to the realization of these tax assets;

accordingly, a full valuation allowance is necessary. These factors include the lack of a significant history of consistent profits and the lack of carryback capacity to realize these assets. Based on this absence of objective evidence, the Company is unable to assert that it will generate sufficient taxable income to realize the deferred tax assets.

Deferred tax (liabilities) assets are comprised of the following:

	December 31,			
	2001			2002
Depreciation	\$	(4,386)	\$	(4,606)
Other		(277)		(262)
Gross deferred tax liabilities		(4,663)		(4,868)
Inventory reserves		540		520
Write-down of fixed assets		961		963
Bad debt reserves		157		208
Sales returns and allowances		1,058		809
Accrued compensation reserves		1,097		1,052
Restructuring reserves				774
Other various reserves		1,003		702
Other		75		53
Loss carryforwards		9,377		12,761
Credit carryforwards		1,364		1,697
Gross deferred tax assets		15,632		19,539
Deferred tax assets valuation allowance		(10,969)		(14,671)
Net deferred taxes	\$		\$	

At December 31, 2002, the Company had net federal operating loss carryforwards of approximately \$34.1 million that expire at various dates from 2003 through 2022. Certain of the net operating loss carryforwards resulted from employee exercises of non-incentive stock options or disqualifying dispositions, the tax benefit of which, when realized, will be accounted for as an addition to capital in

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excess of par value, rather than as a reduction of the provision for income taxes. The Company has state and German net operating loss carryforwards that expire at various future dates. Research and development, investment and foreign tax credit carryovers of approximately \$1.7 million are also available to reduce future federal and state income taxes and expire at various dates through 2022. If certain substantial changes in ownership of the Company occur, there would be an annual limitation on the amount of the carryforwards that can be utilized.

#### NOTE 7 STOCK BASED COMPENSATION

Southwall has stock option plans that reserve shares of Common Stock for issuance to employees, officers, directors and consultants. The Company applies APB Opinion 25 and related interpretations in accounting for its plans. Accordingly, no compensation cost is recognized for grants at fair market value. Southwall adopted the disclosure-only provisions of SFAS No. 123, Accounting for Stock-Based Compensation. Had compensation cost for our stock option plans and stock purchase plans been determined based on the fair value at the grant date for awards granted in 2000, 2001 and 2002 consistent with the provisions of SFAS No. 123 and 148, net income (loss) and net income (loss) per share would have been reduced to the pro forma amounts indicated below:

Years Ended December 31,

Years Ended December 31,

		2000	2000 2001		2002	
Net income (loss)						
As reported	\$	(6,180)	\$	4,635	\$	(4,191)
Stock compensation expense, net of tax		(1,650)		(802)		(1,288)
	_		_		_	
Pro forma	\$	(7,830)	\$	3,833	\$	(5,479)
Net income (loss) per share:	¢.	(0.01)	φ	0.50	ф	(0.40)
As reported basic	\$	(0.81)	\$	0.58	\$	(0.40)
Pro forma basic	\$	(1.02)	\$	0.48	\$	(0.53)
As reported diluted	\$	(0.81)	\$	0.57	\$	(0.40)
Pro forma diluted	\$	(1.02)	\$	0.47	\$	(0.53)

All options outstanding during 2000 and 2002 were excluded from the diluted net loss per share calculations because they were anti-dilutive in view of the losses incurred by the Company in those years.

For the stock option plans, the fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model for the multiple option approach with the following weighted average assumptions used for grants in 2000, 2001 and 2002, respectively. Expected volatility of 134% in 2000, 89% in 2001 and 96% in 2002; risk-free interest rate of 6.2%, 4.6% and 3.8%; and expected lives from vesting date of 2.54, 3.26, and 3.49 years. Southwall has not paid dividends and assumed no dividend yield. The weighted average fair value of stock options granted in 2000, 2001 and 2002 was \$3.74, \$1.89 and \$4.95 per share, respectively.

For the employee stock purchase plans, the fair value of each purchase right is estimated at the beginning of the offering period using the Black-Scholes option-pricing model with the following

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weighted-average assumptions used in 2000, 2001 and 2002 respectively: expected volatility of 134%, 89% and 96%; risk-free interest rate of 6.32%, 4.19% and 4.13%; and expected lives of 0.5 years in each year. The Company has not paid dividends and assumed no dividend yield. The weighted-average fair value of those purchase rights granted in 2000, 2001 and 2002 was \$2.19, \$1.21 and \$2.65 per right, respectively.

#### Stock Option Plans

The Company has granted stock options under various option plans and agreements in the past and currently grants stock options under the 1997 Stock Incentive Plan and the 1998 Stock Option Plan for Employees and Consultants. The board of directors adopted the 1998 Stock Option Plan for Employees and Consultants on August 6, 1998. The human resources committee of the board of directors administers the plans and agreements. The exercise price of options granted under the 1997 and 1998 plans must be at least 85% of the fair market value of the stock at the date of grant.

Generally, options granted under the plans vest at a rate of 25% per year, are non-transferable and expire over terms not exceeding ten years from the date of grant or three months after the optionee terminates his relationship with the Company.

During 1998 1999, and 2002 certain employees, officers and directors of Southwall exercised stock options under the plans by issuing full recourse notes with an annual rate of interest of generally 7%. During 1998, 1999, and 2002 outstanding notes from certain of those employees, officers and directors were extended from terms of one year to terms of two years. Both the principal and the interest accrued on the notes are due at the end of the term of each note. These notes aggregate \$0.1 million and \$0.1 million at December 31, 2001 and 2002 respectively.

As of December 31, 2002, there were 300,302 shares of Common Stock available for grant under the two stock option plans.

The activity under the option plans, combined, was as follows:

	(000's) Options		Range of Exercise Price		Weighted Average Exercise Price
Options outstanding at January 1, 2000	1,661	\$	2.50 - \$8.63	\$	4.59
Granted	752	\$	1.56 - \$11.50		5.35
Exercised	(128)	\$	2.50 - \$9.87		3.82
Cancelled or expired	(317)	\$	1.56 - \$11.50		4.66
December 31, 2000	1,968	\$	1.56 - \$11.50	\$	4.92
	541	Φ.	2.12 000		2.10
Granted		\$	2.13 - \$6.06		3.19
Exercised	(150)		1.56 - \$6.88		3.59
Cancelled or expired	(448)	\$	2.13 - \$11.50		4.80
December 31, 2001	1,911	\$	1.56 - \$11.50	\$	4.81
Granted	655	\$	2.25 - \$15.00		7.81
Exercised	(322)	\$	2.13 - \$11.50		5.10
Cancelled or expired	(291)		2.13 - \$15.00		5.65
December 31, 2002	1,953	\$	2.13 - \$15.00	\$	5.64

Employee Stock Purchase Plan

In March 1997, the Company adopted the 1997 Employee Stock Purchase Plan ("the 1997 Plan") and reserved 100,000 shares of Common Stock for issuance thereunder. Employees, subject to certain limitations, may purchase shares at 85% of the lower of the fair market value of the Common Stock at the beginning of the six-month offering period, or the last day of the purchase period. During 2000, 2001 and 2002, 41,000, 38,000 and 59,000 shares, respectively, were sold under the 1997 Plan. At December 31, 2002, there were 98,000 shares available for issuance under the 1997 Plan.

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The following table summarizes information about stock options outstanding at December 31, 2002:

Options Outstanding					Options E	xercisal	ole
	Range of Exercise Price	(000's) Number Outstanding at 12/31/02	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable at 12/31/02	A E	Veighted Average Exercise Price
\$	1.56 - \$2.82	296	5.13	\$ 2.62	93	\$	2.62
\$	3.19 - \$3.71	221	6.66	3.54	75		3.62
\$	3.75 - \$4.50	224	3.90	4.16	162		4.20
\$	4.63 - \$5.00	248	1.97	4.94	223		4.93
\$	5.07 - \$5.21	213	5.06	5.16	105		5.18
\$	5.75 - \$7.06	240	2.88	6.78	168		6.73
\$	7.44 - \$7.75	53	4.39	7.74	31		7.75
\$	8.00 - \$8.00	239	8.23	8.00	4		8.00

	Options Outstanding			Options I	Exercisa	ble
\$ 8.12 - \$11.50	199	5.99	9.77	16		10.05
\$ 15.00 - \$15.00	20	6.30	15.00	0		0.00
\$ 1.56 - \$11.50	1,953	4.94	\$ 5.64	877	\$	5.02

401(k) Plan

In 1998, the Company sponsored a 401(k) defined contribution plan covering eligible employees who elect to participate. Southwall is allowed to make discretionary profit sharing and 401(k) matching contributions as defined in the plan and as approved by the board of directors. The Company matches 25% of each eligible participant's 401(k) contribution up to a maximum of 20% of the participant's compensation, not to exceed one thousand dollars per year. Southwall's actual contribution may be reduced by certain available forfeitures, if any, during the plan year. No discretionary or profit sharing contributions were made for the years ending December 31, 2000, 2001 and 2002. Matching contributions for the years ended December 31, 2000, 2001 and 2002 were \$0.2 million, \$0.1 million, and \$0.1 million respectively.

#### NOTE 8 SEGMENT REPORTING

Southwall reports segment information using the management approach to determine segment information. The management approach designates the internal organization that is used by management for making operating decisions and assessing performance as the source of its reportable

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segments. The Company is organized on the basis of products and services. The total net revenues for the automotive glass, electronic display, and architectural product lines were as follows:

		2000		2001		2002
	_					
Automotive glass	\$	20,198	\$	37,385	\$	25,697
Electronic display		47,734		29,691		26,555
Architectural		17,416		15,900		16,507
			_		_	
Total net revenues	\$	85,348	\$	82,976	\$	68,759

The following is a summary of net revenue by geographic area for 2000, 2001 and 2002.

		2000		2001		2002
	_					
United States	\$	12,750	\$	10,881	\$	10,597
Japan		34,956		26,755		24,853
France		12,030		19,842		12,922
Pacific Rim		14,681		9,113		9,326
Rest of world		6,763		7,830		5,636
Germany		4,168		8,555		5,425
Total net revenues	\$	85,348	\$	82,976	\$	68,759

Southwall operates from facilities located in the United States and Germany. Identifiable assets were as follows:

As of Dece	ember 31,
2001	2002

United States \$ 54,813 \$ 53,838
Germany \$ 18,345 \$ 22,744

Consolidated \$ 73,158 \$ 76,582

The Company's four largest customers accounted for net revenues in the periods below equal to the following percentages of the Company's total net revenue for each such period:

Customer		2000	2001	2002
A		14.5%	23.8%	18.7%
В		37.8%	21.2%	18.0%
C		2.1%	7.8%	15.7%
D		7.3%	15.9%	10.8%
Total		61.7%	68.7%	63.2%
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#### NOTE 9 COMMITMENTS and CONTINGENCIES

#### Commitments

The Company leases certain property and equipment as well as its facilities under noncancellable operating leases. These leases expire at various dates through 2009. As of December 31, 2002, the future minimum payments under these leases are as follows:

	Caj	Capital		Capital Operati		
2003	\$	7	\$	3,237		
2004		2		3,202		
2005				790		
2006				488		
2007				488		
Thereafter						
Future minimum lease payments		9	\$	8,205		
Less amount representing interest		(1)				
Present value of future minimum lease payments		8				
Current maturties		(8)				
Long-term lease obligations	\$					

Rent expense under operating leases was approximately \$3.2 million, \$3.7 million and \$3.7 million in 2000, 2001 and 2002, respectively.

#### Contingencies

In July 2002, we were served with a complaint in a lawsuit captioned "Hurricane Glass v. Southwall Technologies Inc. and V-Kool, Inc." filed in the Circuit Court of the Twelfth Judicial Circuit in and for Sarasota County, Florida. The complaint alleges that Hurricane was a distributor of our "Solis" product, that Hurricane's customers experienced various problems and failures with the product and that, as a result, Hurricane was required to perform repairs and replacements under its warranty provisions. The complaint alleges approximately \$440,000 in damages against both defendants. We believe the claims to be without merit and intend to defend the action vigorously. Management believes the ultimate resolution of the matter will not have a material effect on results of operations, cash flows and financial position.

We have been named as a defendant, along with Bostik, Inc., in an action entitled "WASCO Products, Inc. v. Southwall Technologies Inc. and Bostik, Inc.", Civ. Action No. C 02-2926 CRB, which was filed in Federal District Court for the Northern District of California on June 18, 2002. We were served with the complaint in this matter on July 1, 2002. The plaintiff has filed the matter as a purported class action on behalf of all entities and individuals in the United States who manufactured and/or sold and warranted the service life of insulated glass units manufactured between 1989 and 1999 which contained our Heat Mirror film and were sealed with a specific type of sealant manufactured by the co-defendant. The plaintiff alleges that the sealant provided by the co-defendant was defective, resulting in elevated warranty replacement claims and costs, and asserts claims against us for breach of

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an implied warranty of fitness, misrepresentation, fraudulent concealment, negligence, negligent interference with prospective economic advantage, breach of contract, unfair business practices and false or misleading business practices. The plaintiff seeks recovery of \$100 million for damages on behalf of the class allegedly resulting from elevated warranty replacement claims, restitution, injunctive relief, and non-specified compensation for lost profits. We believe all of the claims to be without merit and intend to defend the action vigorously. We have tendered the defense of this matter to our insurers, who have agreed to pay a percentage of our defense costs under reservation of rights. We believe they are also obligated to pay any resulting settlement or judgment. The action is in the early stages, thus an estimate of our loss exposure cannot be made.

We are a defendant in an action entitled "Portfolio Financial Servicing Company v. Southwall Technologies Inc.," which was filed in state court in Utah on May 22, 2002. This action arises out of sale-leaseback agreements which we entered into with an entity formerly known as Matrix Funding Corporation, or Matrix, in 1999 in connection with the acquisition of two of our production machines. Matrix thereafter filed bankruptcy proceedings. Plaintiffs in the action are Bank of America which alleges that it is the successor in interest to Matrix, and Portfolio Financial Servicing Company which claims to be an agent of the successor to Matrix. The plaintiffs demand payment of \$6,468,534, which they allege constitute unpaid lease payments, plus the alleged residual value of the equipment, less monies that Matrix owes to us. The action currently is in the discovery phase. We intend to defend the action vigorously. The action is in its early stages of discovery and the Company is not able to estimate the probability of an adverse outcome; accordingly no additional amounts have been accrued beyond the approximately \$3.3 million of the current portion of capital lease obligations due to uncertainty surrounding the potential additional exposure.

We are a defendant in an action filed on April 5, 1996 entitled "Four Seasons Solar Products Corp. vs. Black & Decker Corp., Bostik, Inc. and Southwall Technologies Inc.," No. 5 CV1695, pending in the United States District Court for the Eastern District of New York. Plaintiff is a manufacturer of insulated glass units which incorporate our Heat Mirror film. Plaintiff alleges that a sealant provided by the co-defendant is defective, asserts causes of action for breach of contract, unfair competition, and fraudulent concealment, and seeks monetary damages of approximately \$36 million for past and future replacement costs, loss of customer goodwill, and punitive damages against all defendants. We filed a motion to dismiss. The Court has dismissed the unfair competition and fraudulent concealment claims against us. It has denied our motion to dismiss the breach of contract claim. We believe the claim to be without merit. No adjustment has been recorded due to the uncertainty surrounding the potential exposure.

In October 2000, we were served with a complaint entitled Hurd Millwork, Inc. v. Southwall Technologies Inc., et. al., United States District Court, Northern District of California, Case No. C00-3820 (CRB). Hurd is a manufacturer of insulated glass units, which incorporate Heat Mirror film. Hurd alleged that various failures and deficiencies associated with the insulated glass units gave rise to warranty and other consumer claims. We have reached a settlement with the plaintiff, the terms of which are confidential. Our insurance carriers paid the cash portion of the settlement. We have also provided a discount on the price of future film sales as part of the settlement. During 2002, Hurd utilized discounts stemming from the settlement of approximately \$15,000.

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The insurance carriers in some of the litigation related to alleged product failures and defects in window products manufactured by others in which we were a defendant paid the defense and settlement costs related to such litigation. Those insurance carriers reserved their rights and

have expressed their intent to proceed against us to recover a portion or all of such payments. As a result, those insurance carriers could seek from us up to an aggregate of \$12.9 million plus defense costs, although any such recovery would be restricted to claims that were not covered by our insurance policies. We intend to vigorously defend any attempts by these insurance carriers to seek reimbursement. We are not able to estimate the likelihood that these insurance carriers will seek to recover any such payments, the amount, if any, they might seek, or the outcome of such attempts.

In addition, we are involved in certain other legal actions arising in the ordinary course of business. We believe, however, that none of these actions, either individually or in the aggregate, will have a material adverse effect on our business, our consolidated financial position, results of operations or cash flows.

## NOTE 10 RELATED PARTY TRANSACTIONS

Teijin

On April 9, 1997, Southwall signed a comprehensive set of collaborative agreements with a major supplier of the Company's raw materials, Teijin Limited. The agreements provided for, among other things, the purchase by Teijin of 667,000 shares of the Company's common stock at a price of \$7.50 per share; a guarantee by Teijin of a \$10.0 million loan to the Company; and an agreement to collaborate to achieve closer marketing and product development ties between the two companies. The Company pays an annual loan guarantee fee to Teijin of 0.5625% of the outstanding principal balance of the loan guaranteed by Teijin. The Company paid a loan guarantee fee of approximately \$53,000 and \$39,179 to Teijin in 2001 and 2002, respectively. As of December 31, 2002, \$2.5 million was outstanding under the loan guaranteed by Teijin. Pursuant to a letter agreement dated March 28, 2002, the Company was obligated to prepay \$2.5 million of the loan guaranteed by Teijin with the proceeds from common stock sold in a public offering or an amount equal to 10% of the proceeds from a sale of stock other than in a public offering. As a result of the Company's successful follow-on public offering in 2002 (See Note 4), the Company paid \$2.5 million, in addition to the scheduled principal payment of \$1.25 million, on November 6, 2002.

Also under these agreements, Teijin has the right to nominate a representative to the Company's board of directors. During 2000, 2001 and 2002 the Company paid Teijin approximately \$10.3 million, \$9.0 million and \$6.3 million for purchases of raw material substrates. At December 31, 2001 and 2002, accounts payable to Teijin were \$1.8 million and \$0.4 million.

#### Globamatrix

The Company has two distribution agreements with Globamatrix under which the Company granted it exclusive licenses in North America to distribute the Company's after-market applied film in the automotive and architectural glass markets. Under the agreements, which are scheduled to expire in 2007 and 2008, Globamatrix agreed to purchase an annually increasing amount of our products; however, the Company did not enforce the minimum purchase obligation provision in 2002. During

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2000, 2001 and 2002 sales to Globamatrix were \$2.2 million, \$5.6 million and \$6.4 million. At December 31, 2001 and 2002, accounts receivable from Globamatrix were \$1.5 million and \$2.9 million. In December 2002, the Company reached a settlement in the amount of \$1.5 million with Globamatrix on a product defect claim that arose in October 2002; of the \$1.5 million settlement, \$0.5 million will be provided as a discount against future purchases beginning January 1, 2003 through October 2003, and has been accrued at December 31, 2002. Additionally, Globamatrix' minimum purchase obligation for 2003 was reduced by \$1.75 million.

On April 20, 2001, Globamatrix purchased 422,119 shares of the Company's common stock for \$1.0 million (approximately \$2.37 per share) pursuant to a stock purchase agreement. The closing price of the Company's common stock on the Nasdaq National Market was \$2.10 per share on April 19, 2001, and \$2.19 per share on April 20, 2001. The shares were not registered in 2002 under the Securities Act. Globamatrix holds registration rights with respect to the shares.

## Transactions Involving Directors

In April 1997, the Company entered into a development and technology agreement with Energy Conversion Devices, Inc., or ECD. This agreement provides that the Company will pursue with ECD the commercialization of the process of sputter coating on flexible substrates using PECVD processes. The agreement further provides that the Company will pay ECD a royalty in an amount based upon the sales volume of product produced through the PECVD process. Southwall agreed to pay to ECD 2.25% of its net sales in connection with PECVD technology for five years and 1.25% of net sales after that. Through March 1, 2002, the process had not been commercialized and the Company had not paid ECD royalties under the agreement but expected to begin to pay royalties in 2003. In February 1999, the Company entered into an equipment

purchase contract with ECD pursuant to which ECD agreed to modify one of the Company's production machines (PM 7) so that the machine would produce products by means of the PECVD process. The Company paid ECD approximately \$0.01 million in 2000, \$0.29 million in 2001 and nothing in 2002 in connection with its conversion of PM 7 to the use of PECVD technology. A director of Southwall is the Chairman of ECD. At December 31, 2002, the Company owes ECD approximately \$0.07 million in connection with the conversion of PM 7, which is represented by a note payable. Final payment of \$0.07 million is due in January 2003.

During 1998, 1999, 2000, 2001 and 2002, we lent \$43,875, \$25,313, \$0, \$18,750 and \$14,700, respectively, to Thomas G. Hood, our President and Chief Executive Officer and a director, to permit him to exercise stock options that were about to expire at a time when he was not able to sell the shares issuable upon exercise to pay the exercise price. The indebtedness is represented by full recourse notes payables to us, which are due on June 30, 2003 each bearing interest at the rate of 7.0% per annum. The largest amount of indebtedness outstanding under these notes at any time during 2002 was \$126,345. As of December 31, 2002, the aggregate amount of indebtedness under Mr. Hood's notes was \$126,345, including interest.

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#### NOTE 11 BALANCE SHEET DETAIL

	December 3					
Inventories, net	2001			2002		
Raw Materials	\$ 3	545	\$	3,703		
Work-in-process	2	430		3,432		
Finished goods		176		1,402		
Total Inventories	\$ 6	151	\$	8,537		
	Dece	mber 3	31,			
Property, plant and equipment, net:	2001		20	02		
Land, buildings and leasehold improvements	\$ 8,968	\$		10,297		
Machinery and equipment	70,986			69,884		
Furniture and fixtures	4,730			7,233		
Construction-in-process	 5,179	_		10,870		
	\$ 89,863	\$		98,284		
Less accumulated depreciation	 (42,022	)	(	(48,033)		
Total property, plant and equipment	\$ 47,841	\$		50,251		

Depreciation and amortization expense for the years ended December 31, 2000, 2001 and 2002 was \$5.7 million, \$6.0 million, and \$6.1 million respectively. See Note 5 to the financial statements with respect to a government grant received to offset construction and equipment costs for the German subsidiary.

#### Restructuring costs.

Based on lower revenue expectations, we have decided to transfer more of our product manufacturing from our Palo Alto manufacturing site to our Dresden facility, with its lower cost base. As a consequence of this decision, we implemented a reduction in force at our Palo Alto location in December 2002, and elected to vacate certain buildings in Palo Alto. As a result of these actions, we incurred a restructuring charge of \$2.6 million in 2002 relating to employee severance packages and the remaining rents due on excess facilities in Palo Alto no longer occupied. Approximately \$0.2 million of the restructuring costs were paid prior to December 31, 2002.

The remaining outstanding obligations at December 31, 2002 are:

		Workforce reduction						Т	otal
Balance at January 1, 2002		\$		\$		\$			
Provisions			0.3		2.3		2.6		
Cash payments			(0.2)				(0.2)		
Balance at December 31, 2002		\$	0.1	\$	2.3	\$	2.4		
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#### Guarantees:

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others". FIN 45 requires a liability to be recognized at the time a company issues a guarantee for the fair value of the obligations assumed under certain guarantee agreements. The provisions for initial recognition and measurement of guarantee agreements are effective on a prospective basis for guarantees that are issued or modified after 31 December 2002. The adoption of FIN 45 is not expected to materially affect the consolidated financial statements.

The Company establishes a reserve for warranties and sales returns for specifically identified, as well as, anticipated warranty claims based on warranty experience. As of December 31, 2002 our reserve for warranty and sales returns was:

	begi	ance at nning of year	A	dditions	I	Deductions	_	Total
Reserve for warranty and sales returns	\$	2,642	\$	2,229	\$	2,802	\$	2,069
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#### ITEM 9. CHANGES IN AND DISAGREEMENTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

#### **PART III**

#### ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF REGISTRANT

The information required by this Item concerning our executive officers is contained at the end of Part I in the unnumbered item captioned "Executive Officers of the Registrant." Certain other information required regarding our directors is contained in our Proxy Statement for our 2003 Annual Meeting of Stockholders (the "Proxy Statement") under the caption "Election of Directors" and is incorporated herein by reference.

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and executive officers, and persons who own more than ten percent of our common stock, to file reports with the Securities and Exchange Commission disclosing their ownership of our stock and changes in such ownership. Copies of such reports are also required to be furnished to us. To our knowledge, based solely on review of the copies of the above-mentioned reports furnished to us and written representations that no other reports were required, during 2002, and all other such filing requirements were complied with in a timely fashion.

#### ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the sections entitled "Executive Officer Compensation", "Severance Agreements" and "Human Resources Committee Report on Executive Compensation" appearing in the Proxy Statement.

#### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the section entitled "Security Ownership of Officers, Directors and Principal Stockholders" appearing in the Proxy Statement.

#### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the section entitled "Certain Relationships and Other Transactions" appearing in the Proxy Statement.

#### ITEM 14. CONTROLS AND PROCEDURES

(a) *Disclosure controls and procedures*. Within 90 days before filing this report, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures. Our disclosure controls and procedures are the controls and other procedures that we designed to ensure that we record, process, summarize and report in a timely manner the information we must disclose in reports that we file with or submit to the SEC. Thomas G. Hood, our President and Chief Executive Officer, and Michael E. Seifert, our Senior Vice President and Chief Financial Officer, reviewed and participated in this evaluation. Based on this evaluation, Messrs. Hood and Seifert concluded that, as of the date of their evaluation, our disclosure controls were effective.

(b) Changes in Internal Controls. In connection with its audit of our consolidated financial statements for the year ended December 31, 2002, PricewaterhouseCoopers LLP (PwC) identified significant deficiencies, which represents a reportable condition. The reportable condition was caused by a reduction in force that was initiated in December 2002 and related to the inadequacy of review and supervision of the preparation of accounting records and the untimely reconciliation of certain

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accounts. PwC's conclusions and recommendations were presented to the Audit Committee of the Board of Directors. We intend to respond to the reportable conditions by ensuring that adequate review and supervision is carried out by individuals with an appropriate level of experience to ensure completeness and accuracy of financial statements. We have already taken steps to improve the quality in the accounting department by adding additional resources and will continue to upgrade the organization as deemed necessary.

#### **PART IV**

#### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

The following documents are filed as part of this Form 10-K:

(a) (1) Financial Statements. The following Financial Statements of Southwall Technologies Inc. are filed as part of this Form 10-K:

	Form 10-K Page Number
Report of Independent Accountants	44
Consolidated Balance Sheets as of December 31, 2001 and 2002	45
Consolidated Statements of Operations for the years ended December 31, 2000, 2001 and 2002	46
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2000, 2001 and 2002	47
Consolidated Statements of Cash Flows for the years ended December 31, 2000, 2001 and 2002	48

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Notes to Consolidated Financial Statements

(2) Financial Statement Schedule.

Valuation and qualifying accounts and reserves

Description	Begi	nce at nning Year Ac	lditions	Deduc	tion	Balance at End of Year
December 31, 2002						
Inventory reserves	\$	1,001 \$	255	\$	268(2)\$	988
Allowance for Bad Debts		388	353		189(2)	552
Reserve for warranty and sales returns		2,642	2,229(1)	)	2,802(2)	2,069
December 31, 2001						
Inventory reserves	\$	1,418 \$	876	\$	1,293(2)\$	1,001
Allowance for Bad Debts		640	460		712(2)	388
Reserve for warranty and sales returns		1,903	3,945(1)	)	3,206(2)	2,642

Notes

- (1) Charged against revenue.
- (2) Reserves utilized during the year.
  - (3) Exhibits.

Reference is made to the Exhibit Index, which follows the signature page of this Form 10-K.

(b) Reports on Form 8-K.

No reports on Form 8-K were filed during the quarter ended December 31, 2002.

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# REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

To the Board of Directors and Stockholders of Southwall Technologies, Inc.

Our audits of the consolidated financial statements referred to in our report dated February 25, 2003, appearing in Item 15(a)(1) of this Annual Report on Form 10-K of Southwall Technologies Inc. included an audit of the financial statement schedule listed in Item 15(a)(2) of this Form 10-K. In our opinion, this financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PricewaterhouseCoopers LLP

San Jose, California February 25, 2003

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#### **SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, as of the 31st day of March 2003.

#### SOUTHWALL TECHNOLOGIES INC.

By: /s/ THOMAS G. HOOD

Thomas G. Hood

President

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons in the capacities indicated, as of March 31, 2003.

Signature	Title
/s/ JOSEPH B. REAGAN	Chairman, Board of Directors
Joseph B. Reagan	
/s/ THOMAS G. HOOD	President, Chief Executive Officer and Director (Principal Executive Officer)
Thomas G. Hood	
/s/ BRUCE J. ALEXANDER	Director
Bruce J. Alexander	
/s/ NORIYUKI NAKAMURA	Director
Noriyuki Nakamura	
/s/ WALTER C. SEDGWICK	Director
Walter C. Sedgwick	
/s/ ROBERT C. STEMPEL	Director
Robert C. Stempel	
/s/ MICHAEL E. SEIFERT	Senior Vice President, Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)
Michael E. Seifert	77

I, Thomas G. Hood, certify that:

1.

I have reviewed this annual report on Form 10-K of Southwall Technologies Inc.;

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2.	
	Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact
	necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with
	respect to the period covered by this annual report;

- 3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
- The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
  - designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b)
    evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within ninety (90) days prior to
    the filing date of this annual report (the "Evaluation Date"); and
  - c)
     presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or person performing the equivalent function):
  - all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
- 6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003 /s/ THOMAS G. HOOD

Thomas G. Hood Chief Executive Officer

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## I, Michael E. Seifert, certify that:

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1.	I have re	viewed this annual report on Form 10-K of Southwall Technologies Inc.;
2.	necessar	n my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact y to make the statements made, in light of the circumstances under which such statements were made, not misleading with o the period covered by this annual report;
3.	material	n my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in all report;
4.		strant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
	a)	designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
	b)	evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within ninety (90) days prior to the filing date of this annual report (the "Evaluation Date"); and
	c)	presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on ou evaluation as of the Evaluation Date;
5.		strant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the nmittee of registrant's board of directors (or person performing the equivalent function):
	a)	all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
	b)	any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation,

including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 31, 2003 /s/ MICHAEL E. SEIFERT

Michael E. Seifert Chief Financial Officer

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## EXHIBIT INDEX

Exhibit No.	Exhibit
3.1(1)	Restated Certificate of Incorporation of the Company.
3.2(1)	By-laws of the Company.
10.35.1(11)	Lease Agreement for the facilities at 3941 East Bayshore Road, dated October 7, 1999, between the Company and Straube Associates, Inc.
10.36(1)	Lease Agreement for the facilities at 3961 East Bayshore Road, dated March 20, 1979, between the Company and Allan F. Brown and Robert V. Brown.
10.36.1(11)	Amendment, dated October 12, 1999, between the Company and Brown Investment Company to the Lease Agreement for the facilities at 3961 East Bayshore Road, dated March 20, 1979, between the Company and Allan F. Brown and Robert V. Brown.
10.52(2)	Marketing and Distribution Agreement dated as of May 20, 1988, among Mitsui, Marubeni Corporation and the Company, as amended.
10.52.1(19)	Amendment to the Marketing and Distribution Agreement dated as of May 20, 1988, among Mitsui, Marubeni Corporation and the Company, dated December 28, 1990.
10.59(3)	Lease Agreement for the facilities at 3969-3975 East Bayshore Road Palo Alto, California, dated January 1, 1989, between the Company and Bay Laurel Investment Company.
10.59.1(11)	Amendment, effective January 1, 2000, between the Company and Judd Properties, LLC to the Lease Agreement for the facilities at 3969-3975 East Bayshore Road Palo Alto, California, dated January 1, 1989, between the Company and Bay Laurel Investment Company.
10.60(3)	Lease Agreements for the facilities at 3977-3995 East Bayshore Road Palo Alto, California, dated January 1, 1989, between the Company and Bay Laurel Investment Company.
10.60.1(11)	Amendment, effective January 1, 2000, between the Company and Judd Properties, LLC to the Lease Agreements for the facilities at 3977-3995 East Bayshore Road Palo Alto, California, dated January 1, 1989, between the Company and Bay Laurel Investment Company.
10.71(4)	Lease Agreement for the facilities at 3780 Fabian Way, Palo Alto, California, dated June 11, 1990, between the Company and The Fabian Building.
10.72(4)	License Agreement between Mitsui and the Company, dated December 28, 1990.
10.72.1(19)	Amendment to the License Agreement dated as of December 28, 1990 between Mitsui and the Company, dated August 2000.
10.78(5)	Amendment to property lease dated February 2, 1994 to extend lease period on building at 3961 E. Bayshore Road, Palo Alto, California. Original lease filed as Exhibit No. 10.36 above.
10.80(6)	Lease Agreement between Frank Gant, as Lessor, and the Company, as Lessee, effective September 1, 1994.
10.84(7)	Lease Agreement between Chamberlain Development, L.L.C., as Lessor and the Company, as Lessee, effective August 22, 1996.
10.88(8)	Basic Agreement dated April 9, 1997, for the sale of 667,000 shares of the Company's common stock to Teijin Limited, a Japanese corporation, and for mutually beneficial cooperation and collaboration between Teijin and the Company.
10.89(8)	Credit Agreement dated May 6, 1997, between Sanwa Bank, Limited and the Company.
10.89.1(19)	First Amendment to Credit Agreement dated November 8, 1999 between Sanwa Bank, Limited and the Company.
10.90(8)	Reimbursement and Security Agreement dated May 6, 1997, between Teijin Limited, a Japanese corporation, and the Company.
10.91(8)	Promissory Note, dated May 6, 1997, obligating the Company to Sanwa Bank, Limited, in the amount of \$10 million.
10.92(9)*	The Company's 1997 Stock Incentive Plan.
10.93(10)*	The Company's 1997 Employee Stock Purchase Plan, as amended.
10.94(12)*	The Company's October 22, 1999 Severance Policy in the Event of a Merger.
10.95(12)	Amendment to property lease dated August 22, 1996, to increase rent on building located at 8175 South Hardy Drive, Tempe, Arizona effective December 1, 2000. Original lease was filed as Exhibit 10.84 above.
10.96(13)	Digeo, Inc. sublease agreement.
10.97(13)	Energy Conversion Devices note payable.
10.98(14)	Globamatrix Purchase Agreement.
10.99(15)	1998 Stock Plan for Employees and Consultants.

10.100(15) 10.101(16)	Receivables Financing Agreement between Pacific Business Funding and the Company, dated June 30, 1999. Supply Agreement between Saint Gobain Sekurit France and the Company, dated December 19, 2001 (portions of this
	exhibit have been omitted based on a request for confidential treatment; the non-public information has been filed with the Commission).
10.103(15)	German bank loan dated May 12, 1999.
10.104(15)	German bank loan dated May 28, 1999.
10.105(22)	German bank loans dated May 28, 1999 and December 1, 1999.
10.106(15)	German bank loan due June 30, 2009.
10.107(15)	German bank loan dated June 29, 2000.
10.108(15)	German bank loan dated July 10, 2000.
10.109(15)	German bank loans dated December 18, 2000 and December 19, 2000.
10.111(19)	Master Lease Agreement between Matrix Funding Corporation and the Company, dated July 19, 1999.
10.112(15)	Development and Technology Agreement between Energy Conversion Devices, Inc. dated April 11, 1997.
10.114(20)	Promissory Notes issued by Thomas G. Hood to the Company.
10.115(20)	Teijin Waiver Letter dated March 28, 2002.
10.116(18)	Distribution Agreement between Globamatrix Holdings Pte. Ltd. and the Company, dated as of January 1, 2002
. ,	(portions of this exhibit have been omitted based on a request for confidential treatment; the non-public information
	has been filed with the Commission).
10.117(17)	Teijin Waiver Letter dated May 9, 2002.
10.118(17)	Sanwa Bank Waiver Letter dated May 15, 2002.
10.119(19)	Standard Industrial Lease dated October 1999 for the facilities at 1029 Corporation Way, Palo Alto, California
	between the Company and C&J Development.
10.120(19)	Guarantee Agreement Regarding 10 million US\$ Credit Facility between Teijin Limited and the Company, dated May
	6, 1997.
10.120.1(21)	Memorandum Amendment to the Guarantee Agreement between Teijin Limited and the Company, dated August
	1999.
10.121.	Pilkington Supply and Purchase Agreement dated September 1, 2002.
10.122.	Xinyi Group (Glass) Co. LTD. Purchase Agreement dated September 5, 2002.
21(15)	List of Subsidiaries of the Company.
23.1	Consent of Independent Accountants.
99.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of
	2002.
99.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of
	2002.

Relates to management contract or compensatory plan or arrangement.

- (1) Filed as an exhibit to the Registration Statement on Form S-1 filed with the Commission on April 27, 1987 (Registration No. 33-13779) (the "Registration Statement") and incorporated herein by reference.
- (2) Filed as an exhibit to the Form 10-Q Quarterly Report for Quarter Ended June 30, 1988, filed with the Commission on August 15, 1988 and incorporated herein by reference. Our 1934 Act registration number is 000-15930.
- (3) Filed as an exhibit to the Form 10-Q Quarterly Report for Quarter Ended July 2, 1989, filed with the Commission on August 16, 1989 and incorporated herein by reference.
- (4)
  Filed as an exhibit to the Form 10-K Annual Report 1990, filed with the Commission on March 25, 1991 and incorporated herein by reference.
- (5) Filed as an exhibit to the Form 10-K Annual Report 1992, filed with the Commission on March 15, 1993 and incorporated herein by reference.

(6)

Filed as an exhibit to the Form 10-Q Quarterly Report for Quarter Ended July 3, 1994, filed with the Commission on August 15, 1994 and incorporated herein by reference.

- (7)
  Filed as an exhibit to the Form 10-K Annual Report 1996, filed with the Commission on March 27, 1997 and incorporated herein by reference.
- (8)
  Filed as an exhibit to the Form 10-Q Quarterly Report for Quarter Ended June 29, 1997, filed with the Commission on August 14, 1997 and incorporated herein by reference.
- (9)
  Filed as Proposal 3 included in the 1997 Proxy statement filed with the Commission on April 14, 1997 and incorporated herein by reference.
- (10)
  Filed as Proposal 3 included in the 2002 Proxy statement filed with the Commission on April 22, 2002 and incorporated herein by reference.
- (11)
  Filed as an exhibit to the Form 10-K Annual Report 1999, filed with the Commission on April 6, 2000 and incorporated herein by reference.
- (12)
  Filed as an exhibit to the Form 10-K Annual Report 2000, filed with the Commission on April 9, 2001 and incorporated herein by reference.
- (13)
  Filed as an exhibit to the Form 10-Q Quarterly Report for Quarter Ended September 30, 2001, filed with the Commission on November 12, 2001 and incorporated herein by reference.
- (14)
  Filed as an exhibit to the Form 10-Q Quarterly Report for the Quarter Ended April 1, 2001, filed with the Commission on May 16, 2001 and incorporated herein by reference.
- (15)
  Filed as an exhibit to the Form 10-K Annual Report 2001, filed with the Commission on April 1, 2002 and incorporated herein by reference.
- (16)
  Filed as an exhibit to the Form 10-K/A Annual Report 2001, filed with the Commission on June 14, 2002 and incorporated herein by reference.
- (17)
  Filed as an exhibit to the Form 10-Q Quarterly Report for the Quarter Ended March 31, 2002, filed with the Commission on May 17, 2002 and incorporated herein by reference.
- (18) Filed as an exhibit to the Form 10-Q/A Quarterly Report for the Quarter Ended March 31, 2002, filed with the Commission on June 19, 2002 and incorporated herein by reference.
- (19)
  Filed as an exhibit to Amendment No. 3 to the Registration Statement on Form S-1 filed with the Commission on June 25, 2002 (Registration No. 333-85576) and incorporated herein by reference.
- (20)
  Filed as an exhibit to the Registration Statement on Form S-1 filed with the Commission on April 5, 2002 (Registration No. 333-85576) and incorporated herein by reference.

(21)

Filed as an exhibit to Amendment No. 1 to the Registration Statement on Form S-1 filed with the Commission on May 31, 2002 (Registration No. 333-85576) and incorporated herein by reference.

(22)

Filed as an exhibit to the Form 10-K/A Annual Report 2001, filed with the Commission on June 27, 2002 and incorporated herein by reference.

#### **OuickLinks**

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