SOUTHWALL TECHNOLOGIES INC /DE/
Form 10-K
April 02, 2007

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2006

OR

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

For the transition period from _____to _____

Commission file number 0-15930

Southwall Technologies Inc.
(Exact name of Registrant as specified in its Charter)

Delaware	**94-2551470**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)

3788 Fabian Way
Palo Alto, California 94303
(Address of Principal Executive Offices including Zip Code)

(650) 798-1200
(Registrant's Telephone Number, Including Area Code)

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)

_____

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes £ No T

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15 (d) of the Act. Yes £ No T

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 T No £

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. T

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes £ No T

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of “accelerated filer and large accelerated filer” in Rule 12b-2 of the Exchange Act. (Check One).

Large accelerated filer £
Accelerated filer £
Non-accelerated filer T

The approximate aggregate market value of the Common Stock held by non-affiliates of the registrant on July 3, 2006 (based upon the closing sales price of the Common Stock on the Over-the-Counter Bulletin Market on such date) was $6.2 million. For purposes of this disclosure, Common Stock held by stockholders whose ownership exceeds five percent of the Common Stock outstanding as of July 3, 2006, 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.

The number of shares of the registrant's Common Stock outstanding on March 1, 2007 was 27,139,035

Documents Incorporated by Reference

Document Description	10-K Part
Portions of the Registrant’s Proxy Statement for the Annual Meeting of Stockholders to be held May 24, 2007	III

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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. 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 comparable terminology, although not all forward-looking statements contain these identifying words. Forward-looking statements are only predictions and include, without limitation, statements relating to:

- our strategy, future operations and financial plans, including, without limitation, our plans to install and commercially produce products on new machines;
- the continued trading of our common stock on the Over-the-Counter Bulletin Board Market;
- 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 our ability to implement and maintain effective controls and procedures;
- 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" below. 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.

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PART I

ITEM 1. BUSINESS

Overview

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

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. You may read and copy any material that we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site at http://www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers, including Southwall, that file electronically with the SEC.

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 applications to control the transmission and reflection of light and the flow of energy. Thin film coatings can modify the transmission, reflection and absorption of both visible and non-visible light, such as infrared and ultra-violet light, to enhance the performance and characteristics of the material.

Thin film process technologies

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

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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.

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 pyrolytic 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 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

The primary markets for thin film coated substrates that we manufacture are the automotive glass, electronic display, architectural glass and window film 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

The 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.

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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 inside the automobile.

Electronic display products

The thin film coated products we sell in this market primarily block electromagnetic emissions and infrared energy, and enhance the light output of certain displays. Our thin film coated substrates are used in liquid crystal displays, or LCDs and plasma display panels or PDPs, and in applications such as touch screens.Thin film coated substrates in this market are generally sold to OEMs, which apply the film to flat screens.

Architectural glass products

The 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; thus, the primary source of heat build-up and loss in buildings is through the glass windows.

Window Film

The thin film coated substrates we sell in this market are similar to the films sold into the automotive and architectural glass markets. Differences include certain product characteristics that allow the architectural window film products to be sold in the aftermarket rather than through the OEMs. In addition, our automotive window film products are used for retrofit application to the inside surface of a vehicle window and are sold through resellers who install the film.

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.

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We rely extensively upon trade secrets and know-how to develop and maintain our competitive position. We have 23 patents and 18 patent applications pending in the United States and 68 patents and more than 34 patent applications pending outside the United States that cover materials, processes, products and production equipment. Of our existing patents, three U.S. patents and eighteen international patents will expire in 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	APPLICATION	FILM RODUCTS	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 AGC Automotive Americas Guardian Glass
Electronic display	Liquid crystal display (LCD) screens LCD reflector for lighting sources	Anti-reflective clear (ARC) Silver reflecting	Clear anti-reflective product 95% Reflecting Light-weight mirror	Berliner Glass Mitsui Chemicals
	Plasma display panels (PDP)	Infrared reflective (TCP)	Clear and Conductive Clear infrared blocking	Mitsui Chemicals
Architectural glass	New and retrofit residential and commercial windows and doors	Suspended Heat Mirror	Cool in summer Warm in winter UV blocking Noise reducing	Kensington Windows Zamil Glass Traco
	Commercial buildings	Laminated (XIR)	Infrared reflecting UV blocking	Gulf Glass Industries Cristales Curvados

			Cool in summer Noise reducing	
Window film	After-market installation	Solis/V-KOOL Huper Optik	Transmits up to 75% visible light Reflects up to 85% of infrared heat energy	V-Kool International Huper Optik
			Infrared reflecting UV blocking Cool in summer Noise reducing	

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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 installed in 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 windshield glass producers. Our sputter coated flexible substrates can be applied to windshields with different curvatures and incorporated into most in-line windshield production processes used by glass companies today.

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.

Our net revenues from sales of automotive glass products were $13.4 million, $19.6 million and $20.6 million in 2006, 2005 and 2004, respectively.

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.

Anti-reflective films. Our anti-reflective films minimize reflection of visible light while allowing high picture quality. Our anti-reflective clear, or ARC, films are clear and used in LCD and plasma display panel screens.

Silver reflecting films. Our silver reflecting film is a mirror-like product used as a reflector in LCD backlit screens and for mirrors in rear-projection TV systems.

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.

Our net revenues from sales of electronic display products were $10.8 million, $14.0 million and $20.6 million in 2006, 2005 and 2004, respectively.

Architectural glass 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. Our products allow architectural glass manufacturers 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.

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Suspended Heat Mirror films.