[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 (FEE REQUIRED)

FOR THE FISCAL YEAR ENDED OCTOBER 31, 1997
OR
[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

COMMISSION FILE NUMBER 1-5725
QUANEX CORPORATION
(Exact name of registrant as specified in its charter)

DELAWARE
State or other jurisdiction of incorporation or organization
1900 WEST LOOP SOUTH, SUITE 1500
HOUSTON, TEXAS
(Address of principal executive offices)

38-1872178
(I.R.S. Employer Identification No.)

77027
(Zip Code)

Registrant's telephone number, including area code (713) 961-4600
Securities registered pursuant to Section 12(b) of the Act:

TITLE OF EACH CLASS

Common Stock, \$.50 Par Value
Rights to Purchase Series A Junior Participating
Preferred Stock
6.88\% Convertible Subordinated Debentures

NAME OF EACH EXCHANGE ON WHICH REGISTERED

New York Stock Exchange, Inc.
New York Stock Exchange, Inc. New York Stock Exchange, Inc.

Securities registered pursuant to Section 12(g) of the Act:
NONE
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 [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation $\mathrm{S}-\mathrm{K}$ 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 $10-\mathrm{K}$ or any amendment to this Form 10-K. [ ]

The aggregate market value of the registrant's voting stock held by non-affiliates as of December 31, 1997, computed by reference to the closing price for the Common Stock on the New York Stock Exchange, Inc. on that date, was $\$ 396,630,084$. Such calculation assumes only the registrant's officers and directors were affiliates of the registrant.

At December 31, 1997, there were outstanding $14,102,403$ shares of the registrant's Common Stock, $\$ .50$ par value.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of the Registrant's definitive Proxy Statement, to be filed with the Commission within 120 days of October 31, 1997, for its Annual Meeting of Stockholders to be held on February 26, 1998, are incorporated herein by reference in Items 10, 11, 12, and 13 of Part III of this Annual Report.
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## ITEM 1. BUSINESS

GENERAL
The Company was organized in 1927 as a Michigan corporation under the name of Michigan Seamless Tube Company. The Company reincorporated in Delaware in 1968 under the same name and then changed its name to Quanex Corporation in 1977. The Company's executive offices are located at 1900 West Loop South, Suite 1500, Houston, Texas 77027. References made to the "Company" or "Quanex" include Quanex Corporation and its subsidiaries unless the context otherwise requires.

Quanex Corporation is a technological leader in the manufacture of value-added metal products made from carbon and alloy steel and aluminum. The Company's products include engineered carbon and alloy steel bars, aluminum flat-rolled products, and fabricated aluminum and steel products. Quanex's products include various high quality specialized products designed for specific markets. The Company believes that its use of state-of-the-art process technology, low cost production and engineering to meet specific customer applications provides the Company with competitive advantages over many of its competitors. The Company has also sought to reduce the impact of cyclical economic downturns on its operations through diversification of the markets served. The markets served by the Company include the industrial machinery and capital equipment industries, the transportation industry, energy processing and the commercial and residential building and remodeling industries.

Since the mid-1980s Quanex has refocused its strategy from being a manufacturer principally of steel products with a heavy dependence on energy markets to a diversified, value-added specialized metals products company serving a broad range of markets. The Company's future growth strategy is focused on the continued penetration of higher margin markets, continued expansion of its aluminum and steel manufacturing operations, rapid expansion of formed value-added products, and niche acquisitions.

In April 1997, the Company completed the sale of its LaSalle Steel Company ("LaSalle") subsidiary, a manufacturer of cold finished steel bars, for approximately $\$ 65$ million. For business segment purposes, LaSalle previously comprised the Company's "Cold Finished Steel Bars" segment.

In October 1997, the Company, through its Dutch subsidiary, Piper Impact Europe B.V. ("Piper Europe"), acquired the net assets of Advanced Metal Forming C.V., a Dutch Limited Partnership, for approximately $\$ 30$ million. Located in Zwolle, The Netherlands, Piper Europe produces high-quality aluminum impact extrusions and precision steel stampings for the automotive and electronics industries in Europe and North America. This acquisition will complement the Company's 1996 strategic acquisition of Piper Impact, Inc. ("Piper Impact"), a manufacturer of custom designed, impact extruded aluminum and steel parts for the transportation industry. The acquisition of Advanced Metal Forming C.V. provides the Company with its first non-U.S. operations and, as such, presents new challenges and opportunities for the Company.

In December 1997, the Company completed the sale of its tubing operations ("Tubing Operations"), comprised of Michigan Seamless Tube Company, Gulf States Tube Division, and the Tube Group Administrative Office. For business segment purposes, the Tubing Operations were previously classified as "Steel Tubes". Two small divisions, Heat Treat Division and NitroSteel Division, which were previously included with the Steel Tubes segment, were retained by the Company and are now included in the "Engineered Steel Bar" segment.

The Company has also invested significantly in technologically advanced continuous manufacturing processes to meet demanding quality specifications and to achieve cost efficiencies. In its MacSteel operations, rotary centrifugal continuous casters are used with an in-line manufacturing process to produce bearing grade and aircraft quality, seam-free, specialty engineered carbon and alloy steel bars that enable Quanex to participate in higher margin markets. Since 1992, the Company has invested over $\$ 82$ million to enhance the steel refining processes, to improve rolling and finishing capacity and to expand manufacturing capacity at its MacSteel operations by approximately 100,000 tons per year. The Company currently is engaged in an additional $\$ 60$ million expansion and improvement program at MacSteel designed to increase caster productivity and productive capacity by approximately 70,000 tons, or 13\%, to 620,000 tons per year when completed in fiscal 1998.

The Company's business is managed on a decentralized basis. Each operating group has administrative, operating and marketing functions. Financial reporting systems measure each plant's return on investment, and the Company seeks to reward superior performance with incentive compensation, which is a significant portion of total employee compensation. Intercompany sales are conducted on an arms-length basis. Operational activities and policy are managed by corporate officers and key executives. Also, a small staff provides corporate accounting, financial and treasury management, tax, and human resource services to operating divisions.

MARKETS AND PRODUCT SALES BY BUSINESS SEGMENT
As a result of the Company's dispositions of LaSalle and the Tubing Operations, the Company's operations are now grouped into two business segments, consisting of (i) engineered steel bars and (ii) aluminum products. General corporate expenses are classified as other operations.

Information with respect to major markets for the Company's products, expressed as a percentage of consolidated net sales, is shown under the heading "Sales by Major Markets" as set forth below. For financial information regarding each of Quanex's business segments, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" herein and Note 11 to the Consolidated Financial Statements. Although Quanex has attempted to estimate its sales by product and market categories, many products have multiple end uses for several industries and sales are not recorded on the basis of product or market categories. A significant portion of sales is made to distributors who sell to different industries. Net sales by principal market are based upon the total dollar volume of customer invoices. For the year ended October 31, 1997, one customer, Autoliv Inc., accounted for approximately $13 \%$ of the Company's sales.

SALES BY MAJOR MARKETS


|  |  | TOTAL TRANSPORTATION | \$ | $\begin{gathered} 355.1 \\ 47.6 \% \end{gathered}$ | \$ | $\begin{gathered} 229.2 \\ 37.0 \% \end{gathered}$ | \$ | $\begin{gathered} 194.0 \\ 32.1 \% \end{gathered}$ | \$ | $\begin{gathered} 148.0 \\ 34.0 \% \end{gathered}$ | \$ | $\begin{gathered} 126.3 \\ 34.0 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENERGY | Exploration/ Production | Steel bars and treated tubes and bars | \$ | $\begin{aligned} & 4.6 \\ & 0.6 \% \end{aligned}$ | \$ | $\begin{aligned} & 4.2 \\ & 0.7 \% \end{aligned}$ | \$ | $\begin{aligned} & 4.4 \\ & 0.7 \% \end{aligned}$ | \$ | $\begin{aligned} & 3.7 \\ & 0.8 \% \end{aligned}$ | \$ | $\begin{aligned} & 6.3 \\ & 1.7 \% \end{aligned}$ |
|  | ```Processing/Conversion (refining, petrochemical, power generation)``` | Steel bars and treated tubes and bars | \$ | $\begin{aligned} & 1.2 \\ & 0.2 \% \end{aligned}$ | \$ | $\begin{aligned} & 0.9 \\ & 0.1 \% \end{aligned}$ | \$ | $\begin{aligned} & 1.0 \\ & 0.2 \% \end{aligned}$ | \$ | $\begin{aligned} & 0.8 \\ & 0.2 \% \end{aligned}$ | \$ | $\begin{gathered} 19.9 \\ 5.4 \% \end{gathered}$ |
|  |  | TOTAL ENERGY | \$ | $\begin{aligned} & 5.8 \\ & 0.8 \% \end{aligned}$ | \$ | $\begin{aligned} & 5.1 \\ & 0.8 \% \end{aligned}$ | \$ | $\begin{aligned} & 5.4 \\ & 0.9 \% \end{aligned}$ | \$ | $\begin{aligned} & 4.5 \\ & 1.0 \% \end{aligned}$ | \$ | $\begin{aligned} & 26.2 \\ & 7.1 \% \end{aligned}$ |
| ALUMINUM PRODUCTS | Residential and Commercial Building Materials, Other | Aluminum sheet, fabricated aluminum products, aluminum coil and coated aluminum coil | \$ | $\begin{gathered} 327.5 \\ 43.9 \% \end{gathered}$ | \$ | $\begin{gathered} 313.1 \\ 50.5 \% \end{gathered}$ | \$ | $\begin{gathered} 331.6 \\ 54.9 \% \end{gathered}$ | \$ | $\begin{aligned} & 200.9 \\ & 46.1 \% \end{aligned}$ | \$ | $\begin{aligned} & 143.0 \\ & 38.5 \% \end{aligned}$ |
| OTHER |  |  | \$ | $\begin{gathered} 15.3 \\ 2.0 \% \end{gathered}$ | \$ | $\begin{aligned} & 3.3 \\ & 0.5 \% \end{aligned}$ | \$ | -- | \$ | -- | \$ | -- |
|  |  | TOTAL SALES | \$ | $\begin{aligned} & 746.1 \\ & 100.0 \% \end{aligned}$ | \$ | $\begin{aligned} & 620.1 \\ & 100.0 \% \end{aligned}$ | \$ | $\begin{aligned} & 604.0 \\ & 100.0 \% \end{aligned}$ | \$ | $\begin{aligned} & 435.9 \\ & 100.0 \% \end{aligned}$ | \$ | $\begin{aligned} & 371.3 \\ & 100.0 \% \end{aligned}$ |

## Engineered Steel Bars

The Company's engineered steel bars segment consists of engineered steel bar operations, steel bar and tube heat treating services, and steel bar and tube wear and corrosion resistant finishing services.

The Company's engineered steel bar operations are conducted through its MacSteel division, consisting of two plants located in Ft. Smith, Arkansas and Jackson, Michigan. These plants manufacture hot finished precision engineered carbon and alloy steel bars. The Company believes that MacSteel has the only two plants in North America using continuous rotary centrifugal casting technology. This casting process produces inherently seam-free bars, without surface defects and inclusions, thereby reducing the need for subsequent surface conditioning. The continuous casting and automated in-line manufacturing operations at the MacSteel plants substantially
reduce labor and energy costs by eliminating the intermittent steps that characterize manufacturing operations at most larger integrated steel mills. The Company typically sells only complete heat lots, or batches, which are made to specific customer requirements. Heat lots average 45 tons at Jackson and 50 tons at Ft. Smith.
Over time, MacSteel has focused its capital improvement programs on production of high quality specialty steel bars. Since 1992, the Company has invested significantly in the improvement of operations and expansion of annual manufacturing capacity at its MacSteel operations by a total of approximately 100,000 tons. These investments (i) resulted in improved metallurgical, melting and casting operations, (ii) provided ultrasonic testing facilities at both MacSteel facilities and (iii) upgraded and modernized MacSteel's rolling and finishing capacity and increased caster productivity. These improvements also allowed the Company to produce bearing grade and aircraft quality steel bars and to participate in the higher margin segments of the steel bar market. The Company currently is engaged in an additional \$60 million expansion and improvement program to increase capacity by approximately 70,000 tons per year. Of the total $\$ 60$ million MacSteel project, $\$ 20$ million is related to a significant upgrade to pollution control systems to ensure compliance with EPA standards under the Clean Air Act.
MacSteel products are manufactured for customers in the automotive, light truck, heavy truck, anti-friction bearing, off-road and farm equipment, defense, capital equipment and seamless tubular industries. These industries use engineered steel bars in critical applications such as camshafts, crankshafts, transmission gears, wheel spindles and hubs, bearing cages and rollers, steering components, hydraulic mechanisms and seamless tube production. Piper Impact uses MacSteel engineered steel bars for the manufacture of components for safety critical steel air bag inflators at its plant in New Albany, Mississippi.
Also included in the Engineered Steel Bars segment is a heat treating plant in Huntington, Indiana ("Heat Treat"), and a plant in Kenosha, Wisconsin which improves the wear and corrosion resistance properties of steel bars and tubes ("NitroSteel").

Heat Treat provides tube and bar heat treating and related services, such as quench and temper, stress relieving, normalizing and "cut-to-length". Metallurgical testing services are also provided. This plant serves customers in the energy, automotive, ordnance, mining and fluid power markets.

NitroSteel was acquired in January 1995, and began commercial operations in November 1995. NitroSteel's products are produced to specific customer applications and sold into fluid power markets.

## Aluminum Products

The Company's Aluminum Products segment is comprised of the Nichols Aluminum Division, manufacturing finished aluminum sheet, and the Engineered Products Group, engaged in producing aluminum and steel impact extrusions and fabricated products. The Nichols Aluminum division consists of three plants, a thin-slab casting and hot rolling mill ("N-A Casting") located in Davenport, Iowa, and two cold rolling and finishing plants located in Davenport, Iowa and Lincolnshire, Illinois. The Engineered Products Group consists of Piper Impact, with plants in New Albany, Mississippi and Park City, Utah, Piper Europe with a plant in Zwolle, The Netherlands, and the Fabricated Products Division with manufacturing facilities in Rice Lake, Wisconsin and Chatsworth, Illinois.

Nichols Aluminum manufactures mill finished and coated, aluminum sheet, for the home improvement, new construction, light commercial construction, transportation and service center markets.

N-A Casting operates an aluminum mini-mill, equipped with a state-of-the-art 52 -inch wide Hazelett thin slab caster, a three stand hot rolling mill, and scrap processing and melting equipment. This facility has an annual capacity to produce in excess of 350 million pounds of hot rolled coiled aluminum sheet. The three stand rolling mill is able to reduce the cast aluminum slab from a thickness of approximately . 75 inches to a coiled aluminum sheet with thickness of . 045 inches. This hot rolling mill process substantially reduces subsequent cold rolling requirements. The Company believes that the advent of aluminum mini-mills, like the more developed steel mini-mills, offers competitive advantages over large integrated producers, including labor and energy savings and reduced capital and as-cast material costs.

Nichols Aluminum finishes the aluminum sheet produced at N-A Casting and markets both coated and mill finished aluminum sheet through its Nichols Aluminum Davenport ("NAD") plant and Nichols Aluminum Lincolnshire ("NAL") plant. Operations include cold rolling to specific gauge, annealing, leveling, slitting to specific width and custom coating. Nichols Aluminum currently has annual capacity of cold rolling approximately 300 million pounds depending upon product mix. In December 1997, the Company renewed a non-binding letter of intent to acquire, subject to due diligence and negotiation of a definitive agreement, a cold rolling, finishing and coating facility operated by Decatur Aluminum, in Decatur, Alabama to bring its casting and cold rolling capacities into closer balance.

Piper Impact, which was acquired in August 1996, and Piper Europe, acquired in October 1997, are technological leaders in the manufacture of custom designed, impact extruded aluminum and steel parts for the transportation,
electronics and defense markets. The majority of Piper Impact's sales are to one customer, Autoliv (formerly Morton International), in the form of airbag components for the automotive industry.

Piper Impact completed during fiscal 1997 most of the construction and installation of equipment at its new manufacturing facility in New Albany, Mississippi for the production of highly engineered impact extruded steel products. Piper Impact's steel products plant is part of a two-year, \$55 million capital project to provide capacity for new customer programs primarily for the automotive air bag systems market. This includes passenger and side-impact air bags, "smart" bags with adjustable inflation speed and those with alternative inflation technologies. The Company believes that these projects will provide Piper Impact with the technology and additional capacity for advanced applications, improved customer service, and cost effective manufacturing processes thereby improving competitiveness and growth opportunities.

The Fabricated Products Division, consisting of the AMSCO plant in Rice Lake, Wisconsin and two Homeshield Fabricated Products ("HFP") plants in Chatsworth, Illinois, manufactures aluminum window and patio door screens, window frames, and a broad line of custom designed, roll formed products and stamped shapes for manufacturers of premium wood windows and vinyl windows for the home improvement, new residential and commercial construction markets. AMSCO combines a strong product design and development with reliable, just-in-time delivery. HFP also coats and fabricates aluminum coil in many colors, sizes and finishes into rain carrying systems, soffit, exterior housing trim and painted coil sheet and roofing products.

## MANUFACTURING

Quanex operates 13 manufacturing facilities in eight states in the United States and one plant in Zwolle, The Netherlands. These facilities feature efficient plant design and flexibility in manufacturing processes, enabling the Company to produce a wide variety of products for various industries and applications. The Company is generally able to maintain minimal levels of finished goods inventories at most locations because it typically manufactures products to customer specifications upon order.

Engineered Steel Bars. The Company's MacSteel facilities produce various grades of specialty engineered steel bars by melting high quality steel scrap and casting it in a rotary centrifugal continuous caster. MacSteel's molten steel goes through secondary refining consisting of argon stirring, ladle injection and vacuum arc degassing prior to casting. This enables MacSteel to produce higher quality, "cleaner" steels. Precision engineered products are produced through a continuous in-line process by which scrap steel is converted into hot rolled steel bars without interruption.

As a result of its state-of-the-art continuous manufacturing technology, which reduces labor, energy and process yield loss, the Company believes that MacSteel is one of the lowest cost producers of precision engineered carbon and alloy steel bars. The Company believes that energy costs at MacSteel are significantly lower than those of its competitors because its bars are moved directly from the caster to the rolling mill before cooling, eliminating the need for costly reheating. MacSteel's unit labor costs are achieved with its highly automated manufacturing process enabling it to produce finished high quality steel bars using approximately two man-hours of labor per ton compared to an estimated average of five man-hours per ton for U.S. integrated steel producers.

The Heat Treat facility uses custom designed, in-line, equipment to provide steel tube and bar heat treating services, such as quench-and-temper, case hardening, stress relieving and normalizing. The NitroSteel plant processes steel bars and tubes using the patented Nitrotec treatment to improve corrosion and wear resistance while providing an environmentally friendly, non-toxic alternative to chrome plating.

Aluminum Products. Manufacturing at the Company's various Aluminum Products facilities ranges from the production of coiled aluminum sheet to the production and fabrication of finished aluminum and steel products, such as air bag components, window screens, window frames and related accessories.

The Company's aluminum casting operations are conducted at N-A Casting's mini-mill in Davenport, Iowa. The single in-line manufacturing process at the facility has over 350 million pounds of annual hot rolled aluminum sheet capacity. The mini-mill converts scrap to aluminum sheet through melting, continuous casting and in-line hot rolling. N-A Casting also has the ability to shred scrap to broaden the diversity and sources of its scrap raw material. Delacquering equipment improves the quality of the raw material before it reaches the melting furnaces by burning off impurities within the scrap. The scrap is blended using computer programs to achieve the desired alloy composition and the best economics. After melting the molten metal flows into a Hazelett thin-slab caster, which casts up to a 52 -inch wide aluminum slab. The slab then is fed directly to a hot mill with three in-line rolling stands to reduce the slab from a thickness of approximately .75 inches to coiled aluminum sheet with a target thickness of .045 to 0.125 inches. The combination of capacity increases and technological enhancements directed at producing quality hot rolled aluminum sheet with cost savings derived from optimized scrap utilization, reduced unit energy cost, reduced cold rolling requirements and decreased labor costs results in a significant manufacturing advantage.

Further processing of the coiled aluminum hot rolled sheet from the mini-mill occurs at NAD and NAL plants, where the specific product requirements of customers can be met through cold rolling to various gauges,
annealing for additional product mechanical properties and formability, tension leveling and slitting to specific widths. Products at the NAD plant can also be custom coated, an important feature for the building products applications of certain customers.

The Company's Piper Impact plants in New Albany, Mississippi, Park City, Utah, and Zwolle, The Netherlands manufacture custom designed, impact extruded aluminum and steel parts for automotive air bag inflators, ordnance and electronic products. Piper Impact's operations make use of the impact extrusion technology to produce highly engineered near net shaped components from aluminum and steel bar slugs involving complex design and machining requirements. This unique production method uses impact presses, punches and dies that flow metal under pressure into precisely designed shapes. The cold working of the metal develops high strength products with superior surface quality and little material yield loss. Heat treated and precision machined parts are then delivered to customers' assembly lines, requiring little or no additional processing.

Manufacturing of the Company's value added fabricated products takes place at its AMSCO plant in Rice Lake, Wisconsin and HFP plants in Chatsworth, Illinois. These facilities use roll forming, laser welding and polylaminate technology to produce engineered products such as window screens, insulated glass spacers, cladding and muntin for premium wood and vinyl window manufacturers. In cooperation with a market leader in the office furnishings business, AMSCO developed an award winning office partition product, thus allowing AMSCO to penetrate a new market.

## RAW MATERIALS AND SUPPLIES

The Company's MacSteel plants purchase steel scrap, pig iron and hot briquetted iron, their principal raw materials, on the open market. Transportation of these raw materials to Company plants can be adversely affected by cold weather, creating seasonal price increases. Prices for quality scrap also vary in relation to the general business cycle, typically declining in periods of slow economic growth.

Nichols-Aluminum's principal raw material is aluminum scrap. N-A Casting's mini-mill includes a scrap processing and delacquering facility, which enables the Company to use the broadest and most economical mix of aluminum scrap for its requirements. The Company also purchases aluminum ingot futures contracts on the London Metals Exchange in amounts equal to $N$-A's requirements for fixed price sales commitments of aluminum products and then sells these contracts coincident with delivery of product, thereby protecting against increases in the price of the aluminum scrap used to manufacture the related products.

Piper Impact's raw material consists of aluminum bars and slugs which it purchases on the open market and steel bars which it purchases from MacSteel. Piper Europe purchases its raw material consisting of aluminum slugs and steel sheet on the open market in Europe.

## BACKLOG

At October 31, 1997, Quanex's backlog of orders to be shipped in the next twelve months was $\$ 110.6$ million. This compares to $\$ 123.4$ million at October 31, 1996. Because many of the markets in which Quanex operates have short lead times, backlog figures are not reliable indicators of annual sales volume or operating results.

## COMPETITION

All of the Company's products are sold under highly competitive conditions. The Company competes with a number of companies, some of which have financial and other resources greater than those of the Company. Competitive factors include product quality, price, delivery and ability to manufacture products to customer specifications. The amounts of engineered steel bars and aluminum products produced by the Company represent a small percentage of annual domestic production.

The MacSteel bar plants compete with two large integrated steel producers, two large non-integrated steel producers and two smaller steel companies. Although many of these producers are larger and have greater resources than the Company, the Company believes that the technology used at the MacSteel facilities permits it to compete effectively in the markets it serves.

The Company's aluminum products businesses compete with many small and large aluminum sheet manufacturers, metal fabricators and impact extruders. Some of these competitors are divisions or subsidiaries of major corporations with substantially greater resources. The Company also competes with major aluminum producers in coil-coated and mill products, primarily on the basis of the breadth of product lines, the quality and design of its products, the responsiveness of its services and its prices.

## SALES AND DISTRIBUTION

The Company has a nationwide system of sales offices. MacSteel sells hot rolled engineered steel bars primarily to original equipment manufacturers ("OEM's") through its sales organization and manufacturers' representatives.

The sales and distribution of products in the Company's aluminum products businesses are organized by major product group. Engineered and fabricated products are sold primarily to OEM's. Mill products are sold directly to OEM's and through metal service centers and residential building products are sold primarily through distributors.

## SEASONAL NATURE OF BUSINESS

With the exception of Piper Impact, the business of which is not seasonal, the Company's aluminum and fabricated products businesses are seasonal because its primary markets are in the Northeast and Midwest regions of the United States where winter weather reduces home building and home improvement activity. Historically, this business's lowest sales have occurred during the Company's first fiscal quarter. Because a high percentage of this business's manufacturing overhead and operating expenses is due to labor and costs that are generally fixed throughout the year, profits for the operations in this business tend to be lower in quarters with lower sales.

The other businesses in which the Company competes are not seasonal. However, due to the holidays in the Company's first fiscal quarter and steel plant shutdowns for vacations and maintenance in the Company's third fiscal quarter, sales have historically been lower in those quarters. Due to the combined effects of seasonality, the Company generally expects that, absent unusual activity or changes in economic conditions, its lowest sales will occur in the first fiscal quarter.

## TRADEMARKS, TRADE NAMES AND PATENTS

The Company's Nichols-Homeshield, MacSteel and Piper logos and designs are registered trademarks. The trade name "Homeshield" and its unregistered name "Nichols-Homeshield" are used in connection with the sale of the Company's aluminum products. The Homeshield, MacSteel and Piper logos and designs and their trade names are considered valuable in the conduct of the Company's business.

The businesses conducted by the Company generally do not depend upon patent protection. Although the Company holds numerous patents, in many cases the proprietary technology that the Company has developed for using the patents is more important than the patents themselves.

## RESEARCH AND DEVELOPMENT

Expenditures for research and development of new products or services during the last three years were not significant. Although not technically defined as research and development, a significant amount of time, effort and expense is devoted to customizing and qualifying the Company's products for specific customer applications.

## ENVIRONMENTAL MATTERS

As a manufacturer of specialized metal products, Quanex is subject to extensive laws and regulations concerning the discharge of materials into the environment and the remediation of chemical contamination. Quanex is required to make capital and other expenditures on an ongoing basis in order to satisfy such requirements. The cost of environmental matters has not had a material adverse effect on Quanex's operations or financial condition in the past, and management is not now aware of any existing conditions that it currently believes are likely to have a material adverse effect on Quanex's operations or financial condition.

Under applicable state and federal laws, the Company may be responsible for, among other things, all or part of the costs required to remove or remediate wastes or hazardous substances at the locations Quanex has owned or operated at any time. This responsibility includes cleanup of historic soil and groundwater contamination and other corrective action at a plant currently operated by the Company's Piper Impact subsidiary in New Albany, Mississippi. Having undertaken preliminary technical studies of the contamination, Quanex estimates that $\$ 20$ million will be required to complete necessary cleanup and corrective action. The timing and final extent of remediation work currently are not determined. The final cost could be more or less; however, Quanex has reserved $\$ 20$ million towards the work and is attempting to negotiate mutually acceptable remediation plans with the state of Mississippi.
From time to time, Quanex has been alleged to be liable for all or part of the costs incurred to clean up third-party sites where it supposedly arranged for disposal of hazardous substances. The Company's allocable share of liability at those sites, taking into account the likelihood that other parties will pay their shares, has not been material to its operations or financial condition. Amendments to the Federal Clean Air Act were adopted in 1990, and environmental agencies continue to develop implementing regulations. Depending on the nature of the regulations adopted, Quanex may be required to incur additional capital and other expenditures sometime in the next several years for air pollution control equipment, to maintain or obtain operating permits and approvals, and to address other air emission-related issues. The Company's Board of Directors has approved capital expenditures totaling approximately $\$ 20$ million to be spent between 1996 and 1998 to meet those requirements. That amount includes spending in fiscal 1998
toward a significant upgrade to pollution control systems at MacSteel to ensure compliance with the air standards. Based upon its analysis and experience to date, Quanex does not believe that its compliance with Clean Air Act requirements will have a material effect on its operations or financial condition.

Quanex incurred approximately \$13,800,000 and \$3,900,000 during fiscal 1997 and 1996, respectively, in expenses and capital expenditures in order to comply with existing or proposed environmental regulations. The Company estimates spending of approximately $\$ 14,000,000$ at various of its facilities during fiscal 1998. The 1997 and 1998 amounts include spending toward a significant upgrade to pollution control systems at MacSteel. Quanex will continue to have expenditures in connection with environmental matters beyond 1998, but it is not possible at this time to reasonably estimate the amount of any obligation that would be material to the Company as a whole. Future expenditures relating to environmental matters will necessarily depend upon the application to Quanex and its facilities of future regulations and government decisions.

## EMPLOYEES

At October 31, 1997, the Company employed 3,771 persons. Of the total employed, $27 \%$ were covered by collective bargaining agreements. On November 22, 1997, the International Brotherhood of Teamsters ratified a five-year agreement covering 250 employees at two Davenport, Iowa, plants of Nichols Aluminum. No labor contracts expire during 1998.

ITEM 2. PROPERTIES
The following table lists Quanex's principal plants together with their locations, general character and the industry segment which uses the facility. Each of the facilities identified as being owned by the Company is free of any material encumbrance.

Location $\quad$\begin{tabular}{r}
Plant

 

Square <br>
Footage
\end{tabular}

Owned:
Fort Smith, Arkansas
Jackson, Michigan
Huntington, Indiana
Leased (expires 2009):
Kenosha, Wisconsin
Owned:
Rice Lake, Wisconsin
Chatsworth, Illinois
Lincolnshire, Illinois
Davenport, Iowa
Davenport, Iowa
New Albany, Mississippi
Park City, Utah
Zwolle, The Netherlands
Leased (expires 1999):
Houston, Texas

ENGINEERED STEEL BARS
MacSteel 415,723

MacSteel 245,150
Heat Treating 82,000
NitroSteel 35,000
ALUMINUM PRODUCTS
AMSCO

Homeshield Fabricated Products (two plants) 212,000
Nichols Aluminum 142,000

Nichols Aluminum 236,000 Nichols Aluminum Casting 245,000
Piper Impact (two plants) 683,000
Piper Impact
130,000
$\begin{array}{ll}\text { Piper Impact Europe } & 110,000\end{array}$
EXECUTIVE OFFICES
Quanex Corporation 21,000

## ITEM 3. LEGAL PROCEEDINGS

Other than the proceedings described under Item 1, "Environmental Matters",
there are no material legal proceedings to which Quanex, its subsidiaries, or their property is subject.

ITEM 4. SUBMISSION OF MATTERS TO VOTE OF SECURITY HOLDERS
None.

PART II
ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS
Quanex's common stock, $\$ .50$ par value, is traded on the New York Stock Exchange, under the ticker symbol: NX. Quarterly stock price information and annual dividend information for the common stock is as follows:
-


COMMON STOCK SALES PRICE (High \& Low)

| Ja | 29 | 1/8-24 | 1/4 | 21 | 1/8-18 |  | 24 | 5/8-20 |  | 21 | 1/4-16 | 1/8 |  | 27-17 | 5/8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April | 27 | 7/8-23 | 3/8 | 22 | 3/8-19 | 5/8 | 23 | 3/8-21 |  | 22 | 7/8-19 | 1/8 | 20 | 7/8-14 | 1/4 |
| July. | 34 | 1/8-25 | 1/8 | 23 | 7/8-19 | 3/8 | 26 | 5/8-22 | 1/8 |  | 23-18 | 1/8 | 17 | 3/4-14 |  |
| Octobe | 36 | 1/2-26 | 1/4 | 28 | 3/4-19 | 5/8 |  | 26-18 | 5/8 | 27 | 1/4-20 | 3/4 | 20 | 3/4-16 | 1/2 |

The terms of Quanex's revolving credit arrangements with certain banks limit the total amount of common and preferred stock dividends and other distributions on such stock. Under the most restrictive test under such credit facilities, the total common stock dividends the Company may declare and pay is limited to $\$ 21$ million, plus 50\% of consolidated net earnings after October 31, 1989, adjusted for other factors as defined in their respective Loan Agreements. As of October 31, 1997, the amount of dividends and other distributions the Company was permitted to declare and pay under its credit facilities was $\$ 42.95$ million.

There were 5,743 record holders of Quanex common stock on December 31, 1997.

The exact definitions of commonly used financial terms and ratios vary somewhat among different companies and investment analysts. The following list gives the definition of certain financial terms that are used in this report:

CAPITAL EXPENDITURES: Additions to property, plant and equipment.
BOOK VALUE PER COMMON SHARE: Stockholders' equity less the stated value of preferred stock divided by the number of common shares outstanding.

ASSET TURNOVER: Net sales divided by average total assets.
CURRENT RATIO: Current assets divided by current liabilities.
FIXED CHARGE COVERAGE: The sum of income before income taxes plus interest expense, plus the estimated interest component of rentals, less capitalized interest, plus amortization of previously capitalized interest, plus amortization of deferred debt issuance costs; divided by interest expense, plus the estimated interest component of rentals, plus amortization of deferred debt issuance costs.

RETURN ON INVESTMENT: The sum of net income and the after-tax effect of interest expense less capitalized interest divided by the sum of the averages for long-term debt and stockholders' equity.

RETURN ON COMMON STOCKHOLDERS' EQUITY: Net income attributable to common stockholders divided by average common stockholders' equity.

ITEM 6. SELECTED FINANCIAL DATA
FINANCIAL SUMMARY 1992-1997
(\$ thousands, except per share data)


Cost of sales including depreciation.

| Operating income (loss) | 12,016 |
| :---: | :---: |
| Percent of net sales. | 3.3 |
| Other income (expense)-net | 3,221 |
| Interest expense-net. | 10,495 |
| Income (loss) before income taxes, extraordinary items, cumulat effect of accounting change, and income from discontinued operations | 4,742 |
| Income taxes (credit) | 1,992 |
| Income from continuing operations. | 2,750 |
| Income from discontinued operations | 3,445 |
| Gain on sale of discontinued operations |  |
| Extraordinary items and cumulative effect of accounting changes net of taxes. | $(25,108)(2)$ |
| Net income (loss) | $(18,913)$ |
| Percent of net sales | (5.3) |
| PER Share data |  |
| Income from continuing operations. | 0.01 |
| Income from discontinued operations. | 0.27 |
| Gain on sale of discontinued operations |  |
| Extraordinary items and cumulative effect of accounting change | (1.98) |
| Net earnings (loss) per primary common shares. | (1.70) |
| Cash dividends declared. | 0.52 |
| Book value. | 11.10 |
| Average shares outstanding (000) | 12,696 |
| Market closing price range |  |
| High. | 31 1/2 |
| Low. | $151 / 2$ |
| FINANCIAL POSITION -- YEAR END(1) |  |
| Working capital. | 137,332 |
| Property, plant and equipment -- net | 215,505 |
| Other assets. | 56,655 |
| Total assets | 470,777 |
| Noncurrent deferred income taxes | 32,649 |
| Long-term debt. | 128,694 |
| Stockholders' equity. | 237,592 |
| Total capitalization. | 366,286 |
| Long-term debt percent of capitalization. | 35.1 |
| OTHER DATA |  |
| Asset turnover | 0.8 |
| Current ratio. | 3.2 to 1 |
| Fixed charge coverage | 1.52 |
| Return on average investment -- percent | (3.8) |
| Return on average common equity -- percent | (14.2) |
| Working capital provided (used) by operations(4) | 35,484 |
| Depreciation and amortization. | 30,046 |
| Capital expenditures. | 48,366 |
| Backlog for shipment in next 12 months | 71,368 |
| Number of stockholders | 3,596 |
| Average number of employees | 1,678 |
| Sales/employee. | 215 |

(1) On August 9, 1996, Quanex Corporation acquired Piper Impact, Inc. 1996 results include three months of Piper Impact's operations.
(2) 1996 and 1995 -early extinguishment of debt; 1992-cumulative effect of accounting change from postretirement welfare benefits.
(3) Includes $\$ 7.2$ million facilities realignment charge.
(4) Working capital provided by operations is a supplemental financial measurement used in the company's business and should not be construed as an alternative to operating income or cash provided by operating activities since it excludes the effects of changes in working capital.
(5) Includes gain on sale of discontinued operations
(6) Excludes sales from discontinued operations for the years 1997-1992, respectively of $\$ 187,123, \$ 275,641, \$ 287,210, \$ 263,331, \$ 244,879$, and \$211, 840 .

## RESULTS OF OPERATIONS

The Company classifies its operations into two business segments: engineered steel bars and aluminum products. The Company's products are marketed to the industrial machinery and capital equipment industries, the transportation industry, the energy processing industry and the commercial and residential building and remodeling industries.

For the fifth consecutive year, the Company's continuing operations achieved higher sales. Net sales from continuing operations in fiscal 1997 were \$746.1 million, compared to $\$ 620.1$ million in fiscal 1996, a $20 \%$ increase. Primary earnings per share from continuing operations in fiscal 1997 were $\$ 1.98$ compared to $\$ 1.68$ in fiscal 1996, an $18 \%$ increase.

The Company's internal growth investments, principally at the MacSteel Division and at Piper Impact, Inc. ("Piper Impact") were focused toward capacity expansions, new product offerings, quality improvements, and enhanced customer service capabilities. The Company also completed a strategic acquisition and divestitures during and shortly after fiscal 1997 to improve operations and align its businesses for growth.

In April 1997, the Company completed the sale of its LaSalle Steel Company ("LaSalle") subsidiary. LaSalle's results of operations have been classified as discontinued operations and prior periods have been restated. For business segment reporting purposes, LaSalle's data was previously classified as "Cold Finished Steel Bars".

In October 1997, the Company, through its Dutch subsidiary, Piper Impact Europe B.V. ("Piper Europe"), purchased the net assets of Advanced Metal Forming C.V., a Dutch limited partnership, for approximately $\$ 30$ million. The Company's balance sheet as of October 31, 1997 includes Piper Europe. The Company's income statement for the twelve months ended October 31, 1997 does not include results for Piper Europe

In December 1997, the Company completed the sale of its tubing operations ("Tubing Operations"), comprised of Michigan Seamless Tube, Gulf States Tube, and the Tube Group Administrative Office. The Tubing Operations' results of operations have been classified as discontinued operations and prior periods have been restated. For business segment reporting purposes, these businesses were previously classified as "Steel Tubes". Two small divisions, Heat Treat Division and Nitro Steel Division, which were previously included with this segment, were retained by the Company and are now included in the Engineered Steel Bars segment.
The Company's engineered steel bars business reflected improvements in net sales and operating income for fiscal 1997 compared to fiscal 1996. The improved results were due primarily to higher sales volume, but also reflect the benefits realized from the Company's capital expenditure programs, which have allowed the Company to increase production, enhance quality and manage manufacturing costs.
The Company's aluminum products business experienced lower operating income for fiscal 1997 compared to fiscal 1996 as a result of the start-up costs for Piper Impact's new plant, including higher labor and training expenses and the temporary use of less efficient production processes, as well as weaker margins between selling prices and raw material costs. These margins, referred to herein as "price spreads", are a key financial performance indicator in the aluminum products business.

The Company currently expects that overall business levels for fiscal 1998 should be similar to those experienced during 1997. However, domestic and global market factors will impact the Company and any slowdown in the U.S. economy could affect demand and pricing for many of the Company's products. The start-up costs at Piper Impact's new plant are expected to continue to affect earnings through the first half of fiscal 1998. The sale of LaSalle in April 1997 and the sale of the Tubing Operations in December 1997 will affect income for fiscal 1998 by the difference between the amount these businesses would have earned and the reduction in interest expense as a result of the repayment of debt with the net proceeds from these sales. Improved financial results will be dependent upon, among other things, whether the continued strength of the economy can be sustained, improvements in the markets which the Company serves and improvement in the price spreads of aluminum products.

| 1997 | 1996 | 1995 |
| :---: | :---: | :---: |
| (In thousands) |  |  |
| \$319,468 | \$292,167 | \$286,649 |
| 50,762 | 39, 090 | 43,668 |
| 13,940 | 18,263 | 15,537 |
| \$192, 937 | \$171, 351 | \$177, 079 |
| \$444, 657 | \$344, 867 | \$331, 565 |
| 17,415 | 22,070 | 21,128 |
| 23,227 | 17,712 | 13,135 |
| \$443,799 | \$412,048 | \$230,586 |

(1) Includes Nitro Steel and Heat Treat divisions previously reported under the Steel Tubes segment. (See Note 3)
(2) 1996 Results include three months of Piper Impact's operations. Identifiable assets as of October 31, 1997 includes assets of Piper Europe, acquired, October 29, 1997.

## 1997 COMPARED TO 1996

Net Sales -- Net sales for fiscal 1997 were $\$ 746.1$ million, representing an increase of $\$ 126.0$ million when compared to fiscal 1996. This increase resulted principally from a full year of Piper Impact sales in 1997 compared to three months in 1996 and higher volumes in the engineered steel bar business.
Net sales for fiscal 1997 from the Company's engineered steel bar business were $\$ 319.5$ million, representing an increase of $\$ 27.3$ million, or $9 \%$, when compared to fiscal 1996. This increase was attributable to record volume. An 11\% increase in volume resulted from improved market share following the Company's capacity expansion program.

Net sales from the Company's aluminum products business for fiscal 1997 were $\$ 444.7$ million, representing an increase of $\$ 99.8$ million, or $29 \%$, when compared to fiscal 1996. This increase was mostly attributable to a full year of Piper Impact in 1997 compared to three months in 1996.

Operating Income -- Consolidated operating income for fiscal 1997 was \$55.0 million, representing an increase of $\$ 8.6$ million, or $18 \%$, when compared to fiscal 1996. This increase resulted from improved sales and operating income from the engineered steel bar business, partly offset by lower operating income from the aluminum products business.
Operating income from the Company's engineered steel bar business for fiscal 1997 was $\$ 50.8$ million, representing an increase of $\$ 11.7$ million, or $30 \%$, when compared to fiscal 1996. This increase was principally due to increased sales following the Company's capacity expansion program but 1996 operating income was also affected by higher accruals to the allowance for doubtful accounts. These higher accruals were necessary as the engineered steel bar business increased sales during the past several years.

Operating income from the Company's aluminum products business for fiscal 1997 was $\$ 17.4$ million, representing a decrease of $\$ 4.7$ million, or $21 \%$, when compared to fiscal 1996. This decrease was principally due to volatility in the aluminum scrap markets, resulting in higher average raw material costs and lower price spreads. Results for 1997 were also affected by Piper Impact which is included for a full year in 1997 compared to three months in 1996. However, fourth quarter results were affected by start-up costs, including higher labor and training expenses and the temporary use of less efficient production processes at Piper Impact's new plant in New Albany, Mississippi.

Selling, General and Administrative Expenses -- Selling, general and administrative expenses decreased in fiscal 1997 by $\$ 1.2$ million, or $3 \%$, compared to fiscal 1996. This decrease was principally due to higher accruals to the allowance for doubtful accounts in the prior year affecting the engineered steel bar and the aluminum products businesses. These higher accruals were needed because the Company experienced $\$ 5.7$ million in bad debts during the year ended October 31, 1996, and to recognize risks associated with higher sales volume achieved during the past several years. Fiscal 1997 selling, general and administrative expenses were also affected by a full year of Piper Impact compared to three months in fiscal 1996
Depreciation and Amortization -- Depreciation and amortization increased by $\$ 1.2$ million in fiscal 1997 compared to fiscal 1996. Increased depreciation resulting from a full year of Piper Impact was partly offset by lower depreciation at MacSteel.
Interest Expense and Capitalized Interest -- Interest expense increased by $\$ 5.6$ million compared to fiscal 1996 primarily due to increased long-term debt related to the Piper Impact acquisition in the fourth quarter of fiscal
1996. Capitalized interest increased by $\$ 3.0$ million in 1997 compared to 1996 primarily due to Phase III of the MacSteel expansion project and the construction of the new Piper Impact plant in New Albany, Mississippi.

Other -- Included in "Other, net" for fiscal 1996, was a $\$ 2.3$ million pretax gain which represents the final recovery of a business interruption claim related to a fire at the Company's Lincolnshire, Illinois facility that occurred in 1993. In addition, "Other, net" included investment income of $\$ 2.0$ million for fiscal 1997 compared to \$1.6 million for fiscal 1996.

Income From Continuing Operations -- Income from continuing operations improved by $\$ 4.7$ million, or $21 \%$, compared to fiscal 1996. The improvements were principally attributable to improved results at the Company's MacSteel division. The Company's effective income tax rate was $35 \%$ for fiscal 1997 compared to $42 \%$ in 1996.

Income From Discontinued Operations -- Income from discontinued operations, net of income taxes, for fiscal 1997, was $\$ 5.2$ million, compared to $\$ 9.9$ million for 1996. Fiscal 1996 included a full year of LaSalle which was sold during the second quarter of fiscal 1997.
Net Income -- Fiscal 1997 net income was $\$ 69.2$ million, compared to $\$ 30.4$ million for fiscal 1996. Included in net income for fiscal 1997 is an after-tax gain of $\$ 36.3$ million on the sale of LaSalle Steel Company.

## 1996 COMPARED TO 1995

Net Sales -- Net sales for fiscal 1996 were $\$ 620.1$ million, representing an increase of $\$ 16.1$ million when compared to fiscal 1995. This increase resulted principally from higher volumes in the engineered steel bar and aluminum products businesses, offset by lower selling prices in both of these businesses.

Net sales for fiscal 1996 from the Company's engineered steel bar business were $\$ 292.2$ million, representing an increase of $\$ 5.5$ million, or $2 \%$, when compared to fiscal 1995. This increase was primarily attributable to a $5 \%$ increase in volume and was offset by a $3 \%$ decrease in average selling prices. Decreases in average selling prices resulted from unusually high surcharges for molybdenum, chrome and scrap during 1995. The increased volume resulted from improved market share and the additional capacity added during fiscal 1995.

Net sales from the Company's aluminum products business for fiscal 1996 were $\$ 344.9$ million, representing an increase of $\$ 13.3$ million, or $4 \%$, when compared to fiscal 1995. This increase was partly attributable to the acquisition of Piper Impact. Excluding Piper Impact, pounds shipped increased 9\% in 1996 compared to 1995. Average selling prices, however, decreased $13 \%$ during the same period. The increase in pounds shipped was primarily the result of improved market share.

Operating Income -- Consolidated operating income for fiscal 1996 was \$46.4 million, down slightly from fiscal 1995.

Operating income from the Company's engineered steel bar business for fiscal 1996 was $\$ 39.1$ million, representing a decrease of $\$ 4.6$ million, or $10 \%$, when compared to fiscal 1995. This decrease was principally due to increased selling, general and administrative expenses related to higher accruals to the allowance for doubtful accounts. These higher accruals were necessary as the engineered steel bar business increased sales during the past several years.

Operating income from the Company's aluminum products business for fiscal 1996 was $\$ 22.1$ million, representing an increase of $\$ 942$ thousand when compared to fiscal 1995. This increase was principally due to the acquisition of Piper Impact in August 1996. Results for 1996 were also affected by higher volumes and lower conversion costs. These positive factors were mostly offset by lower price spreads and higher accruals to the allowance for doubtful accounts in 1996 compared to 1995. These higher accruals were necessary as the aluminum products business increased sales during the past several years. Also affecting 1996 was $\$ 1.5$ million additional depreciation resulting from abandonment of idle assets.

Selling, General and Administrative Expenses -- Selling, general and administrative expenses increased in fiscal 1996 by $\$ 11.2$ million, or $33 \%$, compared to fiscal 1995. This increase is principally due to higher accruals to the allowance for doubtful accounts in the engineered steel bar and the aluminum products businesses. These higher accruals were needed because the Company experienced $\$ 5.7$ million in bad debts during the year ended October 31, 1996, and to recognize risks associated with higher sales volume achieved during the past several years.

Depreciation and Amortization -- Depreciation and amortization increased in fiscal 1996 by $\$ 7.3$ million compared to fiscal 1995. Increased depreciation at MacSteel resulted from the completion of Phase II expansion project. Fiscal 1996 depreciation in the aluminum products business was affected by $\$ 1.5$ million of additional depreciation resulting from abandonment of idle assets. Also included in 1996 is three months of Piper Impact.

Interest Expense and Capitalized Interest -- Interest expense increased by $\$ 1.2$ million compared to fiscal 1995 primarily due to increased long-term debt related to the Piper Impact acquisition in the fourth quarter of fiscal 1996. Through the first three quarters of fiscal 1996, interest expense was comparable to the same periods of 1995. Increased interest related to the Company's \$84.9 million of $6.88 \%$ Convertible Subordinated Debentures that were issued in June 1995 in exchange for the Company's outstanding preferred stock was offset by the early extinguishment of a portion of the Company's senior debt in the first quarter of fiscal 1995 and the early
extinguishment of the remaining senior debt in the first fiscal quarter of 1996. Capitalized interest decreased by $\$ 1.3$ million in 1996 compared to 1995
primarily resulting from the completion in March 1995 of Phase II of the
Company's MacSteel Ultra Clean Steel Program.
Other -- Included in "Other, net" for fiscal 1996, was a $\$ 2.3$ million pretax gain which represents the final recovery of a business interruption claim related to a fire at the Company's Lincolnshire, Illinois facility that occurred in 1993. Included in "Other, net" for fiscal 1995 was a $\$ 1.1$ million pretax gain related to a life insurance policy on a deceased former officer. In addition, "Other, net" included investment income of $\$ 1.6$ million for fiscal 1996 compared to \$783 thousand for fiscal 1995.

Income From Continuing Operations -- Income from continuing operations for fiscal 1996 was $\$ 23.0$ million, slightly down from $\$ 23.4$ million in fiscal 1995

Income From Discontinued Operations -- Income form discontinued operations, net of income taxes, for fiscal 1996 was $\$ 9.9$ million compared to $\$ 10.5$ million in 1995. This decrease was attributable to lower sales of cold finished steel bars and higher conversion costs of steel tubes.

Extraordinary Charge -- Included in fiscal 1996 was an extraordinary charge of $\$ 2.5$ million compared to $\$ 2.0$ million in 1995 relating to early extinguishment of debt.

Net Income -- Net income attributable to common shareholders for fiscal 1996 was $\$ 30.4$ million, compared to $\$ 27.9$ million for fiscal 1995. Preferred dividends reduced net income attributable to common shareholders by $\$ 4.0$ million for fiscal 1995. There were no preferred dividends in 1996.

## LIQUIDITY AND CAPITAL RESOURCES

The Company's principal sources of funds are cash on hand, cash flow from operations, and borrowings under an unsecured $\$ 250$ million Revolving Credit and Term Loan Agreement ("Bank Agreement"). The Bank Agreement consists of a revolving line of credit ("Revolver"). In July 1997, the term loan provisions of the Bank Agreement expired. The maturity date of the Bank Agreement, however, was extended by one year to July 23, 2002. The Bank Agreement also provides for up to $\$ 25$ million for letters of credit, limited to the undrawn amount available under the Revolver. All borrowings under the Revolver bear interest, at the option of the Company, at either (i) the prime rate or the federal funds rate plus one percent, whichever is higher, or (ii) a Eurodollar based rate. In the fourth quarter of fiscal 1996, the Company entered into interest rate swap agreements, which effectively converted $\$ 100$ million of its variable rate debt under the Bank Agreement to fixed rate. Under these agreements, payments are made based on a fixed rate ( $\$ 50$ million at $7.025 \%$, and $\$ 50$ million at $6.755 \%$ ) and payments are received on a LIBOR based variable rate (5.71875\% at July 31, 1997). Differentials to be paid or received under the agreements are recognized as interest expense. Payments under the swap agreements are tied to the interest periods for the borrowings under the Bank Agreement. The swap agreements mature July 29, 2003. The Bank Agreement contains customary affirmative and negative covenants and requirements to maintain a minimum consolidated tangible net worth, as defined. The Bank Agreement limits the payment of dividends and certain restricted investments. At October 31, 1997, retained earnings of approximately $\$ 42.95$ million were available for dividends. Under the Bank Agreement, at October 31, 1997, there were $\$ 100$ million of outstanding Revolver borrowings

In December 1995, the Company acquired all of its outstanding 10.77\% Senior Notes for a purchase price equal to $107.5 \%$ of the principal amount plus accrued interest. The acquisition and related expenses resulted in an after-tax extraordinary charge of approximately $\$ 2.5$ million in the first quarter of 1996 The acquisition was funded with cash and additional borrowings under the Old Bank Agreement.

On June 30, 1995, the Company exercised its right under the terms of its Cumulative Convertible Exchangeable Preferred Stock to exchange such stock for an aggregate of $\$ 84,920,000$ of its $6.88 \%$ Convertible Subordinated Debentures due June 30, 2007 ("Debentures"). Interest is payable semi-annually on June 30 and December 31 of each year. The Debentures are subject to mandatory annual sinking fund payments sufficient to redeem $25 \%$ of the Debentures issued on each of June 30, 2005 and June 30, 2006, to retire a total of $50 \%$ of the Debentures before maturity. The Debentures are subordinate to all senior indebtedness of the Company and are convertible, at the option of the holder, into shares of the Company's common stock at a conversion price of $\$ 31.50$ per share.

On August 9, 1996, the Company completed the acquisition of substantially all of the assets of Piper Impact. Piper Impact's assets, net of various liabilities, were acquired for approximately $\$ 130$ million in cash, cash equivalents, and notes. This acquisition was financed with existing cash and bank borrowings. Subsequent to the acquisition, the Company's Board of Directors approved additional capital expenditures at Piper Impact totaling approximately $\$ 55$ million. These expenditures are expected to provide the capacity needed to supply major new customer programs phasing in over the next two years.

On April 18, 1997, the Company completed the sale of LaSalle for approximately $\$ 65$ million in cash. The proceeds were used to pay down the Company's Revolver.

On October 29, 1997, the Company acquired, through its Dutch subsidiary, Piper Impact Europe B.V. ("Piper Europe"), substantially all of the assets of Advance Metal Forming C.V., a Dutch limited partnership, for
approximately $\$ 30$ million. The acquisition was financed with existing cash and bank borrowings of 35 million Dutch Guilders. Piper Europe's primary source of funds is a stand-alone secured credit facility ("Credit Facility") providing up to 50 million Dutch Guilders ("NLG"). At October 31, 1997, 1 NLG was equal to
.514 dollars. The Credit Facility consists of a Roll-Over Term Loan, a Medium Term Loan and an Overdraft Facility. The Roll-Over Term Loan provides NLG 15 million for loan periods of 1, 2, 3, 6, or 12 months with repayment of outstanding borrowings on October 27, 2002. Interest is payable on the repayment date at the Amsterdam Interbank Offering Rate (AIBOR) plus 90 basis points. In the case of a loan period of twelve months, interest is payable six months after the beginning of the loan period and on the repayment date. The Medium Term Loan provides NLG 15 million at $6.375 \%$ payable quarterly in arrears from March 1, 1998, with quarterly repayments of principal in equal amounts of NLG 500 thousand commencing January 1, 1999 through April 1, 2006. The Overdraft Facility provides an aggregate amount of NLG 20 million to cover overdrafts or up to NLG 15 million of loans for a period of one year, subject to annual renewal. Overdrafts bear interest at the Bank's published rate for overdraft facilities plus 1\% per annum. Loans under the Overdraft Facility bear interest at AIBOR plus 45 to 55 basis points. The terms of Overdraft Facility loans are selected by Piper Europe to be a period of 1, 2, 3, 6 or 12 months. Interest on overdrafts are paid quarterly in arrears.

On December 3, 1997, the Company completed the sale of its Tubing Operations for approximately $\$ 30$ million in cash. The proceeds will be used to improve the Company's debt structure and for investment in the Company's value-added businesses.

At October 31, 1997, the Company had commitments of $\$ 23$ million for the purchase or construction of capital assets, primarily relating to the Company's continued expansions at MacSteel and Piper. The Company plans to fund these capital expenditures through cash flow from operations and, if necessary, additional borrowings.

On December 22, 1997, the Company renewed its letter of intent to purchase Decatur Aluminum Corp., a Decatur, Alabama based aluminum sheet manufacturer. The acquisition of Decatur Aluminum is subject to certain conditions, including the receipt of necessary governmental approvals, due diligence and the negotiation of a definitive agreement.

The Company believes that it has sufficient funds and adequate financial sources available to meet its anticipated liquidity needs. The Company also believes that cash flow from operations, cash balances and available borrowings will be sufficient for the foreseeable future to finance anticipated working capital requirements, capital expenditures, debt service requirements, environmental expenditures and dividends.

## Operating Activities

Cash provided by operating activities during fiscal 1997 was $\$ 79.4$ million. This represents an increase of $\$ 13.8$ million, or $21 \%$, compared to fiscal 1996. This improvement resulted from improved income and lower working capital requirements related primarily to inventories, partly offset by higher income taxes.

## Investment Activities

Net cash used by investment activities in fiscal 1997 was $\$ 49.6$ million compared to $\$ 174.2$ million in fiscal 1996. The decrease in cash used by investment activities was principally due to the acquisition of the assets of Piper Impact in 1996 and the proceeds from the sale of LaSalle Steel in 1997, partly offset by increased capital expenditures and the acquisition of Piper Europe. The Company estimates that fiscal 1998 capital expenditures will approximate $\$ 50$ to \$60 million.

## Financing Activities

Net cash used by financing activities for fiscal 1997 was $\$ 39.4$ million, principally consisting of net reductions in long-term debt of $\$ 41.8$ million, $\$ 8.4$ million in common dividends, partly offset by proceeds from exercise of stock options.

The Company uses futures and option contracts to hedge a portion of its exposure to price fluctuations of aluminum. The exposure is related to the Company's backlog of aluminum sales orders with committed prices as well as future aluminum sales for which a sales price increase would lag a raw material cost increase. Firm price commitments do not extend beyond December 1998. Hedging gains and losses are included in "Cost of sales" in the income statement concurrently with the hedged sales. Unrealized gains and losses related to open contracts are not reflected in the consolidated statements of income.

## EFFECTS OF INFLATION

Inflation has not had a significant effect on earnings and other financial statement items.

In February 1997, the FASB issued SFAS No. 128 -- "Earnings per Share" ("SFAS 128") which specifies the computation, presentation and disclosure requirements for Earnings Per Share ("EPS"). SFAS 128 replaces the presentation of primary and fully diluted EPS pursuant to Accounting Principles Board Opinion No. 15 "Earnings per Share"("APB 15") with the presentation of basic and diluted EPS. Basic EPS excludes dilution and is computed by dividing net income available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the entity. The Company is required to adopt SFAS 128 with its January 31, 1998 financial statements and restate all prior-period EPS disclosure. Under SFAS No. 128, the Company's pro forma basic and diluted EPS for fiscal 1997 would have been \$5.01 and \$4.38, respectively.

In June 1997, the FASB issued SFAS No. 130, "Reporting Comprehensive Income", which is effective for the Company's year ending October 31, 1999. SFAS No. 130 establishes standards for the reporting and displaying of comprehensive income and its components. The Company will be analyzing SFAS No. 130 during 1998 to determine what, if any, additional disclosures will be required.

In June 1997, The FASB issued SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information", which is effective for the Company's year ended October 31, 1999. This statement establishes standards for the reporting of information about operating segments. The Company will be analyzing SFAS No. 131 during 1998 to determine what, if any, additional disclosures will be required.

## PRIVATE SECURITIES LITIGATION REFORM ACT

Certain forward looking information contained herein is being provided in accordance with the provisions of the Private Securities Litigation Reform Act. Such information is subject to certain assumptions and beliefs based on current information known to the Company and is subject to factors that could result in actual results differing materially from those anticipated in the forward looking statements contained in this report. Such factors include domestic and international economic activity, prevailing prices of steel and aluminum scrap and other raw material costs, interest rates, the continuation of countervailing import duties on certain of the Company's competitors, construction delays, market conditions for the Company's customers, any material changes in purchases by the principal customers of AMSCO and Piper Impact, environmental regulations and changes in estimates of costs for known environmental remediation projects and situations, world-wide political stability and economic growth, the Company's successful implementation of its internal operating plans, performance issues with key customers, suppliers and subcontractors, and regulatory changes and legal proceedings. Accordingly, there can be no assurance that the forward-looking statements contained herein will occur or that objectives will be achieved.

Board of Directors and Stockholders
Quanex Corporation
Houston, Texas
We have audited the accompanying consolidated balance sheets of Quanex Corporation and subsidiaries as of October 31, 1997 and 1996, and the related consolidated statements of income, stockholders' equity and cash flows for each of the three years in the period ended October 31, 1997. Our audits also included the financial statement schedule listed in the index on page 41. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.
We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Quanex Corporation and subsidiaries as of October 31, 1997 and 1996, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 1997 in conformity with generally accepted accounting principles. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.
/s/ DELOITTE \& TOUCHE LLP
Deloitte \& Touche LLP
Houston, Texas
December 11, 1997

## RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying consolidated financial statements of Quanex Corporation and subsidiaries were prepared by management, which is responsible for their integrity and objectivity. The statements were prepared in accordance with generally accepted accounting principles and include amounts that are based on management's best judgments and estimates.

Quanex's system of internal controls is designed to provide reasonable assurance, at justifiable cost, as to the reliability of financial records and reporting and the protection of assets. The system of controls provides for appropriate division of responsibility and the application of policies and procedures that are consistent with high standards of accounting and administration. Internal controls are monitored through recurring internal audit programs and are updated as our businesses and business conditions change.

The Audit Committee, composed solely of outside directors, determines that management is fulfilling its financial responsibilities by meeting periodically with management, Deloitte \& Touche LLP, and Quanex's internal auditors, to review internal accounting control and financial reporting matters. The internal and independent auditors have free and complete access to the Audit Committee.

We believe that Quanex's system of internal controls, combined with the activities of the internal and independent auditors and the Audit Committee, provides reasonable assurance of the integrity of our financial reporting.
/s/ VERSON E. OECHSLE
Vernon E. Oechsle
President and Chief Executive Officer
/s/ WAYNE M. ROSE
Wayne M. Rose
Vice President and Chief Financial Officer
(In thousands)

| ASSETS |  |  |  |
| :---: | :---: | :---: | :---: |
| Current assets: |  |  |  |
| Cash and equivalents. | \$ 26,851 | \$ | 35,962 |
| Accounts and notes receivable, less allowance for doubtful accounts of $\$ 10,338,000$ in 1997 and $\$ 7,703,000$ in |  |  |  |
| 1996 | 80,089 |  | 78,439 |
| Inventories | 73, 035 |  | 78,828 |
| Deferred income taxes | 5,601 |  | 9,302 |
| Prepaid expenses. | 1,320 |  | 110 |
| Total current assets. | 186,896 |  | 202,641 |
| Property, plant and equipment, net | 379, 071 |  | 319,165 |
| Net assets of discontinued operations | 13,554 |  | 18,830 |
| Goodwill, net | 91,496 |  | 84,343 |
| Other assets. | 14,688 |  | 13,969 |
|  | \$ 685,705 |  | 638,948 |
| LIABILITIES AND STOCKHOLDERS' EQUITY |  |  |  |
| Current liabilities: |  |  |  |
| Notes payable. | \$ | \$ | 5,575 |
| Accounts payable | 71,317 |  | 67, 037 |
| Accrued expense. | 43,208 |  | 37,984 |
| Current maturities of long-term debt | 11,050 |  | -- |
| Income taxes payable. | 8,503 |  | 3,807 |
| Total current liabilities | 134,078 |  | 114,403 |
| Long-term debt | 201,858 |  | 253,513 |
| Deferred pension credits. | 6,627 |  | 7,110 |
| Deferred postretirement welfare benefits | 6,835 |  | 6,459 |
| Deferred income taxes. | 48,111 |  | 40,454 |
| Other liabilities | 19,373 |  | 20,000 |
| Total liabilities | 416,882 |  | 441,939 |
| Stockholders' equity: |  |  |  |
| Preferred stock, no par value, 1,000,000 shares authorized; issued \& outstanding -- none in 1997 and |  |  |  |
| Common stock, $\$ .50$ par value, $25,000,000$ shares authorized; 14,050,411 shares in 1997 and 13,590,400 shares in 1996 issued and outstanding.................. | 7,025 |  | 6,795 |
| Additional paid-in capital. | 105,146 |  | 94,251 |
| Retained earnings. | 156,528 |  | 96,623 |
| Cumulative foreign currency translation adjustment | 422 |  | -- |
| Unearned compensation. | -- |  | (185) |
| Adjustment for minimum pension liability | (298) |  | (475) |
| Total stockholders' equity. | 268,823 |  | 197,009 |
|  | \$ 685,705 |  | 638,948 |

See notes to consolidated financial statements.

| Years Ended October 31, | 1997 | 1996 | 1995 |
| :---: | :---: | :---: | :---: |
|  | (In thousands, except per share amounts) |  |  |
| Net sales. | \$746, 093 | \$620, 069 | \$603,985 |
| Costs and expenses: |  |  |  |
| Cost of sales. | 609,989 | 492,594 | 493,994 |
| Selling, general and administrative. | 43,798 | 44,959 | 33,746 |
| Depreciation and amortization. | 37,298 | 36,083 | 28,785 |
| Operating income | 55,008 | 46,433 | 47,460 |
| Other income (expense): |  |  |  |
| Interest expense. | $(17,541)$ | $(11,929)$ | $(10,742)$ |
| Capitalized interest | 3,539 | 569 | 1,872 |
| Other, net | 1,637 | 4,544 | 1,721 |
| Income from continuing operations before income taxes and extraordinary charge. | 42,643 | 39,617 | 40,311 |
| Income tax expense. | $(14,925)$ | $(16,639)$ | $(16,931)$ |
| Income from continuing operations and before extraordinary charge | 27,718 | 22,978 | 23,380 |
| Income from discontinued operations, net of income taxes... | 5,176 | 9,912 | 10,480 |
| Gain on sale of discontinued operations, net of income taxes. | 36,290 | - - |  |
| Income before extraordinary charge. | 69,184 | 32,890 | 33,860 |
| Extraordinary charge -- early extinguishment of debt, net of income taxes. | - - | $(2,522)$ | $(2,021)$ |
| Net income. | 69,184 | 30,368 | 31,839 |
| Preferred dividends | -- | -- | $(3,957)$ |
| Net income attributable to common stockholders | \$ 69,184 | \$ 30,368 | \$ 27, 882 |
| Earnings per common share: |  |  |  |
|  |  |  |  |
| Continuing operations. | \$ 1.98 | \$ 1.68 | \$ 1.43 |
| Discontinued operations. | 0.37 | 0.73 | 0.77 |
| Gain on sale of discontinued operations | 2.58 | -- |  |
| Extraordinary charge. | -- | (0.19) | (0.15) |
| Total primary net earnings. | \$ 4.93 | \$ 2.22 | \$ 2.05 |
| Fully diluted: |  |  |  |
| Continuing operations | \$ 1.90 | \$ 1.60 | \$ 1.43 |
| Discontinued operations | 0.31 | 0.60 | 0.77 |
| Gain on sale of discontinued operations | 2.17 | -- | -- |
| Extraordinary charge. | -- | (0.15) | (0.15) |
| Total assuming full dilution. | \$ 4.38 | \$ 2.05 | \$ 2.05 |
| Weighted average number of shares outstanding |  |  |  |
| Primary. | 14,029 | 13,658 | 13,580 |
| Assuming full dilution. | 16,725 | 16,585 | 13,580 |

See notes to consolidated financial statements.

| Years Ended October 31, 1997, 1996, and 1995 | Preferr <br> Shares | Stock Amount | Common <br> Shares | ock <br> Amount | Additional Paid-in Capital | Retained Earnings | Other | Total <br> Stock- <br> holders' <br> Equity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at October 31, 1994. | 345,000 | \$ 86, 250 | 13,377,724 | \$6,688 | \$ 86,323 | \$ 55,081 | \$(459) | \$233, 883 |
| Net income.................. | -- | -- | -- | -- | -- | 31,839 | -- | 31,839 |
| ```Common dividends ($.59 per share)``` | -- | -- | -- | -- | -- | $(7,932)$ | -- | $(7,932)$ |
| Preferred dividends. | -- | -- | -- | -- | -- | $(4,451)$ | -- | $(4,451)$ |
| Conversion of preferred stock to subordinated debentures. | $(339,681)$ | $(84,920)$ | -- | -- | 3,350 | ( | -- | $(81,570)$ |
| Conversion of preferred stock to common stock..... | $(5,319)$ | $(1,330)$ | 42,211 | 21 | 1,309 | -- | -- | - - |
| Adjustment for minimum pension liability. | -- | - - | -- | -- | -- | -- | (355) | (355) |
| Unearned compensation. | -- | -- | -- | -- | -- | -- | 53 | 53 |
| Other. | -- | -- | 65,377 | 34 | 1,424 | (111) | -- | 1,347 |
| Balance at October 31, 1995... | -- | -- | 13,485,312 | 6,743 | 92,406 | 74,426 | (761) | 172,814 |
| Net income....... | -- | -- | - - | -- | -- | 30,368 |  | 30,368 |
| Common dividends (\$.60 per share) | -- | -- | -- | -- | -- | $(8,115)$ | -- | $(8,115)$ |
| Adjustment for minimum pension liability. | -- | -- | -- | -- | -- | - - | (31) | (31) |
| Unearned compensation. | - | -- | - | -- | -- |  | 132 | 132 |
| Other. | -- | -- | 105,088 | 52 | 1,845 | (56) | -- | 1,841 |
| Balance at October 31, 1996. | -- | -- | 13,590,400 | 6,795 | 94,251 | 96,623 | (660) | 197, 009 |
| Net income....... | -- | -- | -- | -- | -- | 69,184 |  | 69,184 |
| Common dividends (\$.61 per share) | -- | -- | -- | -- | -- | $(8,422)$ | -- | $(8,422)$ |
| Adjustment for minimum pension liability.... | -- | -- | -- | -- | -- | - - | 177 | 177 |
| Unearned compensation. | -- | -- | -- | -- | -- | -- | 185 | 185 |
| Foreign currency translation adjustment. |  |  |  |  |  |  | 422 | 422 |
| Other......................... . | -- | -- | 460,011 | 230 | 10,895 | (857) | -- | 10,268 |
| Balance at October 31, 1997... | -- | \$ | 14, 050,411 | \$7, 025 | \$105, 146 | \$156, 528 | \$ 124 | \$268, 823 |

[^0](In thousands)


[^1]
## 1. SIGNIFICANT ACCOUNTING POLICIES

PRINCIPLES OF CONSOLIDATION
The consolidated financial statements include the accounts of Quanex Corporation and its subsidiaries (the "Company"), all of which are wholly owned. All significant intercompany balances and transactions have been eliminated in consolidation

## SCOPE OF OPERATIONS

The Company operates primarily in two industry segments: the manufacturing of engineered steel bars and aluminum products. The Company's products include engineered steel bars, aluminum sheet, aluminum fabricated products and impact extrusions. The Company's manufacturing operations are conducted primarily in the United States.

## REVENUES

The company recognizes revenues when products are shipped and the title and risk of ownership pass to the customer.

## STATEMENTS OF CASH FLOWS

The Company generally considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. Similar investments with original maturities beyond three months are considered short-term investments. For fiscal years 1997, 1996 and 1995 cash paid for income taxes was $\$ 13,906,000, \$ 19,551,000$, and $\$ 17,572,000$, respectively. These amounts are before refunds of $\$ 471,000$, $\$ 204,000$, and $\$ 47,000$, respectively. Cash paid for interest for fiscal 1997, 1996 and 1995 was \$17,964,000, $\$ 12,084,000$, and $\$ 10,324,000$, respectively. Non-cash investing and financing activities in fiscal 1995 included the exchange of $\$ 84,920,000$ of the Company's Cumulative Convertible Exchangeable Preferred Stock for the Company's 6.88\% Convertible Subordinated Debentures due June 30, 2007, and the conversion of $\$ 1,330,000$ of the Company's Cumulative Convertible Exchangeable Preferred Stock to the Company's common stock. (See Note 2 regarding acquisitions)

## INVENTORIES

Inventories are valued at the lower of cost or market. The accounting methods used in valuing the Company's inventories are described in Note 5

## LONG-LIVED ASSETS

Goodwill represents the excess of the purchase price over the fair value of acquired companies and is being amortized on a straight line basis over forty years for the goodwill resulting from the acquisition of Nichols Homeshield in 1989, and over twenty-five years for the goodwill resulting from the acquisitions of Piper Impact, Inc. in 1996 and Piper Impact Europe B.V. in 1997 (See Note 2). At October 31, 1997 and 1996, accumulated amortization was $\$ 10,398,000$ and $\$ 7,297,000$, respectively. The Company evaluates any possible impairment of goodwill using estimates of undiscounted future cash flows.

Property, plant and equipment is stated at cost and is depreciated using the straight-line method over the estimated useful lives of the assets. The estimated useful lives of certain categories are as follows:


During 1995, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 121, "Accounting for the Impairment of Long-Lived Assets and Long-Lived Assets to Be Disposed Of". The statement establishes accounting standards related to the impairment of long-lived assets, such as property, plant, equipment and intangibles. The Company adopted statement No. 121 in fiscal 1997 and did not experience any material impact on its financial position or results of operations.

## HEDGING

The Company uses futures and option contracts to hedge a portion of its exposure to price fluctuations of aluminum. Hedging gains and losses are recognized concurrently with the related sales transactions. The Company enters into interest rate agreements which effectively exchange variable interest rate debt for fixed interest rate debt. The agreements are used to reduce the exposure to increasing interest rates. The Company enters into these agreements with major financial institutions. The Company does not use derivative financial instruments for trading or speculative purposes. (See Note 15)

## EARNINGS PER SHARE DATA

Primary earnings per share is computed by deducting preferred dividends from net income in order to determine net income attributable to common stockholders. This amount is then divided by the weighted average number of common shares outstanding and common stock equivalents

Fully diluted earnings per-share amounts assume conversion of the Company's $6.88 \%$ Convertible Subordinated Debentures, the elimination of the related interest and amortization of issuance costs, net of tax, and the issuance of common stock for all other potentially dilutive common stock equivalents outstanding.

In February 1997, the Financial Accounting Standards Board issued statement of Financial Accounting Standards No. 128 -- "Earnings per Share" ("SFAS 128") which specifies the computation, presentation and disclosure requirements for Earnings Per Share ("EPS"). SFAS 128 replaces the presentation of primary and fully diluted EPS pursuant to Accounting Principles Board Opinion No.
15 -- "Earnings per Share" ("APB 15") with the presentation of basic and diluted EPS. Basic EPS excludes dilution and is computed by dividing net income available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the entity. The Company is required to adopt SFAS 128 with its January 31, 1998 financial statements and restate all prior-period EPS disclosure.

Under SFAS 128, the Company's pro forma basic and diluted EPS would have been:

|  | 1997 | 1996 | 1995 |
| :---: | :---: | :---: | :---: |
| Basic EPS: |  |  |  |
| Continuing operations | \$2. 01 | \$ 1.70 | \$ 1.44 |
| Discontinued operations | 0.37 | 0.73 | 0.78 |
| Gain on sale of discontinued operations | 2.63 | -- | -- |
| Extraordinary charge. | -- | (0.19) | (0.15) |
| Total Basic EPS. | \$5.01 | \$ 2.24 | \$ 2.07 |
| Diluted EPS: |  |  |  |
| Continuing operations. | \$1.90 | \$ 1.60 | \$ 1.51 |
| Discontinued operations | 0.31 | 0.60 | 0.64 |
| Gain on sale of discontinued operations | 2.17 | -- | -- |
| Extraordinary charge. | -- | (0.15) | (0.12) |
| Total Diluted EPS. | \$4.38 | \$ 2.05 | \$ 2.03 |

## FOREIGN CURRENCY TRANSLATION

Gains and losses resulting from translation of the Company's foreign subsidiary's operations are included as a separate component of stockholder's equity.

## USE OF ESTIMATES

The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure 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.

## RECLASSIFICATION

Certain amounts for prior periods have been reclassified in the accompanying consolidated financial statements to conform to 1997 presentations.

## 2. ACQUISITIONS

On August 9, 1996, the Company acquired the assets, net of various liabilities, of Piper Impact, Inc. ("Piper Impact"). Piper Impact is a manufacturer of custom-designed, impact-extruded aluminum and steel parts for the transportation, electronics and defense markets, with production facilities in New Albany, Mississippi and Park City, Utah.

Piper Impact's net assets were acquired for approximately $\$ 130$ million in cash, cash equivalents, and notes. The acquisition was accounted for using the purchase method of accounting. The purchase price was allocated to the assets and liabilities of Piper Impact based on their estimated fair values. The goodwill associated with the Piper Impact acquisition approximated $\$ 56$ million, which is being amortized on a straight-line basis over twenty-five years. To finance the acquisition, the Company entered into an unsecured revolving credit/term loan facility which provides for the borrowing of up to $\$ 250$ million. (See Note 8)
Liabilities assumed included an estimated $\$ 20$ million related to costs for further investigation and specified environmental remediation. These cost estimates include charges for additional studies, remediation, renovations to affected facilities and equipment, and other compliance expenditures. The estimated range of costs is $\$ 15$ million to $\$ 25$ million of which the accrual represents management's best estimate of total costs expected to be incurred. Actual expenditures could differ from current estimates as additional studies are completed, requiring revisions to the remediation and restoration plan.

The unaudited pro-forma consolidated results of operations of the Company are shown below as if the acquisition had occurred at the beginning of the fiscal periods indicated. These results are not necessarily indicative of the results which would actually have occurred if the purchase had taken place at the beginning of the periods, nor are they necessarily indicative of future results.

| Pro Forma |  |
| :---: | :---: |
| October 31, |  |
| 1996 | 1995 |
| (In thousands, except per share amounts) (Unaudited) |  |
| \$708,492 | \$710,357 |
| 27,751 | 28,801 |
| -- | 3,957 |
| 27,751 | 24,844 |
| \$ 2.03 | \$ 1.83 |
| \$ 1.89 | \$ 1.83 |

On October 29, 1997, the Company, through its Dutch subsidiary, Piper Impact Europe B.V. ("Piper Europe"), acquired the net assets of Advanced Metal Forming C.V., a Dutch limited partnership, for approximately $\$ 30$ million. The Company's balance sheet as of October 31, 1997 includes Piper Europe. The income statement for the twelve months ended October 31, 1997 does not include Piper Europe.
Piper Europe produces aluminum impact extrusions and precision steel stampings for the automotive and electronics industries in Europe and North America. Piper Europe employs approximately 260 people, and its manufacturing facilities are located near Zwolle in The Netherlands.

## 3. DISCONTINUED OPERATIONS

In April 1997, the Company completed the sale of its LaSalle Steel Company ("LaSalle") subsidiary. The Company recorded an after tax gain on the sale of $\$ 36,290,000$ in the second quarter of fiscal 1997. LaSalle's results of operations have been classified as discontinued operations and prior periods have been restated. For business segment reporting purposes, LaSalle's data was previously reported as the segment "Cold Finished Steel Bars".
In December 1997, the Company completed the sale of its tubing operations, comprised of Michigan Seamless Tube, Gulf States Tube, and the Tube Group Administrative Office ("Tubing Operations"). The Company will record a gain on the sale of approximately \$13,000,000 in the first quarter of fiscal 1998. Results of these operations have been classified as discontinued and prior periods have been restated. For business segment reporting purposes, Tubing Operations were previously classified as "Steel Tubes". (See Note 17)
Net sales and income from discontinued operations are as follows:


October 31,
19971996
(In thousands)

| Net Assets of Discontinued Operations |  |  |
| :---: | :---: | :---: |
| Current assets.. | \$ 24,388 | \$ 60,697 |
| Property, plant and equipment, net | 17,357 | 32,381 |
| Other assets | 2,784 | 5,010 |
| Current liabilities | $(11,241)$ | $(38,663)$ |
| Deferred pension credits | $(4,373)$ | $(10,183)$ |
| Deferred postretirement welfare benefits | $(22,406)$ | $(49,169)$ |
| Deferred income taxes. | 6,718 | 16,421 |
| Adjustment for minimum pension liability | 327 | 2,336 |
| Net assets of discontinued operations | \$ 13,554 | \$ 18,830 |

## 4. INCOME TAXES

Income tax expense (benefit) consists of the following:

|  | Year | ded Oct | 31, |
| :---: | :---: | :---: | :---: |
|  | 1997 | 1996 | 1995 |
|  |  | thousand |  |
| Current: |  |  |  |
| Federal. | \$ 846 | \$12,914 | \$11,147 |
| State. | 2,829 | 2,865 | 562 |
|  | 3,675 | 15,779 | 11,709 |
| Deferred. | 11,250 | 860 | 5,222 |
| Income taxes from continuing operations | 14,925 | 16,639 | 16,931 |
| Income taxes from discontinued operations. | 2,786 | 7,178 | 7,589 |
| Income taxes from sale of discontinued operations | 13,178 | -- | -- |
| Reduction of taxes from extinguishment of debt |  | $(1,826)$ | $(1,463)$ |
| Totals. | \$30,889 | \$21,991 | \$23, 057 |

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Company's net deferred tax liability are as follows:

October 31,

| 1997 | 1996 |
| :---: | :---: |

(In thousands)

| Deferred tax liability: |  |  |
| :---: | :---: | :---: |
| Property, plant and equipment | \$43, 092 | \$34,843 |
| Inventory | 412 | (587) |
| Other | 12,735 | 12,791 |
|  | 56,239 | 47,047 |
| Deferred tax assets: |  |  |
| Postretirement benefit obligation. | 2,969 | 2,762 |
| Other employee benefit obligations | 8,143 | 7,041 |
| Other accrued liabilities | 2,617 | 6,092 |
|  | 13,729 | 15,895 |
| Net deferred tax liability | \$42,510 | \$31, 152 |
| Deferred income tax liability -- non-current | \$48,111 | \$40,454 |
| Deferred tax assets -- current | $(5,601)$ | $(9,302)$ |
| Net deferred tax liability. | \$42,510 | \$31, 152 |

Income tax expense differs from the amount computed by applying the statutory federal income tax rate to income from continuing operations before income taxes for the following reasons:

|  | Years | ded Octo | 31, |
| :---: | :---: | :---: | :---: |
|  | 1997 | 1996 | 1995 |
|  | ( | thousand |  |
| Income tax expense at statutory tax rate. | \$14,925 | \$13,866 | \$14, 109 |
| Increase (decrease) in taxes resulting from: |  |  |  |
| State income taxes, net of federal effect. | 1,655 | 2,148 | 2,220 |
| Goodwill. | 334 | 334 | 334 |
| Other items, net | $(1,989)$ | 291 | 268 |
|  | \$14,925 | \$16,639 | \$16,931 |

The Company reached a settlement with the Internal Revenue Service with respect to its tax audit of fiscal years 1992 through 1994. During 1997, the company on earnings for fiscal 1997.

## 5. INVENTORIES

Inventories consist of the following:

|  | October 31, |  |
| :---: | :---: | :---: |
|  | 1997 | 1996 |
|  | (In thousands) |  |
| Raw materials. | \$19,432 | \$19,757 |
| Finished goods and work in process | 47,739 | 53,100 |
|  | 67,171 | 72,857 |
| Other. | 5,864 | 5,971 |
| Total. | \$73, 035 | \$78,828 |

The values of inventories in the consolidated balance sheets are based on the following accounting methods:

| LIFO. |  | \$51,517 | \$60,904 |
| :---: | :---: | :---: | :---: |
| FIFO. |  | 21,518 | 17,924 |
|  | Total | \$73,035 | \$78,828 |

With respect to inventories valued using the LIFO method, replacement cost exceeded the LIFO value by approximately $\$ 16,000,000$ and $\$ 13,000,000$ at October 31, 1997 and 1996, respectively.
6. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

|  | October 31, |  |  |
| :---: | :---: | :---: | :---: |
|  | 1997 | 1996 |  |
|  | (In thousands) |  |  |
| Land and land improvements. | \$ 18,901 |  | 16,381 |
| Buildings. | 80,981 |  | 75,466 |
| Machinery and equipment | 461, 817 |  | 424,577 |
| Construction in progress. | 81,155 |  | 34,890 |
| Less accumulated depreciation and amortization. | $642,854$ |  | 551,314 |
|  | $(263,783)$ |  | $(232,149)$ |
|  | \$ 379,071 |  | 319,165 |

The Company had commitments for the purchase or construction of capital assets amounting to approximately $\$ 23$ million at October 31, 1997
7. ACCRUED EXPENSES

Accrued expenses consist of the following:

|  | Octob | 31, |
| :---: | :---: | :---: |
|  | 1997 | 1996 |
|  | (In th | ands) |
| Accrued contribution to pension funds. | \$ 1, 033 | \$ 1,023 |
| Interest | 2,516 | 2,925 |
| Payroll, payroll taxes and employee benefits | 21,995 | 20,682 |
| State and local taxes. | 1,985 | 1,647 |
| Other | 15,679 | 11,707 |
|  | \$43, 208 | \$37,984 |
|  | ======= | ======= |

8. LONG-TERM DEBT AND FINANCING ARRANGEMENTS

Long-term debt consists of the following:

| October 31, |  |
| :---: | :---: |
| 1997 | 1996 |

(In thousands)

| Revolving credit agreements | \$100, 185 | \$160, 000 |
| :---: | :---: | :---: |
| Convertible subordinated debentures | 84,920 | 84,920 |
| Term loan | 7,709 | -- |
| Bank borrowings due within one year | 10,278 | -- |
| Industrial Revenue and Economic Development Bonds, unsecured, payable in annual installments through the year 2005, bearing interest ranging from 6.50\% to 8.375\%....... | 3,275 | 3,275 |
| Other | 6,541 | 5,318 |
|  | \$212, 908 | ------- |
| Less maturities due within one year included in current |  |  |
| liabilities. | 11,050 | -- |
|  | \$201, 858 | \$253, 513 |

On July 23, 1996, the Company replaced its $\$ 75$ million Revolving Credit and Letter of Credit Agreement with an unsecured $\$ 250$ million Revolving Credit and Term Loan Agreement ("Bank Agreement"). The Bank Agreement consists of a revolving line of credit ("Revolver"). In July 1997, the term loan provisions of the Bank Agreement expired. The Bank Agreement expires July 23, 2002, and provides for up to $\$ 25$ million for standby letters of credit, limited to the undrawn amount available under the Revolver. All borrowings under the Revolver bear interest, at the option of the Company, at either (a) the prime rate or the federal funds rate plus one percent, whichever is higher, or (b) a Eurodollar based rate. At October 31, 1997, the Company had $\$ 100$ million outstanding under the Revolver. The weighted average interest rates on borrowings under the Revolver were 6.6\% and 6.3\% in 1997 and 1996, respectively. As of October 31, 1997, the Company was in compliance with all Bank Agreement covenants. Under the Company's most restrictive loan covenants, retained earnings of \$42,954,000 at October 31, 1997 were available for dividends

On June 30, 1995, the Company exercised its right under the terms of its Cumulative Convertible Exchangeable Preferred Stock to exchange such stock for an aggregate of \$84,920,000 of its 6.88\% Convertible Subordinated Debentures due June 30, 2007 ("Debentures"). Interest is payable semi-annually on June 30 and December 31 of each year. The Debentures are subject to mandatory annual sinking fund payments sufficient to redeem $25 \%$ of the Debentures issued on each of June 30,2005 and June 30, 2006, to retire a total of $50 \%$ of the Debentures before maturity. The Debentures are subordinate to all senior indebtedness of the Company and are convertible, at the option of the holder, into shares of the Company's common stock at a conversion price of $\$ 31.50$ per share.

At October 31, 1994, the Company had $\$ 125$ million outstanding in Senior Notes. The Senior Notes paid interest at 10.77\% per annum. In December 1994, the Company acquired $\$ 59.5$ million principal amount of the Senior Notes for a purchase price equal to $105 \%$ of the principal amount plus accrued interest. The Company recorded an extraordinary charge of $\$ 2.0$ million ( $\$ 3.5$ million before tax) in the first quarter of 1995 related to the call premium and write-off of deferred debt issuance costs for the Senior Notes that were repurchased. In August 1995, the Company made a required annual repayment of $\$ 20.8$ million principal amount. In December 1995, the Company acquired the remaining \$44.7 million principal amount of the Senior Notes for a purchase price equal to $107.5 \%$ of the principal amount plus accrued interest. The second acquisition and related expenses resulted in an after-tax extraordinary charge of approximately $\$ 2.5$ million ( $\$ 4.3$ million before tax) in the first quarter of 1996.

On October 28, 1997, Piper Impact Europe B.V. ("Piper Europe") executed a stand-alone secured credit facility ("Credit Facility") providing up to 50 million Dutch Guilders ("NLG"). At October 31, 1997, 1 NLG was equal to . 514 U.S. dollars. The Credit Facility consists of a Roll-Over Term Loan, a Medium Term Loan and an Overdraft Facility. The Roll-Over Term Loan provides NLG 15 million for loan periods of $1,2,3,6$, or 12 months with repayment of outstanding borrowings on October 27, 2002. Interest is payable on the repayment date at the Amsterdam Interbank Offering Rate (AIBOR) plus 90 basis points. In the case of a loan period of twelve months, interest is payable six months after the beginning of the loan period and on the repayment date. The Medium Term Loan provides NLG 15 million at $6.375 \%$ payable quarterly in arrears from March 1, 1998, with quarterly repayments of principal in equal amounts of NLG 500 thousand commencing January 1, 1999 through April 1, 2006. The Overdraft Facility provides an aggregate amount of NLG 20 million to cover overdrafts or up to NLG 15 million of loans for a period of one year, subject to annual renewal. Overdrafts bear interest at the Bank's published rate for overdraft facilities plus 1\% per annum. Loans under the Overdraft Facility bear interest at AIBOR plus 45 to 55 basis points. The terms of Overdraft Facility loans are selected by Piper Europe to be a period of 1, 2, 3, 6, or 12 months. Interest on overdrafts are paid quarterly in arrears.

Interest on loans under the Overdraft Facility is payable on the repayment date, however, in the case of a loan period of twelve months, interest is payable six months after the beginning of the loan period and on the repayment date. At October 31, 1997, Piper Europe had NLG 35.3 million outstanding under the Credit Facility. As of October 31, 1997, Piper Europe was in compliance with all Credit Facility covenants.
Aggregate maturities of long-term debt at October 31, 1997, are as follows (in thousands):

| 1998. | \$ 11, 050 |
| :---: | :---: |
| 1999. | -- |
| 2000. | -- |
| 2001. | -- |
| 2002. | 100,185 |
| Thereafter | 101,673 |
|  | \$212,908 |

## 9. PENSION PLANS AND RETIREMENT BENEFITS

The Company has retirement plans covering substantially all employees. The plans provide for defined benefits. The plans pay benefits to employees at retirement using formulas based upon years of service and compensation rates near retirement. The Company's funding policy is generally to make the minimum annual contributions required by applicable regulations.

The plans' funded status was as follows:

|  | Assets exceed accumulated benefit obligation |  | Accumulated benefit obligation exceeds assets |  |
| :---: | :---: | :---: | :---: | :---: |
|  | October 31, |  |  |  |
|  | 1997 | 1996 | 1997 | 1996 |
|  | (In thousands) |  |  |  |
| Assets available for benefits | \$ 12,807 | \$ 9,910 | \$ 3,606 | \$ 2,323 |
| Projected benefit obligation |  |  |  |  |
| Vested.. | $(10,602)$ | $(8,571)$ | $(4,446)$ | $(3,637)$ |
| Nonvested. | (170) | (283) | (752) | (834) |
| Accumulated benefit obligation | $(10,772)$ | $(8,854)$ | $(5,198)$ | $(4,471)$ |
| Effect of future salary increases | $(5,990)$ | $(5,378)$ | -- | -- |
| Total projected benefit obligation. | $(16,762)$ | $(14,232)$ | $(5,198)$ | $(4,471)$ |
| Assets less than projected benefit obligation. | \$ $(3,955)$ | \$ (4,322) | \$ $(1,592)$ | \$ $(2,148)$ |
| Consisting of: |  |  |  |  |
| Amounts to be offset against future pension costs: |  |  |  |  |
| Assets in excess of obligation at adoption. | \$ 772 | \$ 876 | \$ 52 | \$ 59 |
| Obligation (increase) decrease due to plan amendments. | 238 | 294 | (816) | (826) |
| Actuarial gains (losses) | 1,103 | 492 | (541) | (836) |
| Minimum liability adjustment |  | - - | 1,305 | 1,604 |
| Amounts recognized in consolidated balance sheets: |  |  |  |  |
| Deferred pension credit... | $(5,371)$ | $(5,250)$ | $(1,256)$ | $(1,860)$ |
| Accrued contribution to pension funds. | (697) | (734) | (336) | (289) |
|  | \$ $(3,955)$ | \$ (4, 322) | \$ $(1,592)$ | \$ 2,148 ) |

In accordance with the provisions of Statement of Financial Accounting Standards No. 87, the Company recorded additional minimum pension liabilities as of October 31, 1997 and 1996, representing the excess of the accumulated benefit obligations over the fair value of plan assets and accrued pension liabilities. The Company recorded additional pension liabilities of $\$ 1,305,000$ and $\$ 1,604,000$; intangible assets of $\$ 816,000$ and $\$ 827,000$; and stockholders' equity reductions, net of income taxes, of $\$ 298,000$ and $\$ 475,000$, as of October 31 , 1997 and 1996, respectively.

The projected unit credit method was used to determine the actuarial present value of the accumulated benefit obligation and the projected benefit obligation. For 1997, 1996 and 1995 the discount rate was $7.5 \%$. The expected long term rate of return on assets was $10 \%$ for the three year period ending October 31, 1997. The assumed rate of increase in future compensation levels was $4.5 \%$ in 1997, 1996 and 1995. The plans invest primarily in marketable equity and debt securities.

Net pension costs for defined benefit plans were as follows:


The Company has various defined contribution plans in effect for certain eligible employees. The Company makes contributions to the plans subject to certain limitations outlined in the plans. Contributions to these plans were approximately \$2,919,000, \$2,476,000, and \$2,299,000 during fiscal 1997, 1996, and 1995, respectively.
The Company has a Supplemental Benefit Plan covering certain key officers of the Company. Earned vested benefits under the Supplemental Benefit Plan were approximately $\$ 3,724,000, ~ \$ 2,959,000$, and $\$ 4,107,000$ at October 31, 1997, 1996 and 1995, respectively. These benefits are funded with life insurance policies purchased by the Company.

## 10. POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

The Company provides certain healthcare and life insurance benefits for eligible retired employees. Employees may become eligible for those benefits if they reach normal retirement age while working for the Company. The Company continues to fund benefit costs on a pay-as-you-go basis; and, for fiscal year 1997, the Company made benefit payments totaling $\$ 247,000$, compared to $\$ 171,000$ and \$366,000 in fiscal 1996 and 1995, respectively

The following table sets forth the funded status of the Company's projected postretirement benefits other than pensions, reconciled with amounts recognized in the Company's consolidated balance sheets at:

|  | October 31, |  |
| :---: | :---: | :---: |
|  | 1997 | 1996 |
|  | (In thousands) |  |
| Accumulated postretirement benefit obligation: |  |  |
| Retirees. | \$(4,233) | \$(3,870) |
| Fully eligible active plan participants | (161) | (178) |
| Other active plan participants | $(2,217)$ | $(2,043)$ |
|  | $(6,611)$ | $(6,091)$ |
| Plan assets at fair value. | -- | -- |
| Accumulated postretirement benefit obligation in excess of plan assets. | $(6,611)$ | $(6,091)$ |
| Unrecognized prior service cost. | -- | -- |
| Unrecognized net loss from past experience different from that assumed and from changes in assumption............. | (224) | (368) |
| Accrued postretirement benefit cost | \$ $(6,835)$ | \$ 6,459$)$ |


| 1997 | 1996 | 1995 |
| :---: | :---: | :---: |


| Net periodic postretirement benefit cost: |  |  |  |
| :---: | :---: | :---: | :---: |
| Service cost -- benefits attributed to service during the period | \$148 | \$145 | \$124 |
| Interest cost on accumulated postretirement Benefit obligation. | 472 | 438 | 442 |
| Net amortization and deferral | 3 | 5 | 54 |
| Net periodic postretirement benefit cost | \$623 | \$588 | \$620 |

If the healthcare cost trend rate assumptions were increased by 1\%, the accumulated postretirement benefit obligation as of October 31, 1997 would be increased by $3.5 \%$. The effect of this change on the sum of the service cost and interest cost would be an increase of $2.8 \%$.

## 11. INDUSTRY SEGMENT INFORMATION

Quanex is principally a producer of specialized metals and metal products. The Company's operations primarily consist of two segments: engineered steel bars and aluminum products.

For the year ended October 31, 1997, sales to Autoliv Inc. represented 13\% of the Company's consolidated net sales. Sales to Autoliv are included in the aluminum products segment.

|  | Corporate |  |  |
| :---: | :---: | :---: | :---: |
| Year ended | Engineered | Aluminum | and |
| October 31, 1997 | Steel Bars(4) | Products(1) | Other(2) | Consolidated


|  | (In thousands) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Net Sales: |  |  |  |  |
| To unaffiliated companies. | \$301, 436 | \$444, 657 | -- | \$746, 093 |
| Intersegment(3) | 18,032 | -- | \$ 18,032 ) |  |
| Total | \$319, 468 | \$444, 657 | \$ 18,032 ) | \$746, 093 |
| Operating Income (loss). | \$50,762 | \$17,415 | \$ $(13,169)$ | \$55, 008 |
| Depreciation and amortizatio |  |  |  |  |
| Operating. | \$13,940 | \$23,227 | \$ 131 | \$37, 298 |
| Other. | - - | -- | 567 | 567 |
| Total. | \$13,940 | \$23, 227 | \$ 698 | \$37, 865 |
| Capital expenditures | \$35, 220 | \$33,581 | \$ 345 | \$69,146 |
| Identifiable assets. | \$192,937 | \$443, 799 | \$48,969 | \$685,705 |

(1) Identifiable assets includes Advanced Metal Forming C.V., acquired on October 29, 1997.
(2) Included in "Corporate and Other" are intersegment eliminations, corporate expenses and net assets of discontinued operations.
(3) Intersegment sales are conducted on an arm's-length basis.
(4) Includes Nitro Steel and Heat Treat divisions previously reported under the Steel Tubes segment. See Note 3.

|  |  | Corporate |
| :---: | :---: | :---: |
| Year ended | Engineered | Aluminum | | and |
| :---: |
| October 31, 1996 |$\quad$ Steel Bars(4) $\quad$ Products(1) $\quad$ Other(2) $\quad$ Consolidated

(In thousands)

| Net Sales: |  |  |
| :---: | :---: | :---: |
| To unaffiliated companies | \$275, 202 | \$34 |
| Intersegment(3) | 16,965 |  |
| Total | \$292,167 | \$3 |
| Operating Income (loss) | \$39,090 | \$22 |
| Depreciation and amortizatio |  |  |
| Operating. | \$18,263 | \$17 |
| Other | -- |  |
| Total | \$18,263 | \$1 |
| Capital expenditures | \$19,573 | \$1 |
| Identifiable assets. | \$171, 351 | \$41 |
| (1) Includes three months of Piper Impact's operations. |  |  |
| (2) Included in "Corporate and Other" are intersegment eliminations, corporate expenses and net assets of discontinued operations. |  |  |
| (3) Intersegment sales are conducted on an arm's-length basis. |  |  |
| (4) Includes Nitro Steel and Steel Tubes segment. Se | reported |  |

Engineered Steel Bars(3)

Aluminum Products

Corporate
and
Other(1)
(In thousands)

| Net Sales: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| To unaffiliated companies. | \$272,420 | \$331, 565 | -- | \$603,985 |
| Intersegment(2) | 14,229 |  | \$(14, 229) |  |
| Total. | \$286,649 | \$331, 565 | \$(14, 229) | \$603,985 |
| Operating Income (loss) | \$43, 668 | \$21,128 | \$ 17,336 ) | $======$ $\$ 47,460$ |
| Depreciation and amortization: |  |  |  |  |
| Operating. | \$15,537 | \$13,135 | \$ 113 | \$28,785 |
| Other | -- | -- | 625 | 625 |
| Total. | \$15,537 | \$13,135 | \$ 738 | \$29,410 |
| Capital expenditures | \$12,776 | \$ 8,704 | \$ 149 | \$21,629 |
| Identifiable assets. | \$177, 079 | \$230,586 | \$58,793 | \$466, 458 |

(1) Included in "Corporate and Other" are intersegment eliminations, corporate expenses and net assets of discontinued operations.
(2) Intersegment sales are conducted on an arm's length basis.
(3) Includes Nitro Steel and Heat Treat divisions previously reported under the Steel Tubes segment. See Note 3.

## 12. PREFERRED STOCK PURCHASE RIGHTS

The Company declared a dividend in 1986 of one Preferred Stock Purchase Right (a "Right") on each outstanding share of its common stock. This action was intended to assure that all shareholders would receive fair treatment in the event of a proposed takeover of the Company. On April 26, 1989, the Company amended the Rights to provide for additional protection to shareholders and to provide the Board of Directors of the Company with needed flexibility in responding to abusive takeover tactics. Each Right, when exercisable, entitles the holder to purchase 1/100th of a share of the Company's Series A Junior Participating Preferred Stock at an exercise price of $\$ 60$. Each $1 / 100$ th of a share of Series $A$ Junior Participating Preferred Stock will be entitled to a dividend equal to the greater of $\$ .01$ or the dividend declared on each share of common stock, and will be entitled to 1/100th of a vote, voting together with the shares of common stock. The Rights will be exercisable only if, without the Company's prior consent, a person or group of persons acquires or announces the intention to acquire $20 \%$ or more of the Company's common stock. If the Company is acquired through a merger or other business combination transaction, each Right will entitle the holder to purchase $\$ 120$ worth of the surviving company's common stock for \$60. Additionally, if someone acquires $20 \%$ or more of the Company's common stock, each Right not owned by the $20 \%$ or greater shareholder would permit the holder to purchase $\$ 120$ worth of the Company's common stock for $\$ 60$. The Rights are redeemable, at the option of the Company, at $\$ .02$ per Right at any time until ten days after someone acquires $20 \%$ or more of the common stock. The Rights expire in 1999.

As a result of the Rights distribution, 150,000 of the 1,000,000 shares of authorized Preferred Stock were reserved for issuance as Series A Junior Participating Preferred Stock.

## 13. PREFERRED STOCK -- DEPOSITARY CONVERTIBLE EXCHANGEABLE PREFERRED SHARES

During May 1992, the Company issued 3,450,000 Depositary Convertible
Exchangeable Preferred Shares ("Depositary Shares"), each representing 1/10th of a share of the Company's 6.88\% Cumulative Convertible Exchangeable Preferred Stock ("Preferred Stock"). The net proceeds from the issuance was $\$ 82.9$ million. The dividend per annum and liquidation preference for each share of Preferred Stock were \$17.20 and \$250, respectively, and for each Depositary Share were $\$ 1.72$ and \$25, respectively. Dividends on the Preferred Stock and Depositary Shares were cumulative and payable quarterly, commencing September 30, 1992. The Company was prohibited from paying any dividends on Common Stock (other than in Common Stock or junior stock) unless all required preferred dividends had been paid.
The Preferred Stock was convertible at the option of the holder into shares of the Company's Common Stock at a conversion price of $\$ 31.50$ per share, subject to adjustment in certain events. The Preferred Stock was exchangeable at the option of the Company, in whole but not in part, on any dividend payment date commencing June 30, 1995 for the Company's 6.88\% Convertible Subordinated Debentures due June 30, 2007 ("6.88\% Debentures") at the rate of $\$ 250$ principal amount of $6.88 \%$ Debentures for each share of Preferred Stock and $\$ 25$ principal amount of $6.88 \%$ Debentures for each Depositary Share.
On June 30, 1995, the Company exercised its right under the terms of its Cumulative Convertible Exchangeable Preferred Stock to exchange such stock for an aggregate of $\$ 84,920,000$ of its $6.88 \%$ Debentures. Interest is payable
semi-annually on June 30 and December 31 of each year. The Debentures are subject to mandatory annual sinking fund payments sufficient to redeem $25 \%$ of the Debentures issued on each of June 30, 2005 and June 30, 2006, to retire a total of $50 \%$ of the Debentures before maturity. The Debentures are subordinate to all senior indebtedness of the Company and are convertible, at the option of the holder, into shares of the Company's common stock at a conversion price of $\$ 31.50$ per share.

## 14. RESTRICTED STOCK AND STOCK OPTION PLANS

The Company has restricted stock and stock option plans which provide for the granting of common shares or stock options to key employees. Under the Company's restricted stock plan, common stock may be awarded to key employees. The recipient is entitled to all of the rights of a shareholder, except that during the forfeiture period the shares are nontransferable. The award vests during an eight year period based on the price of the Company's stock. Upon issuance of stock under the plan, unearned compensation equal to the market value at the date of grant is charged to stockholders' equity and subsequently amortized to expense over the restricted period. There were no restricted shares granted in 1995, 1996 or 1997. The amount charged to compensation expense was $\$ 185,000$ in 1997, \$132,000 in 1996, and \$53,000 in 1995.
Options are granted at prices determined by the Board of Directors which may not be less than the fair market value of the shares at the time the options are granted. Unless otherwise provided by the Board at the time of grant, options become exercisable in $331 / 3 \%$ increments maturing cumulatively on each of the first through third anniversaries of the date of grant and must be exercised no later than ten years from the date of grant. No options may be granted under the plans after December 1, 2002. There were $722,322,624,035$, and 140,151 shares available for granting of options at October 31, 1997, 1996, and 1995, respectively. Stock option transactions for the three years ended October 31, 1997, were as follows:

|  | Shares Exercisable | Shares Under Option | Average Price Per Share |
| :---: | :---: | :---: | :---: |
| Balance at October 31, 1994. | 405,299 | 794,801 | \$19 |
| Granted. |  | 295,000 | 20 |
| Exercised |  | $(28,768)$ | 15 |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1995. | 567,243 | 1,061, 033 | 20 |
| Granted. |  | 269,650 | 28 |
| Exercised. |  | $(69,503)$ | 12 |
| Cancelled. |  | $(3,534)$ | 22 |
| Balance at October 31, 1996. | 726,609 | 1,257,646 | 22 |
| Granted. |  | 165,700 | 29 |
| Exercised |  | $(323,218)$ | 18 |
| Cancelled. |  | $(13,987)$ | 25 |
| Balance at October 31, 1997. | 650,053 | 1,086,141 | \$24 |

The Company also has a stock option plan which provides for the granting of stock options to non-employee Directors to purchase up to an aggregate amount of 100,000 shares of common stock. The plan provides that each non-employee
Director and each future non-employee Director, as of the first anniversary of the date of his election as a Director of the Company, will be granted an option to purchase 10,000 shares of common stock at a price per share of common stock equal to the fair market value of the common stock as of the date of the grant.

Options become exercisable in $331 / 3 \%$ increments maturing cumulatively on each of the first through third anniversaries of the date of the grant and must be exercised no later than 10 years from the date of grant. No options may be granted under the plan after June 22, 1997. There were no shares available for granting of options
at October 31, 1997. There were 20,000, and 40,000 shares available for granting of options at October 31, 1996 and 1995, respectively. Stock option transactions for the three years ended October 31, 1997, were as follows:

|  | Shares Exercisable | Shares Under Option | Average Price Per Share |
| :---: | :---: | :---: | :---: |
| Balance at October 31, 1994. | 13,333 | 20,000 | \$17 |
| Granted. |  | -- | -- |
| Exercised. |  | -- | -- |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1995. | 16,666 | 20,000 | \$17 |
| Granted. |  | 20,000 | 20 |
| Exercised. |  | -- | -- |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1996. | 20,000 | 40,000 | \$18 |
| Granted. |  | -- | -- |
| Exercised. |  | $(15,000)$ | 18 |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1997. | 11,666 | 25,000 | \$18 |

In addition, the Company has a stock option plan which provides for the granting of stock options to non-employee Directors to purchase up to an aggregate of 210,000 shares of common stock. Each non-employee Director as of December 6, 1989, was granted an option to purchase 3,000 shares of common stock at a price per share of common stock equal to the fair market value of the common stock as of the date of grant. Also, each non-employee Director who is a director of the Company on any subsequent October 31, while the plan is in effect and shares are available for the granting of options hereunder, shall be granted on such October 31, an option to purchase 3,000 shares of common stock at a price equal to the fair market value of the common stock as of such October 31. Options become exercisable at any time commencing six months after the grant and must be exercised no later than 10 years from the date of grant. No option may be granted under the plan after December 5, 1999. There were 30,000, 51,000, and 72,000 shares available for granting of options at October 31, 1997, 1996 and 1995, respectively. Stock option transactions for the three years ended October 31, 1997, were as follows:

|  | Shares Exercisable | Shares Under Option | Average Price Per Share |
| :---: | :---: | :---: | :---: |
| Balance at October 31, 1994. | 66,000 | 87,000 | \$20 |
| Granted. |  | 21,000 | 20 |
| Exercised. |  | -- | -- |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1995. | 87,000 | 108,000 | \$20 |
| Granted. |  | 21,000 | 29 |
| Exercised. |  | $(6,000)$ | 19 |
| Cancelled. |  | -- | -- |
| Balance at October 31, 1996. | 102,000 | 123,000 | \$22 |
| Granted. |  | 21,000 | 28 |
| Exercised. |  | $(30,000)$ | 18 |
| Cancelled |  | -- | -- |
| Balance at October 31, 1997 | 93,000 | 114,000 | \$24 |

On October 1, 1992, Carl E. Pfeiffer retired as the Chief Executive Officer of the Company. In connection with such retirement, the Company replaced options to purchase 60,000 shares of Common Stock at a weighted average exercise price of $\$ 15.85$ held by Mr. Pfeiffer, under the Company's employee stock option plans with new options
having the same exercise prices and expiration dates. Such options are
substantially similar to the options previously held by him with the exception that vesting is not contingent upon his continued employment with the Company and the options expire on various dates between October 25, 1999, and October 13, 2001, instead of one year after retirement. There were no shares exercisable at October 31, 1997. There were 60,000 shares exercisable at October 31, 1996 and 1995. During the year ended October 31, 1997, 60,000 shares were exercised at an average price of $\$ 15.85$ per share. There were no transactions related to these stock options during the years ended October 31, 1996 and 1995.

## STOCK BASED COMPENSATION

Effective November 1, 1996, the Company adopted SFAS No. 123, "Accounting for Stock-Based Compensation." In accordance with SFAS No. 123, the Company will continue to apply the existing rules contained in Accounting Principles Opinion No. 25, "Accounting for Stock Issued to Employees," and disclose the required pro forma effect on net income and earnings per share of the fair value based method of accounting for stock based compensation as required by SFAS No. 123.
The following pro forma summary of the Company's consolidated results of operations have been prepared as if the fair value based method of accounting for stock based compensation as required by SFAS No. 123 had been applied:

(In thousands)

| Net income attributable to common | \$69,184 | $\begin{array}{r} \$ 30,368 \\ (1,431) \end{array}$ |  |
| :---: | :---: | :---: | :---: |
| SFAS No. 123 adjustment | (995) |  |  |
| Pro forma net attributable to common stockholders. | \$68,189 |  | , 937 |
| Earnings per Common share: |  |  |  |
| Primary as reported. | \$ 4.93 | \$ | 2.22 |
| Primary pro forma. | \$ 4.86 | \$ | 2.12 |
| Fully diluted as reported. | \$ 4.38 | \$ | 2.05 |
| Fully diluted pro forma. | \$ 4.32 |  | 1.96 |

Fair value of the options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted average assumptions for 1997 and 1996

|  | 1997 | 1996 |
| :---: | :---: | :---: |
| Risk-free interest rate. | 5.39\% | 5.44\% |
| Dividend yield. | 2.23\% | 2.23\% |
| Volatility factor | 29.83\% | 29.83\% |
| Weighted average expect | 5 YEARS | 5 years |

## 15. FINANCIAL INSTRUMENTS

The Company uses futures and option contracts to hedge a portion of its exposure to price fluctuations of aluminum. The exposure is related to the Company's backlog of aluminum sales orders with committed prices as well as future aluminum sales for which a sales price increase would lag a raw material cost increase. Firm price commitments do not extend beyond December, 1998. Hedging gains and losses are included in "Cost of sales" in the income statement concurrently with the hedged sales. Unrealized gains and losses related to open contracts are not reflected in the consolidated statements of income. At October 31, 1997, the Company had open futures contracts at fair values of $\$ 2.8$ million and unrealized losses of $\$ 16,000$ on such contracts. At October 31, 1997, these contracts covered a notional volume of $3,693,000$ pounds of aluminum.

In the fourth quarter of fiscal 1996, the Company entered into interest rate swap agreements, which effectively converted $\$ 100$ million of its variable rate debt under the Bank Agreement, to fixed rate. Under these agreements, payments are made based on a fixed rate ( $\$ 50$ million at $7.025 \%$, and $\$ 50$ million at $6.755 \%$ ) and received on a LIBOR based variable rate (5.78125\% at October 31, 1997). Differentials to be paid or received under the agreements are recognized as interest expense. The agreements mature in 2003. The unrealized losses related to the interest rate swaps are $\$ 4.1$ million ( $\$ 3.1$ million in 1996) on the total notional amount of $\$ 100$ million ( $\$ 100$ million in 1996).

The fair values of the Company's financial assets approximate the carrying values reported on the consolidated balance sheet. The fair value of long-term debt was $\$ 215.6$ million and $\$ 256.9$ million, as of October 31, 1997 and 1996, respectively, as compared to carrying values at October 31, 1997 and 1996 of $\$ 212.9$ million and $\$ 253.5$ million, respectively.

The fair value of long-term debt was based on the quoted market price, recent transactions, or based on rates available to the Company for instruments with similar terms and maturities. The fair value of interest rate swaps were estimated by discounting expected cash flows using quoted market interest rates.

## 16. CONTINGENCIES

Quanex is subject to loss contingencies arising from federal, state, and local environmental laws. Environmental expenditures are expensed or capitalized depending on their future economic benefit. The Company accrues its best estimates of its cleanup obligations and adjusts such accruals as further information develops or circumstances change. Costs of future expenditures for environmental laws might be deemed to impose joint and several liability for remediation obligations, the Company accrues its allocable share of liability taking into account the number of companies participating, their ability to pay their shares, the volumes and nature of the wastes involved, the nature of anticipated response actions, and the nature of the Company's alleged connections. It is management's opinion that the company has established appropriate reserves for environmental remediation obligations at various of its plant sites and disposal facilities. Those amounts are not expected to have a material adverse effect on the Company's financial condition. Total reserves include $\$ 20$ million related to costs for further investigations, environmental remediation, and corrective actions in connection with the acquisition of Piper Impact. Actual cleanup costs at the Company's current plan sites, former plants, and disposal facilities could be more or less than the amounts accrued for remediation obligations. It is not possible at this point to reasonably estimate the amount of any obligation for remediation in excess of current accruals that would be material to Quanex's financial statements because of uncertain ties as to the extent of environmental impact and concurrence of governmental authorities.

## 17. SUBSEQUENT EVENT

In December 1997, the Company completed the sale of its tubing operations, comprised of Michigan Seamless Tube, Gulf States Tube, and the Tube Group Administrative Office ("Tubing Operations"), to Vision Metals, Inc., a new company formed by certain management of the Tubing Operations and Citicorp Venture Capital, Ltd. Under the terms of the Purchase Agreement dated December 3, 1997, the Company received cash consideration of approximately $\$ 30$ million, subject to post closing adjustments. The results of operations of the Tubing Operations have been classified as discontinued operations and prior periods have been restated. For business segment reporting purposes, the Tubing Operations were previously classified as "Steel Tubes". Two small divisions, Heat Treat Division and Nitro Steel Division, which were previously included within the "Steel Tubes" segment, were retained by the Company and are now included in the "Engineered Steel Bars" segment.

## QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

The following sets forth the selected quarterly information for the years ended October 31, 1997 and 1996. The information presented has been restated to reflect LaSalle and the Tubing Operations as discontinued operations. (See Note 3 to the Consolidated Financial Statements)

|  | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
| :---: | :---: | :---: | :---: | :---: |
|  | (In thous | nds excep | per share | amounts) |
| 1997: |  |  |  |  |
| Net sales | \$167,955 | \$185,999 | \$196,589 | \$195, 550 |
| Gross profit | 20,732 | 26,265 | 28,807 | 26,671 |
| Income from continuing operations | 3,372 | 7,339 | 8,607 | 8,400 |
| Income from discontinued operations | 954 | 1,751 | 813 | 1,658 |
| Gain on sale of discontinued operations | -- | 36,290 | -- | -- |
| Net income. | 4,326 | 45,380 | 9,420 | 10,058 |
| Earnings per share: |  |  |  |  |
| Primary: |  |  |  |  |
| Income from continuing operations. | 0.23 | 0.53 | 0.61 | 0.59 |
| Income from discontinued operations | 0.08 | 0.12 | 0.06 | 0.11 |
| Gain on sale of discontinued operations | -- | 2.60 | -- | -- |
| Earnings per primary common share. | 0.31 | 3.25 | 0.67 | 0.70 |
| Assuming full dilution. | \$ 0.31 | \$ 2.78 | \$ 0.62 | \$ 0.65 |
| 1996: |  |  |  |  |
| Net sales. | \$121, 845 | \$143, 497 | \$160, 294 | \$194,433 |
| Gross profit. | 14,728 | 17,955 | 26,409 | 34, 091 |
| Income from continuing operations | 1,524 | 5,254 | 7,478 | 8,722 |
| Income from discontinued operations | 2,523 | 2,878 | 1,667 | 2,844 |
| Extraordinary charge -- early extinguishment of debt | $(2,522)$ | -- | -- | -- |
| Net income. | 1,525 | 8,132 | 9,145 | 11,566 |
| Earnings per share: |  |  |  |  |
| Primary: |  |  |  |  |
| Income from continuing operations. | 0.11 | 0.39 | 0.55 | 0.63 |
| Income from discontinued operations | 0.19 | 0.21 | 0.12 | 0.21 |
| Extraordinary charge -- early extinguishment of debt | (.19) | -- | -- | -- |
| Earnings per primary common share. | 0.11 | 0.60 | 0.67 | 0.84 |
| Assuming full dilution.. | \$ 0.11 | \$ 0.55 | \$ 0.61 | \$ 0.75 |

## SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS

| Description | Balance at beginning of year | Charged to costs and expenses | Write-offs | Other |  | Balance at end of year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (In thousands) |  |  |  |  |  |
| ful accounts: |  |  |  |  |  |  |
| 31, 1997 | \$7,703 | \$ 2,674 | \$ (39) | \$ |  | \$10,338 |
| 31, 1996 | \$2,933 | \$10,449 | \$ 5,679 ) | \$ |  | \$ 7,703 |
| 31, 1995 | \$2,942 | \$ 445 | \$ (454) | \$ |  | \$ 2,933 |



ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT
Pursuant to General Instruction $G(3)$ to Form $10-\mathrm{K}$, information on directors and executive officers of the Registrant is incorporated herein by reference from the Registrant's Definitive Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the close of the fiscal year.

ITEM 11. EXECUTIVE COMPENSATION
Pursuant to General Instruction $G(3)$ to Form 10-K, information on executive compensation is incorporated herein by reference from the Registrant's Definitive Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the close of the fiscal year.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT
Pursuant to General Instruction $G(3)$ to Form 10-K, information on security ownership of certain beneficial owners and management is incorporated herein by reference from the Registrant's Definitive Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the close of the fiscal year.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS
Pursuant to General Instruction G(3) to Form 10-K, information on certain relationships and related transactions is incorporated herein by reference from the Registrant's Definitive Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the close of the fiscal year.



| 4.5 | -- \$250,000,000 Revolving Credit and Term Loan Agreement dated as of July 23, 1996, among the Company, Comerica Bank, as Agent, and Harris Trust and Savings Bank and Wells Fargo Bank (Texas), NA as Co-Agents, filed as Exhibit 4.1 of the Company's Report on Form 8-K, dated August 9, 1996, and incorporated herein by reference. |
| :---: | :---: |
| 10.1 | -- Agreement of Lease between Leland Tube Company, Inc. and Role Realty Co., dated March 5, 1970, with attached Assignment of Tenant's Interest in Lease from Leland Tube Company to the Registrant, dated May 31, 1979, and filed as Exhibit 10.3 of the Registrant's Form S-2, Registration No. 2-88583, and incorporated herein by reference. |
| 10.2 | -- Agreement of Lease between Leland Tube Company, Inc. and Role Realty Co., dated January 24, 1973, with attached Assignment of Tenant's Interest in Lease from Leland Tube Company to the Registrant, dated May 31, 1979, and filed as Exhibit 10.4 of the Registrant's Form S-2, Registration No. 2-88583, and incorporated herein by reference. |
| 10.3 | -- Lease Agreement between the Registrant and William M. Paul and Associates, dated August 27, 1980, filed as Exhibit 10.5 of the Registrant's Form S-2, Registration No. 2-88583, and incorporated herein by reference. |
| 10.4 | -- Agreement of Lease between the Registrant and 3D Tower Limited, dated March 5, 1985, filed as Exhibit 10.13 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1985, and incorporated herein by reference, as amended by the First Amendment Lease Agreement between the Registrant and VPM 1989-1, Ltd. effective December 8, 1989 and the amendment filed as Exhibit 10.23 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1995. |
| +10.5 | -- Quanex Corporation 1988 Stock Option Plan, as amended, and form of Stock Option Agreement filed as Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 1988, together with the amendment filed as Exhibit 10.17 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1995, and incorporated herein by reference. |
| +10.6 | -- Quanex Corporation Deferred Compensation Plan, as amended and restated filed as Exhibit 10.6 of the Registrant's Annual Report on Form $10-\mathrm{K}$ for the year ended October 31, 1995, and incorporated herein by reference |
| +10.7 | -- Quanex Corporation 1978 Stock Option Plan, as amended, filed as Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 1988, together with the amendment filed as Exhibit 10.16 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1995, and incorporated herein by reference. |
| +10.8 | -- Quanex Corporation Executive Incentive Compensation Plan, as amended, filed as Exhibit 10.8 to the Registrant's Form $10-\mathrm{K}$ for the fiscal year ended October 31, 1993, and incorporated herein by reference. |
| +10.9 | -- Quanex Corporation Supplemental Benefit Plan, effective February 28, 1980 as restated November 1, 1988 and amended on June 28, 1991, filed as Exhibit 10.9 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 1991, and incorporated herein by reference. |
| +10.10 | -- Form of Severance Compensation Agreement and Escrow Agreement, adopted on February 28, 1985, between the Registrant and each executive officer of the Registrant, filed as Exhibit 10.14 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1985, and incorporated herein by reference. |
| +10.11 | -- Quanex Corporation Stock Option Loan Plan for Key Officers, filed as Exhibit 10.13 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1988, and incorporated herein by reference. |
| +10.12 | -- Quanex Corporation 1987 Non-Employee Director Stock Option Plan, as amended, and the related form of Stock Option Agreement, filed as Exhibit 10.14 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1988, together with the amendment filed as Exhibit 10.14 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1995, and incorporated herein by reference. |


| +10.13 | -- Quanex Corporation 1989 Non-Employee Director Stock Option Plan, as amended, filed as Exhibit 4.4 of the Registrant's Form S-8, Registration No. 33-35128, together with the amendment filed as Exhibit 10.15 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1995, and incorporated herein by reference. |
| :---: | :---: |
| +10.14 | -- Quanex Corporation Employee Stock Option and Restricted Stock Plan, as amended, filed as Exhibit 10.14 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1994, and incorporated herein by reference. |
| +10.15 | -- Retirement Agreement dated as of September 1, 1992, between the Registrant and Carl E. Pfeiffer, filed as Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference. |
| +10.16 | -- Stock Option Agreement dated as of October 1, 1992, between the Registrant and Carl E. Pfeiffer, filed as Exhibit 10.21 to the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference. |
| +10.17 | -- Deferred Compensation Agreement dated as of July 31, 1992, between the Registrant and Carl E. Pfeiffer, filed as Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference. |
| +10.18 | -- Quanex Corporation Non-Employee Director Retirement Plan, filed as Exhibit 10.18 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1994, and incorporated herein by reference. |
| +10.19 | -- 1996 Employee Stock Option Plan and Restricted Stock Plan, filed as Exhibit 10.19 of the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1996, and incorporated herein by reference. |
| +10.20 | -- Quanex Corporation Deferred Compensation Trust filed as Exhibit 4.8 of the Registrant's Registration Statement on Form S-3, Registration No. 333-36635, and incorporated herein by reference. |
| +*10.21 | -- Quanex Corporation 1997 Non-Employee Director Stock Option Plan. |
| *11 | -- Statement re computation of per share earnings. |
| *21 | -- Subsidiaries of the Registrant. |
| *23 | -- Consent of Deloitte \& Touche LLP. |
| *27 | Financial Data Schedule |

+ Management Compensation or Incentive Plan
* Filed herewith

As permitted by Item 601(b)(4)(iii)(A) of Regulation S-K, the Registrant has not filed with this Annual Report on Form 10-K certain instruments defining the rights of holders of long-term debt of the Registrant and its subsidiaries because the total amount of securities authorized under any of such instruments does not exceed $10 \%$ of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant agrees to furnish a copy of any such agreements to the Securities and Exchange Commission upon request.
(b) Reports on Form 8-K

No Reports on Form 8-K were filed by the Company during the quarter ended October 31, 1997.

Pursuant to the requirements of Section 13 or $15(\mathrm{~d})$ 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.

QUANEX CORPORATION

By: /s/ VERNON E. OECHSLE
Director, President and Chief Executive

Vernon E. Oechsle Officer (Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.


| EXHIBIT |  |
| :---: | :---: |
| NUMBER | DESCRIPTION OF EXHIBITS |
| 2.1 | -- Asset Purchase Agreement dated July 31, 1996, among the Company, Piper Impact, Inc., a Delaware corporation, Piper Impact, Inc., A Tennessee corporation, B. F. Sammons and M. W. Robbins, filed as Exhibit 2.1 of the Company's Report on Form 8-K, dated August 9, 1996, and incorporated herein by reference. |
| 2.2 | -- Stock Purchase Agreement dated April 18, 1997, by and among Niagara Corporation, Niagara Cold Drawn Corp., and Quanex Corporation filed as Exhibit 2.1 to the Company's Current Report on Form 8-K, dated May 5, 1997, and incorporated herein by reference. |
| 2.3 | -- Purchase Agreement dated December 31, 1997, among Quanex Corporation, Vision Metals Holdings, Inc., and Vision Metals, Inc., filed as Exhibit 2.1 to the Company's Current Report on Form 8-K, dated December 3, 1997, and incorporated herein by reference. |
| 3.1 | -- Restated Certificate of Incorporation of the Registrant, as amended on February 27, 1997, filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8, Registration No. 333-22977, and incorporated herein by reference. |
| 3.2 | -- Amended and Restated Bylaws of the Registrant, as amended through December 12, 1996 filed as Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1996, and incorporated herein by reference. |
| 4.1 | -- Form of Registrant's Common Stock certificate, filed as Exhibit 4.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended April 30, 1987, and incorporated herein by reference. |
| 4.2 | -- Amended and Restated Rights Agreement between the Registrant and Manufacturers Hanover Trust Company, as Rights Agent, filed as Exhibit 1 to Amendment No. 1 to the Registrant's Form 8-A dated April 28, 1989, and incorporated herein by reference. |
| 4.3 | -- Amended and Restated Certificate of Designation, Preferences and Rights of the Registrant's Series A Junior Participating Preferred Stock, filed as Exhibit 1 to Amendment No. 1 to the Registrant's Form 8-A dated April 28, 1989, and incorporated herein by reference. |
| 4.4 | -- Form of Indenture relating to the Registrant's 6.88\% Convertible Subordinated Debentures due 2007 between the Registrant and Chemical Bank, as Trustee, filed as Exhibit 19.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended April 30, 1992, and incorporated herein by reference. |
| 4.5 | -- \$250,000,000 Revolving Credit and Term Loan Agreement dated as of July 23, 1996, among the Company, Comerica Bank, as Agent, and Harris Trust and Savings Bank and Wells Fargo Bank (Texas), NA as Co-Agents, filed as Exhibit 4.1 of the Company's Report on Form 8-K, dated August 9, 1996, and incorporated herein by reference. |
| 10.1 | -- Agreement of Lease between Leland Tube Company, Inc. and Role Realty Co., dated March 5, 1970, with attached Assignment of Tenant's Interest in Lease from Leland Tube Company to the Registrant, dated May 31, 1979, and filed as Exhibit 10.3 of the Registrant's Form S-2, Registration No. 2-88583, and incorporated herein by reference. |
| 10.2 | -- Agreement of Lease between Leland Tube Company, Inc. and Role Realty Co., dated January 24, 1973, with attached Assignment of Tenant's Interest in Lease from Leland Tube Company to the Registrant, dated May 31, 1979, and filed as Exhibit 10.4 of the Registrant's Form S-2, Registration No. 2-88583, and incorporated herein by reference. |
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| +*10.21 | -- Quanex Corporation 1997 Non-Employee Director Stock Option Plan. |
| *11 | -- Statement re computation of per share earnings. |
| *21 | -- Subsidiaries of the Registrant. |
| *23 | -- Consent of Deloitte \& Touche LLP. |
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## QUANEX CORPORATION

1997 NON-EMPLOYEE DIRECTOR STOCK OPTION PLAN

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This Quanex Corporation 1997 Non-Employee Director Stock Option Plan (the "Plan") is adopted, subject to stockholder approval, for the benefit of the directors of Quanex Corporation, a Delaware corporation (the "Company") who, at the time of their service, are not employees of the Company or any of its subsidiaries. The Plan is intended to advance the interest of the Company by providing such directors with an additional incentive to serve the Company by increasing their proprietary interest in the success of the Company.

The words and phrases defined in this Article shall have the meaning set out in these definitions throughout this Plan, unless the context in which any such word or phrase appears reasonably requires a broader, narrower, or different meaning.
1.1 "BOARD OF DIRECTORS" means the board of directors of the

Company.
1.2 "COMPANY" means Quanex Corporation, a Delaware corporation.
1.3 "DISABILITY" means a mental or physical disability of the Optionee which, in the opinion of a physician selected by the President of the Company, (i) shall prevent the Optionee from adequately performing his services as a director of the Company and (ii) can be expected to result in death or has lasted or can be expected to last for a continuous period of not less than 12 months.
1.4 "FAIR MARKET VALUE" of the Stock as of any date means the closing sale price of the Stock on that date (or, if there was no sale on such date, the next preceding date on which there was such a sale) on the principal securities exchange on which the Stock is listed.
1.5 "NON-EMPLOYEE DIRECTOR" means a director of the Company who, while a director, is not an employee of the Company, or a corporation, of which a majority of voting securities is owned, directly or indirectly, by the Company.
1.6 "OPTION" means an option granted under this Plan to purchase shares of Stock.
1.7 "OPTION AGREEMENT" means the written agreement which sets out the terms of an Option.
1.8 "OPTIONEE" means a person who is granted an Option under this

Plan.
1.9 "PLAN" means the Quanex Corporation 1997 Non-Employee Director Stock Option Plan, as set out in this document and as it may be amended from time to time.
1.10 "RETIRE" or "RETIREMENT" means the cessation of an Optionee's services as a director on the Board of Directors after completing either two full terms or six years of service as a director on the Board of Directors.
1.11 "STOCK" means the common stock of the Company, $\$ .50$ par value. In addition, for purposes of the Plan and the Options, the term Stock shall be deemed to include any rights to purchase the Series A Junior Participating Preferred Stock of the Company that may then be trading with the Stock as provided in the Rights Agreement between the Company and Chemical Bank.

## GENERAL PROVISIONS RELATING TO OPTIONS

2.1

DEDICATED SHARES. The total number of shares of Stock with respect to which Options may be granted under the Plan shall be 400,000 shares. The shares may be treasury shares or authorized but unissued shares. The number of shares stated in this Section 2.1 shall be subject to adjustment in accordance with the provisions of Section 2.4.

If any outstanding Option expires or terminates for any reason or any Option is surrendered, the shares of Stock allocable to the unexercised portion of that Option may again be subject to an Option under the Plan.
2.2 NON-TRANSFERABILITY. Except as expressly provided otherwise in an Optionee's Option Agreement, Options shall not be transferable by the Optionee otherwise than by will or under the laws of descent and distribution, and shall be exercisable, during the Optionee's lifetime, only by him.
2.3 REQUIREMENTS OF LAW. The Company shall not be required to sell or issue any Stock under any Option if issuing that Stock would constitute or result in a violation by the Optionee or the Company of any provision of any law, statute, or regulation of any governmental authority. Specifically, in connection with any applicable statute or regulation relating to the registration of securities, upon exercise of any Option, the Company shall not be required to issue any Stock unless the Board of Directors has received evidence satisfactory to it to the effect that the holder of that Option will not transfer the Stock except in accordance with applicable law, including receipt of an opinion of counsel satisfactory to the Company to the effect that any proposed transfer complies with applicable law. The determination by the Board of Directors on this matter shall be final, binding and conclusive. The Company may, but shall in no event be obligated to, register any Stock covered by this Plan pursuant to applicable securities laws of any country or any political subdivision. In the event the Stock issuable on exercise of an Option is not registered, the Company may imprint on the certificate evidencing the Stock any legend that counsel for the Company considers necessary or advisable to comply with applicable law. The Company shall not be obligated to take any other affirmative action in order to cause the exercise of an Option and the issuance of shares thereunder, to comply with any law or regulation of any governmental authority.
2.4 CHANGES IN THE COMPANY'S CAPITAL STRUCTURE. If the Company shall effect a subdivision or consolidation of shares or other capital adjustment of, or the payment of a dividend in capital stock or other equity securities of the Company on, its Common Stock, or other increase or reduction of the number of shares of the Common Stock outstanding without receiving consideration therefor in money, services, or property, or the reclassification of its Stock, in whole or in part, into other equity securities of the Company, then (a) the number, class and per share price of shares of Stock subject to outstanding Options hereunder shall be appropriately adjusted by the Board of Directors (or in the case of the issuance of other equity securities as a dividend on, or
in a reclassification of, the Stock, the Options shall extend to such other securities) in such a manner as to entitle an Optionee to receive, upon exercise of an Option, for the same aggregate cash compensation, the same total number and class or classes of shares (or in the case of a dividend of, or reclassification into, other equity securities, such other securities) he would have held after such adjustment if he had exercised his Option in full immediately prior to the event requiring the adjustment, or, if applicable, the record date for determining stockholders to be affected by such adjustment; and (b) the number and class of shares then reserved for issuance under the Plan (or in the case of a dividend of, or reclassification into, other equity securities, such other securities) shall be adjusted by substituting for the total number and class of shares of Stock then received, the number and class or classes of shares of Stock (or in the case of a dividend on, or reclassification into, other equity securities, such other securities) that would have been received by the owner of an equal number of outstanding shares of Stock as the result of the event requiring the adjustment. Comparable rights shall accrue to each Optionee in the event of successive subdivisions, consolidations, capital adjustment, dividends or reclassifications of the character described above.

If the Company shall distribute to all holders of its shares of Stock (including any such distribution made to non-dissenting stockholders in connection with a consolidation or merger in which the Company is the surviving corporation and in which holders of shares of Stock continue to hold shares of Stock after such merger or consolidation) evidences of indebtedness or cash or other assets (other than cash dividends payable out of consolidated retained earnings not in excess of, in any one year period, the greater of (a) \$1.00 per share of Stock or (b) two times the aggregate amount of dividends per share paid during the preceding calendar year and dividends or distributions payable in shares of Stock or other equity securities of the Company described in the immediately preceding paragraph), then in each case the Optionee's exercise price specified in his Option Agreement ("Exercise Price") shall be adjusted by reducing the Option Price in effect immediately prior to the record date for the determination of stockholders entitled to receive such distribution by an amount equal to the Fair Market Value, as determined in good faith by the Board of Directors (whose determination shall be described in a statement filed in the Company's corporate records and be available for inspection by any holder of an Option) of the portion of the evidence of indebtedness or cash or other assets so to be distributed applicable to one share of Stock; provided that in no event shall the Option Price be less than the par value of a share of Stock. Such adjustment shall be made whenever any such distribution is made, and shall become effective on the date of the distribution retroactive to the record date for the determination of the stockholders entitled to receive such distribution. Comparable adjustments shall be made in the event of successive transactions of the character described above.

If the Company shall make a tender offer for, or grant to all of its holders of its shares of Stock the right to require the Company or any subsidiary of the Company to acquire from such stockholders shares of Stock, at a price in excess of the Current Market Price (a "Put Right") or the Company shall grant to all of its holders for its shares of Stock the right to acquire shares of Stock for less than the Current Market Price (a "Purchase Right"), then, in the case of a Put Right, the Option Price shall be adjusted by multiplying the Option Price in effect immediately prior to the record date
for the determination of stockholders entitled to receive such Put Right by a fraction, the numerator of which shall be the number of shares of Stock then outstanding minus the number of shares of Stock which could be purchased at the Current Market Price for the aggregate amount which would be paid if all Put Rights are exercised and the denominator of which is the number of shares of Stock which would be outstanding if all Put Rights are exercised; and, in the case of a Purchase Right, the Option Price shall be adjusted by multiplying the Option Price in effect immediately prior to the record date for the determination of the stockholders entitled to receive such Purchase Right by a fraction, the numerator of which shall be the number of shares of Stock then outstanding plus the number of shares of Stock which could be purchased at the Current Market Price for the aggregate amount which would be paid if all Purchase Rights are exercised and the denominator of which is the number of shares of Stock which would be outstanding if all Purchase Rights are exercised. In addition, the number of shares subject to the Option shall be increased by multiplying the number of shares then subject to the Option by a fraction which is the inverse of the fraction used to adjust the Option Price. Notwithstanding the foregoing, if any such Put Rights or Purchase Rights shall terminate without being exercised, the Option Price and number of shares subject to the Option shall be appropriately readjusted to reflect the Option Price and number of shares subject to the Option which would have been in effect if such unexercised Rights had never existed. Comparable adjustments shall be made in the event of successive transactions of the character described above.

After the merger of one or more corporations into the Company, after any consolidation of the Company and one or more corporations, or after any other corporate transaction described in Section 424(a) of the Code in which the Company shall be the surviving corporation, each Optionee, at no additional cost, shall be entitled to receive, upon any exercise of his Option, in lieu of the number of shares as to which the Option shall then be so exercised, the number and class of shares of stock or other equity securities to which the Optionee would have been entitled pursuant to the terms of the agreement of merger or consolidation if at the time of such merger or consolidation such Optionee had been a holder of a number of shares of Stock equal to the number of shares as to which the Option shall then be so exercised and, if as a result of such merger, consolidation or other transaction, the holders of Stock are not entitled to receive any shares of Stock pursuant to the terms thereof, each Optionee, at no additional cost shall be entitled to receive, upon exercise of his Option, such other assets and property, including cash to which he would have been entitled if at the time of such merger, consolidation or other transaction he had been the holder of the number of shares of Stock equal to the number of shares as to which the Option shall then be so exercised. Comparable rights shall accrue to each Optionee in the event of successive mergers or consolidations of the character described above.

After a merger of the Company into one or more corporations, after a consolidation of the Company and one or more corporations, or after any other corporate transaction described in Section 424(a) of the Code in which the Company is not the surviving corporation, each Optionee shall, at no additional cost, be entitled at the option of the surviving corporation (i) to have his then existing Option assumed or have a new option substituted for the existing Option by the surviving corporation to the transaction which is then employing him, or a parent or subsidiary of such
corporation, on a basis where the excess of the aggregate fair market value of the shares subject to the Option immediately after the substitution or assumption over the aggregate Option Price of such option is equal to the excess of the aggregate fair market value of all shares subject to the option immediately before such substitution or assumption over the aggregate Option Price of such shares, provided that the shares subject to the new option must be traded on the New York or American Stock Exchange or quoted on the National Association of Securities Dealers Automated Quotation System, or (ii) to receive, upon any exercise of his Option, in lieu of the number of shares as to which the Option shall then be so exercised, the securities, property and other assets, including cash, to which the Optionee would have been entitled pursuant to the terms of the agreement of merger or consolidation or the agreement giving rise to the other corporate transaction if at the time of such merger, consolidation or other transaction such Optionee had been the holder of the number of shares of Stock equal to the number of shares as to which the Option shall then be so exercised.

If a corporate transaction described in Section 424(a) of the Code which involves the Company is to take place and there is to be no surviving corporation while an Option remains in whole or in part unexercised, it shall be canceled by the Board of Directors as of the effective date of any such corporate transaction but before that date each Optionee shall be provided with a notice of such cancellation and shall have the right to exercise such Option in full (without regard to any vesting limitations set forth in, or imposed pursuant to, preceding provisions of this Plan or the Option Agreement) to the extent it is then still unexercised during a 30-day period preceding the effective date of such corporate transaction.

For purposes of this Section, Current Market Price per share of Stock shall mean the last reported price for the Stock in the New York Stock Exchange - -- Composite Transaction listing on the trading day immediately preceding the first trading day on which, as a result of the establishment of a record date or otherwise, the trading price reflects that an acquirer of Stock in the public market will not participate in or receive the payment of any applicable dividend or distribution; provided, however, that if there is no closing price for the stock as so reported on that date or if, in the discretion of the Committee, another means of determining the fair value of the shares of stock at such date shall be necessary or advisable, the Committee may provide for another means for determining the Current Market Price of the Stock.

Except as hereinbefore expressly provided, the issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, for cash or property, or for labor or services either upon direct sale or upon the exercise of rights or warrants to subscribe therefor, or upon conversion of shares or obligations of the Company convertible into such shares or other securities, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Stock then subject to outstanding Options.
2.5 OPTIONS CONDITIONED UPON STOCKHOLDER APPROVAL OF THE PLAN. Option granted under the Plan will be exercisable before the stockholders of the Company approve the Plan.

## OPTIONS

3.1 AUTOMATIC ANNUAL GRANTS. Except for any October 31 on which he receives an Option under the Quanex Corporation 1989 Non-Employee Director Stock Option Plan, subject to the approval of the Plan by the stockholders of the Company and the availability under the Plan of a sufficient number of shares of Stock that may be issued upon the exercise of outstanding Options, each Non-Employee Director who is a director of the Company on any October 31 while this Plan is in effect shall be granted on each such October 31 an Option to purchase such number of shares of Stock as is determined by the Board of Directors.

### 3.2 AMOUNT EXERCISABLE--AUTOMATIC ANNUAL GRANTS.

Subject to Section 2.5, each Option granted pursuant to Section 3.1 is exercisable in full immediately upon the date of grant.
3.3 GRANTS FOR NEW DIRECTORS. Subject to the approval of the Plan by the stockholders of the Company and the availability under the Plan of a sufficient number of shares of Stock that may be issued upon the exercise of outstanding options, there shall be granted under the Plan to each Non-Employee Director who was not granted an Option under the Quanex Corporation 1987 Non-Employee Director Stock Option Plan as of the date upon which such Non-Employee Director shall have continuously served as a director of the Company for a period of one year an Option to purchase such number of shares of Stock as is determined by the Board of Directors. Upon the receipt of an Option under the Plan pursuant to this Section 3.3, the Optionee shall not be eligible to receive another Option for new Non-Employee Directors pursuant to this Section 3.3. Nothing in this Section 3.3 shall affect the eligibility of an Optionee to receive an Option pursuant to Section 3.1.
3.4 AMOUNT EXERCISABLE--GRANTS FOR NEW DIRECTORS. Each Option Agreement for an Option granted pursuant to Section 3.3 shall contain the following terms of exercise:
(a) No Option granted under Section 3.3 of the Plan may be exercised until the Optionee has served as a director of the Company for one year following the date of grant;
(b) beginning on the day after the first anniversary of the date of grant, the Option may be exercised up to $1 / 3$ of the shares subject to the Option;
(c) after the expiration of each succeeding anniversary date of the date of grant, the Option may be exercised up to an additional $1 / 3$ of the shares subject to the Option, so that after the expiration of the third anniversary of the date of grant, the Option shall be exercisable in full; and
(d) to the extent not exercised, installments shall be cumulative and may be exercised in whole or in part until the Option expires on the tenth anniversary of the date of the grant.
3.5 OPTION PRICE. The price at which Stock may be purchased under an Option shall be equal to $100 \%$ of the Fair Market Value of the shares of Stock on the date the Option is granted.

### 3.6 DURATION OF OPTIONS

Each Option awarded, to the extent it shall not previously have been exercised, shall terminate on the earlier of the following dates:
(i) on the last day within the three month period commencing on the date on which the Optionee ceases to be a director of the Company, for any reason other than death, Retirement or Disability; or
(ii) ten years after the date of grant of such

Option.
If the Optionee ceases to be a director of the Company for any reason other than his death, Disability or Retirement, his Option shall not continue to vest after such cessation of service as a director. If the Optionee ceases to be a director of the Company due to his death, Disability or Retirement, his Option shall continue to vest after such cessation of service as a director until the Option expires ten years after the grant of the Option.
3.7 DEATH OF AN OPTIONEE. Upon the death of an Optionee prior to the expiration of his Option, his executors, administrators or any person or persons to whom his Option may be transferred by will or by the laws of descent and distribution, shall have the right, at any time prior to the expiration date of the Option to exercise the Option with respect to the number of shares that the Optionee would have been entitled to exercise if he were still alive.
3.8 EXERCISE OF OPTIONS. An Optionee may exercise his Option by delivering to the Company a written notice stating (i) that he wishes to exercise such Option on the date such notice is so delivered, (ii) the number of shares of Stock with respect to which such Option is to be exercised and (iii) the address to which the certificate representing such shares of Stock should be mailed. In order to be effective, such written notice shall be accompanied by payment of the option price of such shares of Stock. Each such payment shall be made by cashier's check drawn on a national banking association and payable to the order of the Company in United States dollars.

If, at the time of receipt by the Company of such written notice, (i) the Company has unrestricted surplus in an amount not less than the option price of such shares of Stock, (ii) all accrued cumulative preferential dividends and other current preferential dividends on all outstanding shares of preferred Stock of the Company have been fully paid, (iii) the acquisition by the Company of its own shares of Stock for the purpose of
enabling such Optionee to exercise such Option is otherwise permitted by applicable law and without any vote or consent of any stockholder of the Company, and (iv) there shall have been adopted, and there shall be in full force and effect, a resolution of the Board of Directors of the Company authorizing the acquisition by the Company of its own shares of Stock for such purpose, then such Optionee may deliver to the Company, in payment of the option price of the shares of Stock with respect to which such Option is exercised, (x) certificates registered in the name of such Optionee that represent a number of shares of Stock legally and beneficially owned by such Optionee (free of all liens, claims and encumbrances of every kind) and having a Fair Market Value on the date of receipt by the Company of such written notice that is not greater than the option price of the shares of Stock with respect to which such Option is to be exercised, such certificates to be accompanied by Stock powers duly endorsed in blank by the record holder of the shares of Stock represented by such certificates, with the signature of such record holder guaranteed by a national banking association, and (y) if the option price of the shares of Stock with respect to which such Option is to be exercised exceeds such Fair Market Value, a cashier's check drawn on a national banking association and payable to the order of the Company in an amount, in United States dollars, equal to the amount of such excess. Notwithstanding the provisions of the immediately preceding sentence, the Treasurer of the Company, in his sole discretion, may refuse to accept shares of Stock in payment of the ption price of the shares of Stock with respect to which such Option is to be exercised and, in that event, any certificates representing shares of Stock that were received by the Company with such written notice shall be returned to such Optionee, together with notice by the Company to such Optionee of the refusal of the Treasurer of the Company to accept such shares of Stock. If, at the expiration of seven business days after the delivery to such Optionee of such written notice from the Company, such Optionee shall not have delivered to the Company a cashier's check drawn on a national banking association and payable to the order of the Company in an amount, in United States dollars, equal to the option price of the shares of Stock with respect to which such Option is to be exercised, such written notice from the Optionee to the Company shall be ineffective to exercise such Option.

As promptly as practicable after the receipt by the Company of (i) such written notice from the Optionee and (ii) payment, in the form required by the foregoing provisions of this Section 3.8, of the option price of the shares of Stock with respect to which such Option is to be exercised, a certificate representing the number of shares of Stock with respect to which such Option has been so exercised, such certificate to be registered in the name of such Optionee, provided that such delivery shall be considered to have been made when such certificate shall have been mailed, postage prepaid, to such Optionee at the address specified for such purpose in such written notice from the Optionee to the Company.
3.9 FORM OF OPTIONS. All Options granted under this Plan will be nonqualified stock options that are not intended to qualify as incentive stock options under section 422 of the Internal Revenue Code of 1986, as amended.
3.10 WRITTEN AGREEMENT. Each Option shall be embodied in a written Option Agreement which shall be subject to the terms and conditions of this Plan and shall be signed by the Optionee and by an officer of the Company.
3.11 NO RIGHTS AS STOCKHOLDER. No Optionee shall have any rights as a stockholder with respect to Stock covered by his Option until the date a stock certificate is issued for the Stock.

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## AMENDMENT OR TERMINATION OF PLAN

The Board of Directors of the Company may amend or terminate this Plan at any time, in its sole and absolute discretion; provided, however, that no amendment shall decrease the exercise price for Options below the Fair Market Value of the Stock at the time it is granted.

## MISCELLANEOUS

5.1 NO RETENTION OBLIGATION. The granting of any Option shall not impose upon the Company any obligation to continue to retain the Optionee's services as a director of the Company.
5.2 TAXES. The Company shall not be obligated to advise an Optionee of the existence of any tax that may apply with respect to the grant or exercise of an Option.
5.3 GENDER. If the context requires, words of one gender when used in this Plan shall include the others and words used in the singular or plural shall include the other.
5.4 HEADINGS. Headings of Articles and Sections are included for convenience of reference only and do not constitute part of this Plan and shall not be used in construing the terms of this Plan.
5.5 OTHER COMPENSATION. The adoption of this Plan shall not affect any other compensation in effect for the Non-Employee Directors, nor shall this Plan preclude the Company from establishing any other forms of compensation for Non-Employee Directors.
5.6 OTHER OPTIONS. The grant of an Option shall not confer upon an Optionee the right to receive any future or other Options under this Plan.
5.7 ARBITRATION OF DISPUTES. Any controversy arising out of or relating to the Plan or an Option Agreement shall be resolved by arbitration conducted pursuant to the arbitration rules of the American Arbitration Association. The arbitration shall be final and binding on the parties.
5.8 GOVERNING LAW. The provisions of this Plan shall be construed, administered, and governed under the laws of the State of Texas.

## QUANEX CORPORATION

## COMPUTATION OF EARNINGS PER COMMON SHARE

YEARS ENDED OCTOBER 31

| 1997 | 1996 | 1995 |
| :---: | :---: | :---: |
| (IN THOUSANDS, EXCEPT PER SHARE AMOUNTS) |  |  |
|  |  |  |


| Income from continuing operations | \$27,718 | \$22,978 | \$23,380 |
| :---: | :---: | :---: | :---: |
| Income from discontinued operations, net of income taxes. | 5,176 | 9,912 | 10,480 |
| Gain on sale of discontinued operations, net of income taxes. | 36,290 | - - | - - |
| Income before extraordinary charge | 69,184 | 32,890 | 33,860 |
| Extraordinary charge -- early extinguishment of debt | -- | $(2,522)$ | $(2,021)$ |
| Net income | \$69,184 | \$30,368 | \$31,839 |
| Preferred dividend requirements | -- |  | $(3,957)$ |
| Net income attributable to common stockholders | \$69,184 | \$30,368 | \$27,882 |
| Weighted average shares outstanding-primary | 14,029 | 13,658 | 13,580 |
| Earnings per common share: Primary: |  |  |  |
|  |  |  |  |
| Income from continuing operations | \$ 1.98 | \$ 1.68 | \$ 1.43 |
| Income from discontinued operations | 0.37 | 0.73 | 0.77 |
| Gain on sale of discontinued operations | 2.58 | -- |  |
| Extraordinary charge | -- | (0.19) | (0.15) |
| Earnings per common share | \$ 4.93 | \$ 2.22 | \$ 2.05 |
| Income from continuing operations | \$27,718 | \$22,978 | \$23,380 |
| Income from discontinued operations, net of income taxes | 5,176 | 9,912 | 10,480 |
| Gain on sale of discontinued operations, net of income |  |  |  |
| Income before extraordinary charge | 69,184 | 32,890 | 33,860 |
| Extraordinary charge -- early extinguishment of debt | -- | $(2,522)$ | $(2,021)$ |
| Net income | \$69,184 | \$30,368 | \$31, 839 |
| Interest on $6.88 \%$ convertible subordinated debentures and amortization of related issuance costs, net of applicable income taxes. | 3,997 | 3,567 | 1,188 |
| Adjusted net income | \$73,181 | \$33,935 | \$33, 027 |
| Weighted average shares outstanding-primary | 14,029 | 13,658 | 13,580 |
| Effect of common stock equivalents arising from stock options. | - - | 231 |  |
| Preferred stock assumed converted to common stock. | -- | -- | 1,825 |
| Subordinated debentures assumed converted to common stock | 2,696 | 2,696 | 899 |
| Weighted average shares outstanding-fully diluted | 16,725 | 16,585 | 16,304 |
| Earnings per common share: |  |  |  |
| Assuming full dilution: |  |  |  |
| Income from continuing operations. | \$ 1.90 | \$ 1.60 | \$ 1.51 |
| Income from discontinued operations | 0.31 | 0.60 | 0.64 |
| Gain on sale of discontinued operations | 2.17 | -- |  |
| Extraordinary charge. | -- | (0.15) | (0.12) |
| Earnings per common share. | \$ 4.38 | \$ 2.05 | \$ 2.03 |

## SUBSIDIARIES OF QUANEX CORPORATION

Michigan Seamless Tube Company.................................. Delaware
Piper Impact, Inc............................................................. Delaware
Quanex Metals, Inc
Delaware
Nichols-Homeshield, Inc........................................... Delaware
Quanex Bar, Inc............................................................... Delaware
Quanex Steel, Inc
Delaware
Quanex Health Management Company, Inc.......................... Delaware
Quanex Manufacturing, Inc................................................ . De. Daware
Quanex Solutions, Inc................................................ Delaware
Quanex Enterprises, Inc......................................... Delaware
Quanex Technologies, Inc................................................. . . Delaware
Quanex Foreign Sales Corporation................................... U.S. Virgi


## INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statements No. 33-23474, No. 33-29585, No. 33-22550, No. 33-35128, No. 33-38702, No. 33-46824, No. 33-57235, No. 33-54081, No. 33-54085, No. 33-54087, No. 333-18267, No.
333-22977 and No. 333-36635 of Quanex Corporation of our report dated December 11, 1997 appearing in this Annual Report on Form 10-K of Quanex Corporation for the year ended October 31, 1997.
/s/ Deloitte \& Touche LLP
DELOITTE \& TOUCHE LLP
Houston, Texas
January 12, 1998

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE BALANCE SHEET AS OF OCTOBER 31, 1997 AND THE INCOME STATEMENT FOR THE YEAR ENDED OCTOBER 31, 1997 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

1,000


[^0]:    See notes to consolidated financial statements

[^1]:    See notes to consolidated financial statements

