

# MEASUREX

MEASUREX CORPORATION ANNUAL REPORT 1982

## CORPORATE PROFILE

Measurex is a leading producer of sensor-based computer process control systems for use in continuous process industries.

Measurex—acronym for “MEASUREMENT EXcellence”—has built a worldwide reputation by providing economic results for its customers. The Company’s systems use proprietary sensors to measure and improve the management of product qualities.

Principal users of Measurex systems include the paper, pulp, building products, metals, plastics, rubber industries and electrical utilities as well as other energy-intensive industries. By optimizing manufacturing operations, Measurex’ customers produce more product from a given quantity of raw material, increase output, and gain greater uniformity of finished product. As a result, customers consume less energy and fewer raw materials, while improving productivity and product quality.

The computer, which receives data from Measurex sensors, is programmed as an integrated control, display, and information system. It makes possible precise control

of the production process and provides color graphic displays and printouts for use by process operators and plant management.

Measurex has pioneered the development of energy management systems to optimize energy usage in industrial plants and utilities. The basic strategy of the Measurex energy systems is to reduce the amount of fuel required to meet process steam and electrical demands. This application of digital computer control to the energy management field has broadened Measurex’ market base.

Corporate headquarters are located in Cupertino, California, in the heart of Santa Clara County’s high technology “Silicon Valley.” Measurex has 2050 employees around the world. The Company also has a manufacturing facility in Waterford, Ireland, an engineering facility in Cork, Ireland, and operates an engineering and systems assembly and test facility at its wholly owned subsidiary in Tokyo, Japan.

Measurex® is a registered trademark of Measurex Corporation.



# FINANCIAL HIGHLIGHTS



|                             | 1982          | 1981          |
|-----------------------------|---------------|---------------|
| Revenues                    | \$118,145,000 | \$119,702,000 |
| Net income (loss)           | \$ (350,000)  | \$ 2,101,000  |
| Net income (loss) per share | \$ (.10)      | \$ .60        |
| Dividends per share         | \$ .38        | \$ .50        |
| <b>End of Year:</b>         |               |               |
| Working capital             | \$ 36,390,000 | \$ 49,373,000 |
| Total assets                | \$118,652,000 | \$129,256,000 |
| Total debt                  | \$ 12,096,000 | \$ 18,052,000 |
| Shareholders' equity        | \$ 75,318,000 | \$ 76,570,000 |
| Number of employees         | 2,050         | 2,193         |
| Revenues per employee       | \$ 55,000     | \$ 56,000     |
| Backlog                     | \$ 36,400,000 | \$ 44,300,000 |
| Shares outstanding          | 3,561,000     | 3,533,000     |



## PRESIDENT'S MESSAGE

Adverse economic conditions continued to affect our customers during 1982 which resulted in lower orders for our systems. Revenues, reflecting a decline in new system shipments, were down slightly at \$118,145,000 resulting in a loss of \$350,000 or \$.10 per share. This loss for the year is the first since Measurex became a public company in 1972.

Aggressive cost reduction programs were implemented which has enabled the Company to return to profitability at significantly lower levels of new system shipments as evidenced by fourth quarter results. Revenues for this period were \$27,565,000 resulting in net income of \$107,000 or \$.03 per share.

Orders for the fourth quarter were encouraging at \$23 million, bringing the total

for the year to \$68 million. Backlog at year end was \$36 million, of which \$26 million is scheduled for delivery during fiscal year 1983.

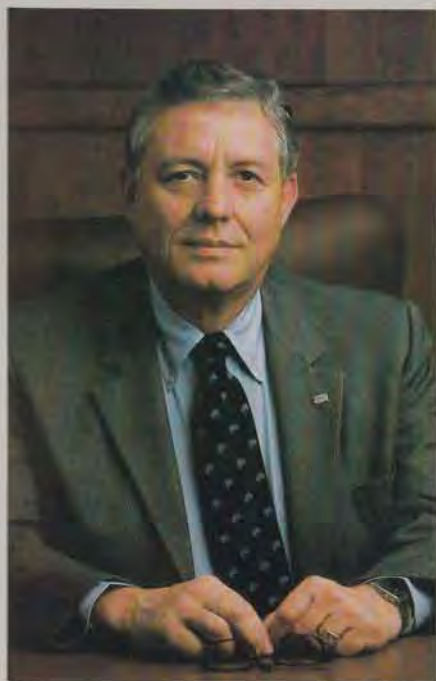
Our asset management program has continued to produce good results. Debt of the Corporation was 16 percent of shareholders' equity at year end 1982, representing a 68 percent reduction in the debt to equity ratio since 1979. The combined debt of Measurex and its nonconsolidated finance subsidiaries was decreased by \$10 million during the year, bringing the reduction since 1979 to \$38 million.

Continued investments in new product development culminated in our March 2, 1983 announcement of the VISION 2002™ Network. Measurex is entering the market for distributed digital instrumentation controls and factory-wide networks, in addition to our current Measurex 2002 supervisory computer systems. With this single network for mill-wide visibility and control, Measurex has taken a major step in the evolution of process control technology. All existing sensor-based Measurex 2000 series systems can be integrated into this new network.

Measurex' traditional business has been to supply dedicated computer control systems for unit processes. Our entry into the distributed digital instrumentation and plant-wide control market represents a substantial







increase in Measurex' worldwide business potential. Global sales of these products were approximately \$1 billion in 1982.

Process automation has become more sophisticated as computer applications have increased. Most of the efficiency improvements from process automation have been at the unit process level. The application of digital communication technology now makes it possible to increase productivity on a plant-wide basis. Unit process controls can be linked together in a communications network providing better coordination and scheduling among units, thus improving overall plant efficiency.

This movement to distributed digital instrumentation and the advances in communications technology places Measurex in an ideal position to capitalize on its extensive experience in digital optimizing controls and application software. The new VISION 2002 Network provides a cohesive family of system products from basic instrumentation through unit process and mill-wide controls. Advanced VISION 2002 software makes it easy for users to configure and build displays, controls and entire networks.

The broadening of Measurex' market base, made possible by our new product line, combined with our strong financial condition, positions the Company for substantial growth as the economy improves.

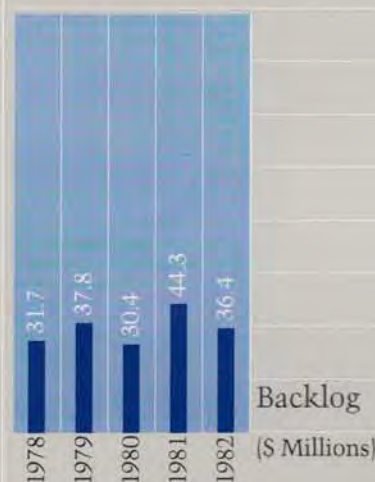
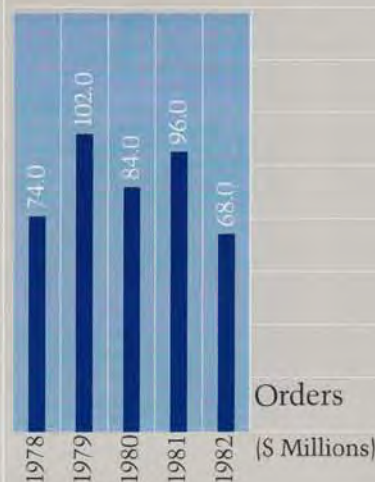
To our shareholders and customers, I express my appreciation for their continued support. I wish to thank Measurex' directors and employees for their dedication and efforts.

Sincerely,

*David A. Bossen*

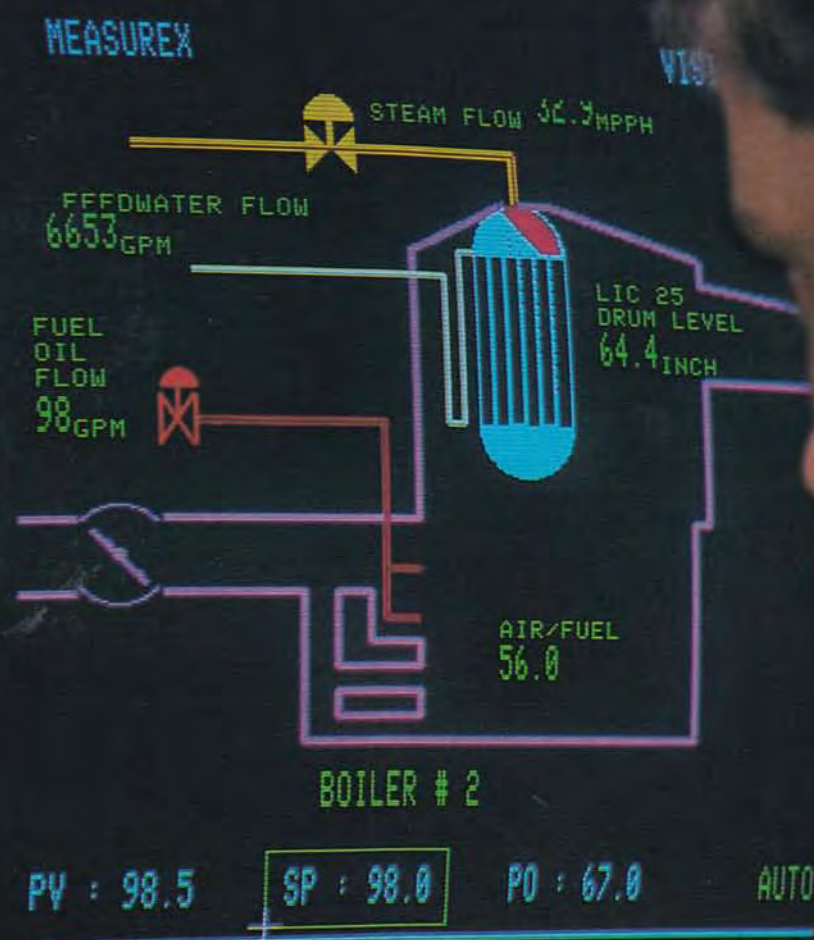
David A. Bossen

President  
Chief Executive Officer





# measurex



AIR/FUEL CONTROL  
SELECT OPTION

|               |  | STEAM<br>FLOW | DRAFT         | STATUS          |
|---------------|--|---------------|---------------|-----------------|
| FEED<br>WATER |  |               | DRUM<br>LEVEL | GRAPHIC         |
| FUEL<br>OIL   |  | AIR<br>FUEL   |               | POD#1<br>SELECT |

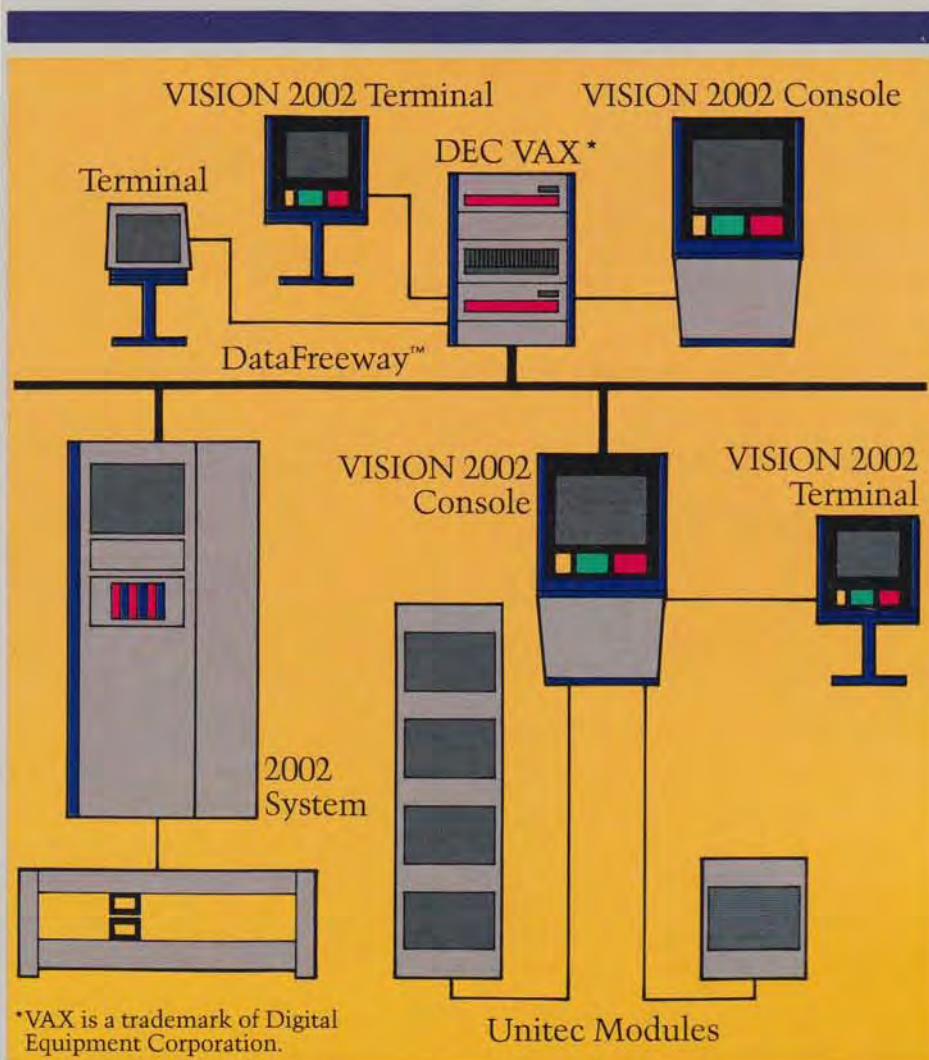
# VISION 2002 NETWORK

## Leadership

The introduction of a fully-integrated, single-vendor system reaffirms Measurex' leadership in process control technology. All components of the VISION 2002™ Network are fully compatible, so that our customers need rely on only one supplier for all hardware, software and system support.

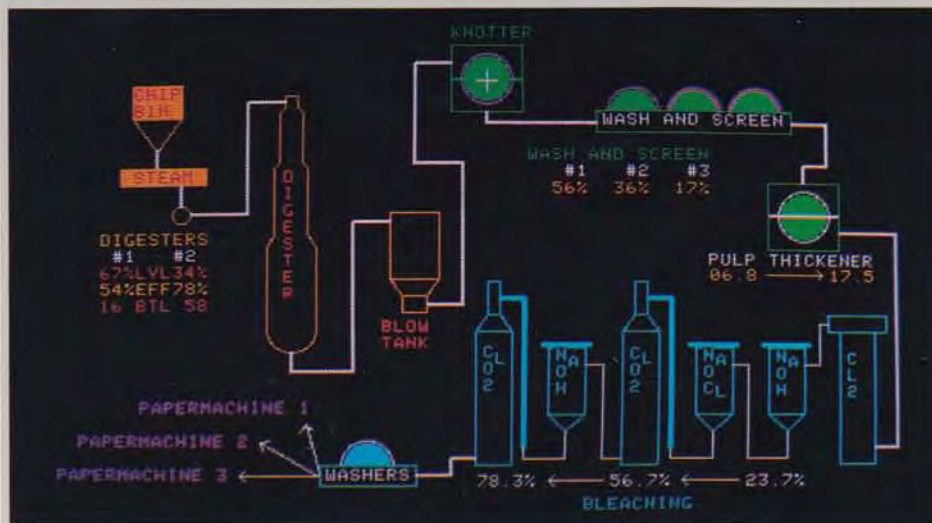
The software of the VISION 2002 Network is unique among process control systems. A key benefit is that it eliminates the need for programming knowledge in order to develop interactive control applications. A prime objective of the design is to eliminate high cost programming by substituting low cost silicon chips. The software products provided make it possible for the user to build highly complex systems with no knowledge of programming.

The DynaTouch™ keypad screen makes the system exceptionally easy to use. This touch-activated screen, located below the main video on the console, gives direct access to information at any level throughout the plant. A simple dialogue of questions and possible answers guides the selection of displays and the creation of custom displays, reports and controls.



Complete plant-wide visibility and control is now available in a single, integrated multi-computer network.





Computer-on-a-chip technology is applied to individual process control loops.

## VISION 2002 NETWORK

### Innovation

With three fully integrated levels—the VISION 2002 Local Network, 2002 Supervisory Systems and the VISION 2002 Management Network—the system provides complete visibility and control for all process industries.

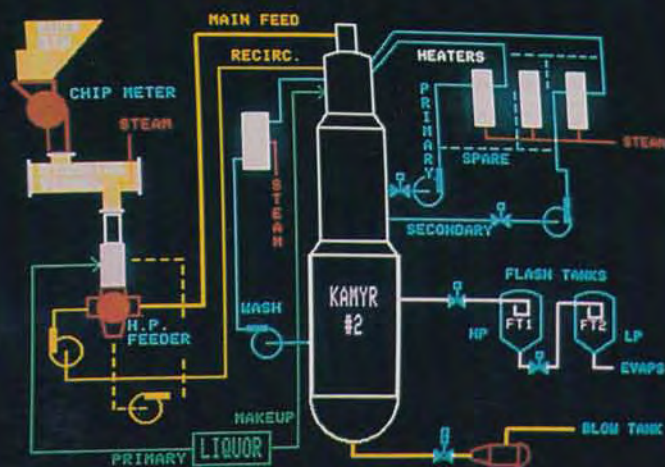
Measurex' VISION 2002 Network is the first system to provide instrumentation level, supervisory level and high level plant-wide control in a common system. It is built on over 15 years of experience in digital computer-based process control systems and is the result of more than five years of development. The VISION 2002 operator interface provides direct access to all information without reference to manuals, memorized codes or programming skills.

Key to the VISION 2002 Network concept is Measurex' recognition of the fact that it is essential not only to integrate all levels of Measurex control, but also to make the system compatible with other vendors' computers. This capability was made available in 1980 with the DataFreeway™ communication system.

The combination of the DataFreeway communication and the modular architecture of the VISION 2002 system enables customers to build a system beginning with any level of capability.



# measurex

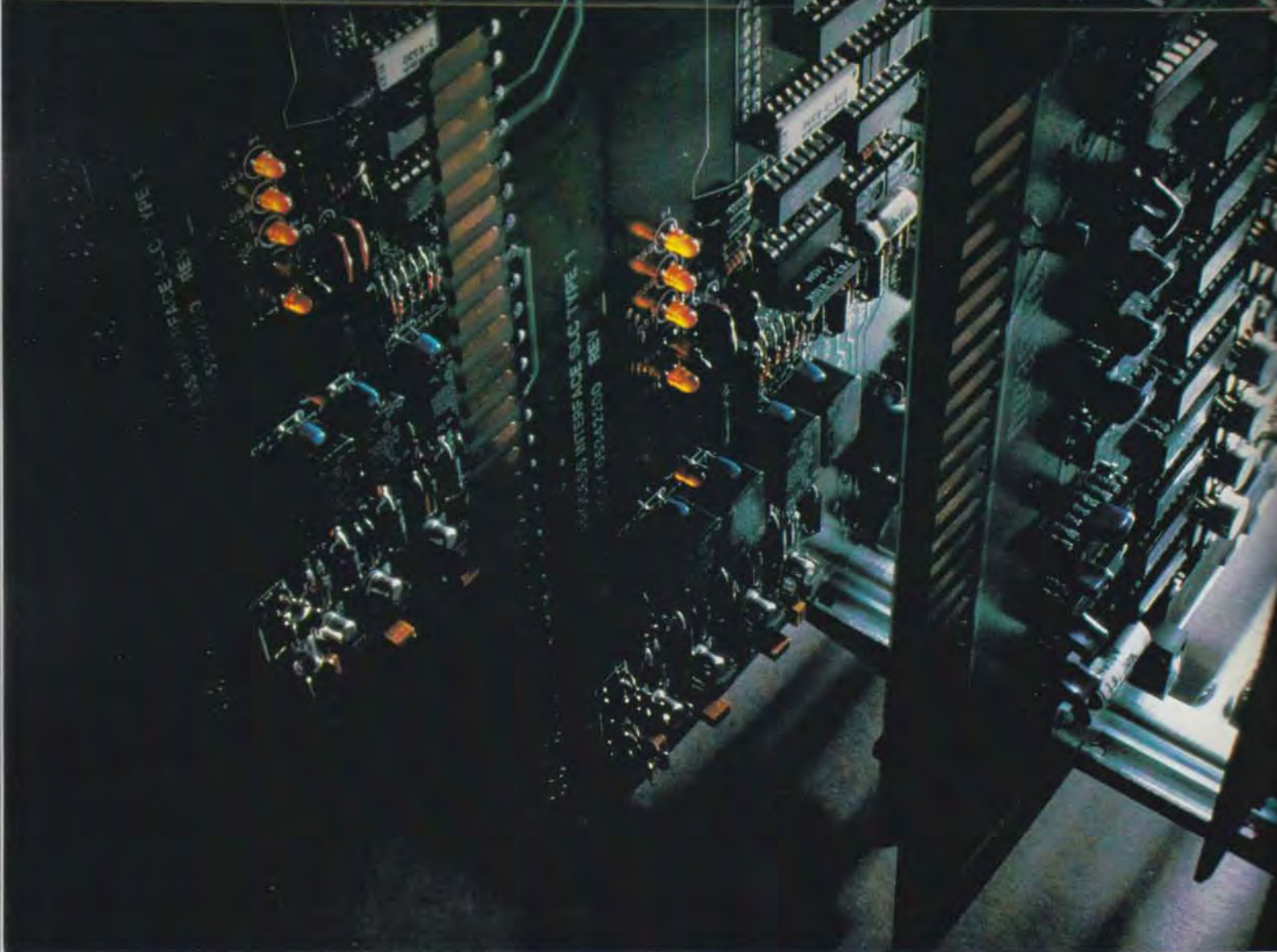
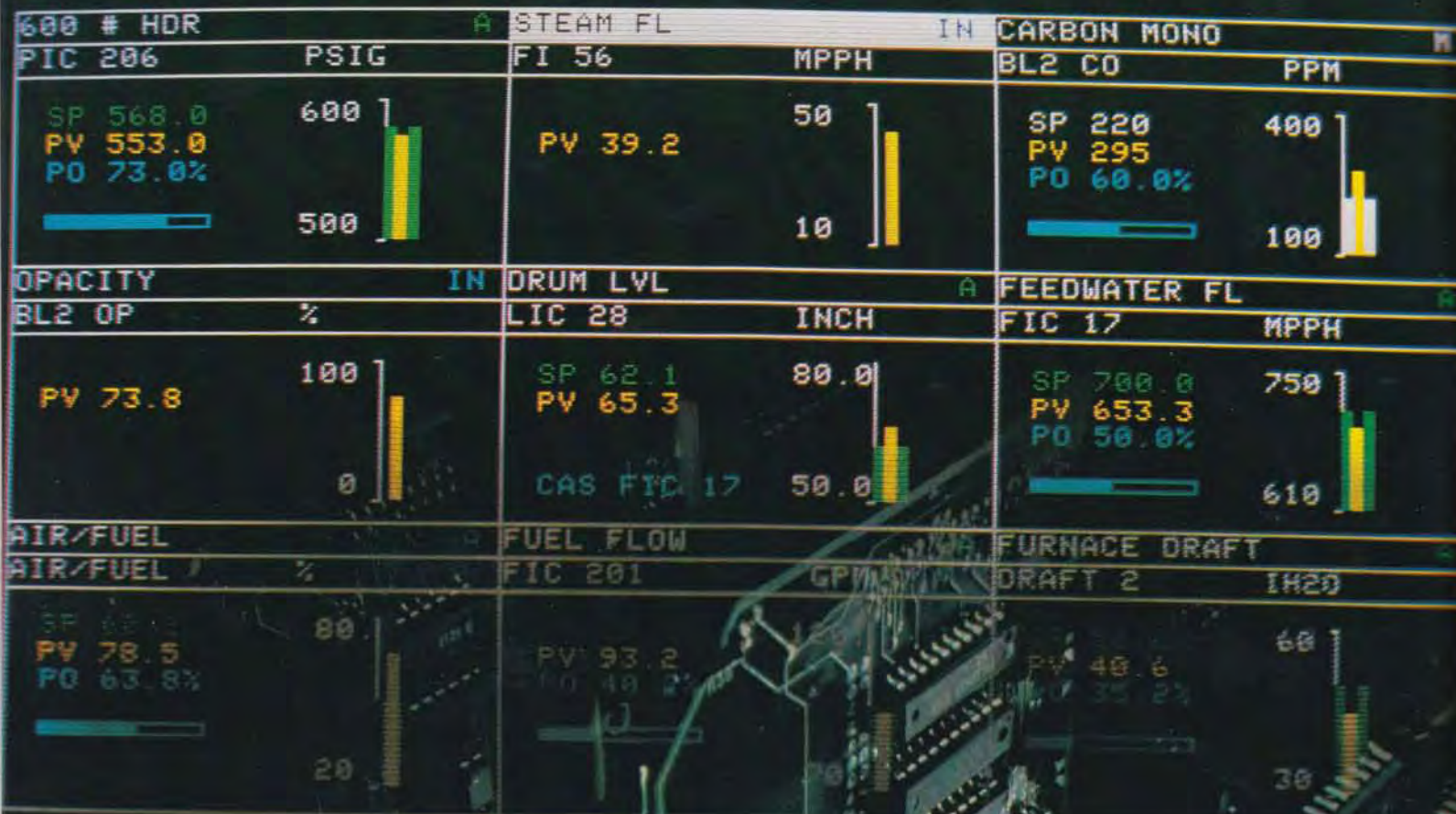


ENTER A COMMAND (e.g., CHECK, EDIT, HELP)

|        |               |        |        |      |
|--------|---------------|--------|--------|------|
| HELP   | CHECK         | EDIT   | DELETE |      |
| DELETE | NEW CHARACTER | DELETE | LIST   |      |
| LOAD   | COPY          |        |        | EXIT |









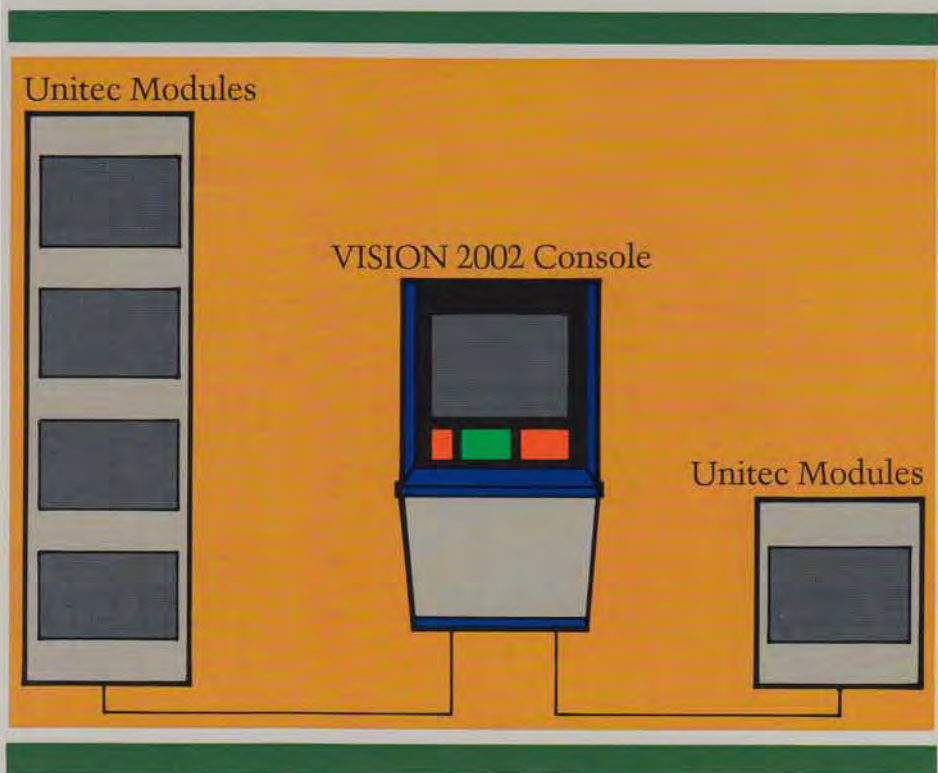
# VISION 2002 NETWORK

## Performance

The VISION 2002 Network has the capacity to read over 100,000 analog inputs, or control 12,000 loops. In a system of this magnitude, high performance through uninterrupted reliability is absolutely essential.

Minimizing the impact of any failure at any level is key to Measurex' approach to ensuring the reliability of the VISION 2002 Network. This is accomplished through distributed functions, backup components and redundant capabilities throughout. For example, at the instrumentation level—the VISION 2002 Local Network—the Unitec™ modules, which control each primary loop, can have automatic hot backups. In the event of a failure, these backups take over with no loss of control. By distributing intelligence to Unitec modules, the Local Network is isolated from higher level computer problems.

In addition, higher level computers can have automatic backups, and the communication systems can be provided with redundant links.



System reliability and flexibility are ensured by redundant capabilities and distributed intelligence.





Measurex continues to add innovative technological enhancements to paper machine control systems.

## PULP AND PAPER

Quality and economic efficiency have become the keys to success for the paper industry. During 1982 Measurex continued offering leadership to the pulp and paper industries with a broad range of sensors, machine and cross direction controls, as well as process analysis capabilities, which provide paper-makers this competitive edge.

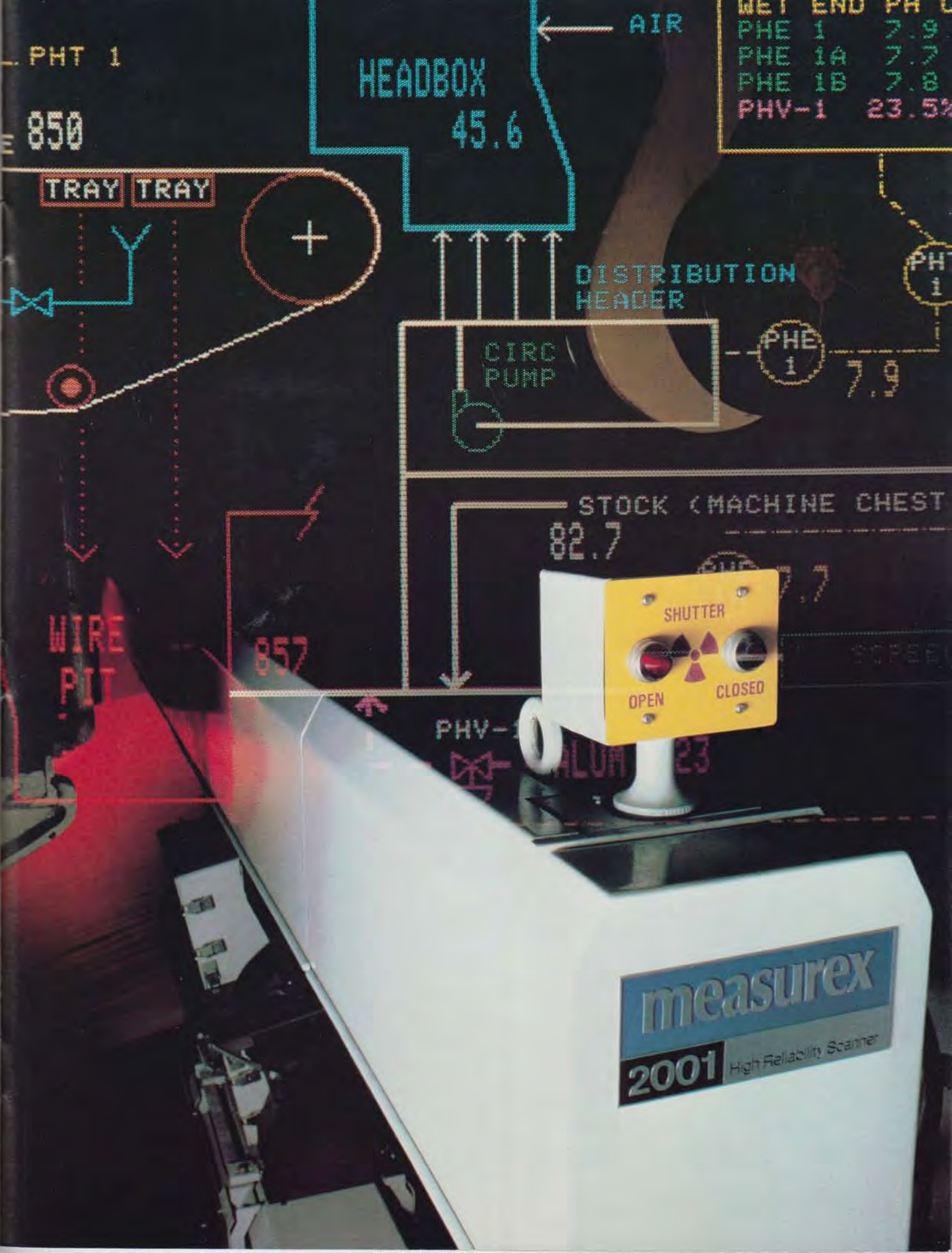
The new full spectrum color and brightness sensor and the smoothness sensor gained wide acceptance by the paper industry in 1982. Color and brightness are essential specifications for most fine paper grades, and smoothness is one of the prime factors determining printability and reducing rejects.

Measurex introduced the Digitector III™ basis weight sensor, featuring ash insensitivity, universal calibration, low noise and dynamic Z correction. These features provide faster and more accurate measurements for better profile control results. On-line process troubleshooting programs, such as the PROBE™ package, provide spectral density analysis for analyzing and resolving short-term process variations.

In the controls area, one of the major developments was the field success of the STAR™ automatic control tuning package. This advanced technique increases control results 15 to 30 percent.

These introductions and improvements in Measurex' product lines continue the Company's commitment to engineering leadership for the pulp and paper industries.





PHT 1

850

TRAY TRAY

HEADBOX

45.6

AIR

WET END PH 1  
PHE 1 7.9  
PHE 1A 7.7  
PHE 1B 7.8  
PHV-1 23.5%

DISTRIBUTION  
HEADER

CIRC  
PUMP

PHE  
1

7.9

STOCK (MACHINE CHEST

82.7

WIRE  
PIT

857

SHUTTER

OPEN

CLOSED

PHV-1

ALUM 23

measurex

2001

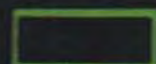
High Reliability Scanner



L P ANTIOCH PM 3 GRADE

42 12/22/82 12:41

# CD MOISTURE



COMPUTER CD CNTL

U/DIV 2 00

CD MOI SPREAD 1.59



COMPUTER SHOWER CNTL

100% ON



OFF

5

10

15

20

25

30

35

SHWR

2

% ON

OFF

100%

0%

50%

100%

150%

200%

250%

300%

350%

400%

450%

500%

550%

600%



# TOTAL PROFILE CONTROL

The paper industry's need for improved product quality and production efficiency has led to the dramatic success and acceptance of Measurex' Total Profile Control concept.

Total Profile Control provides the technology to reduce cross direction weight, moisture, caliper and reel hardness variations to the lowest possible levels. The critical importance of the product profile on converting and machine performance has allowed Measurex' Total Profile Control to more than double the economic savings associated with the control of machine direction variations.

The Thermatrol™ weight profile control package utilizes Equilex thermally expandable slice rods developed by Chleq Froté and provides 50 to 80 percent reduction in weight profile variations. Benefits include up to 3 percent raw material and energy savings as well as significant converting efficiency performance.

The Aquatrol™ and Steamtrol™ systems for precise moisture control showed continued success in 1982. Over 130 installations of Caliper Profile Control have continued to reduce reel and winder rejects by 50 percent or more.

Measurex' Total Profile Control leadership is exemplified by seven years experience and 240 successful applications.



Controlling key paper cross direction variables multiplies individual control benefits and enhances total results.





Total line control offers unmatched measurement accuracy and control precision.

## PLASTICS AND RUBBER

The plastics and rubber industries continue to remain on the leading edge of rapidly changing technologies, and therefore require the greatest process visibility and control capability for improved product quality.

The Measurix System 2002 provides the industries with a full array of capabilities from measurement only to total line control. Total line control brings all the key elements of a process into one functional operating system for the precise controls required for increased product quality and profitability.

Measurix System 2002 continues to provide to the plastics and rubber industries typical paybacks of less than 12 to 18 months. Users of the System 2002 increase production throughputs up to 20 percent, obtain raw material savings of 5 to 10 percent by spread reductions of 50 to 70 percent, while improving product quality and increasing production efficiency.

Advanced automatic profile controls continue to gain popularity in these sheet processes. Extrusion AutoProfile™ control of cross directional sheet variations enhances savings and quality by maintaining typical sheet profile tolerances within 2 percent of specifications.

These innovative new features, along with other proven system benefits, provide superior results for a changing industry.



MEASUREX 2002 CODE TTX1055 07/14/81

# HIGH RES PROFILE

AUGE AVG 10.07 CD SPREAD 0.08 U/DIV 0.05



20 40 60 80  
AUGE AVG 10.07 CD SPREAD 0.08 U/DIV 0.05



112 107 34 50

ENTER  
OUT  
ROW

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50

112 107 34 50



02 MM

ALLOY

1145

TIME

# SHAPE CONTROL

0.0 U/DIV

10.0

AVG % ON

45

AVG

10.0

U/DIV

1.1

CD

SPREAD

0

5

10

15

20

25

NOZZLE POSITION

1.0

E PERCENT ON

0.0

30.7

COMPU

NO PRESSURE DOT

250.0

COMPU





# METALS

The Measurex MetalsMaster™ system provides both improved productivity and profitability by increasing rolling speeds 10 to 30 percent. It increases finished product yield per unit weight by 2 to 5 percent, thus reducing waste and improving raw material usage. The MetalsMaster system also improves gauge uniformity by 50 to 75 percent for consistently higher product quality.

A significant new addition to the MetalsMaster system is shape control. Through the use of shape roll measurement devices, the MetalsMaster system is able to automatically adjust spray bars, roll tilt and bending to achieve an exceptionally flat sheet. This advanced control capability increases product quality while achieving even greater rolling speeds.

Utilizing an advanced generation of sensors, an expanded range of control strategies and comprehensive, flexible software, the MetalsMaster system provides the most rapid payback of any system available to the metals industry.

Productivity and product quality have never before taken on such a significant role in the metals industry. This rapid payback continues to be of key importance in an industry where productivity and product quality are critical.

Product quality is improved through the use of expanded control strategies.







Specific application  
of in-depth expertise  
maximizes heat rate  
improvement.



## UTILITIES

The UtilityMaster™ system, introduced during 1982 for fossil fuel electrical generating plants, offers expanded market applications for Measurex. These fossil utility operations represent more than 80 percent of the power generating capacity of the United States.

The UtilityMaster system uses Measurex' carbon monoxide control to improve the combustion process, thereby saving fuel. The UtilityMaster system also provides on-line heat rate deviation monitoring and reporting as a tool for optimizing unit heat rate.

The UtilityMaster system has achieved heat rate improvements of 0.5% or better on the three major fuels used by the utility industry—pulverized coal, natural gas and fuel oil. The savings generated by the heat rate improvement typically provide utility customers with a system payback of less than one year.

The introduction of the UtilityMaster system extends Measurex' proven energy management control strategies to utility companies, affording these customers improved profitability and productivity.



## COMBUSTION MASTER BL

|                     | TARGET | ACTUAL |
|---------------------|--------|--------|
| CARBON MONOXIDE PPM | 125.00 | 67.09  |
| AIR/FUEL BIAS %     | 68.11  | 68.08  |
| AUTO CO TARGET PPM  | 125.00 |        |
|                     | LIMIT  | ACTUAL |
| STACK TEMP          |        | 258.26 |
| DEGF                |        |        |

|                    |      |       |
|--------------------|------|-------|
| FUEL FLOW          | %    | 32.35 |
| CARBON DIOXIDE     | %    | 10.26 |
| STEAM FLOW         | MPPH | 1.00  |
| THERM EFFICIENCY % |      | 88.72 |



12/22/82 17:07

# TREND PLOT

ENTER PAGE # 3 SAMPLE RATE (SEC) 15

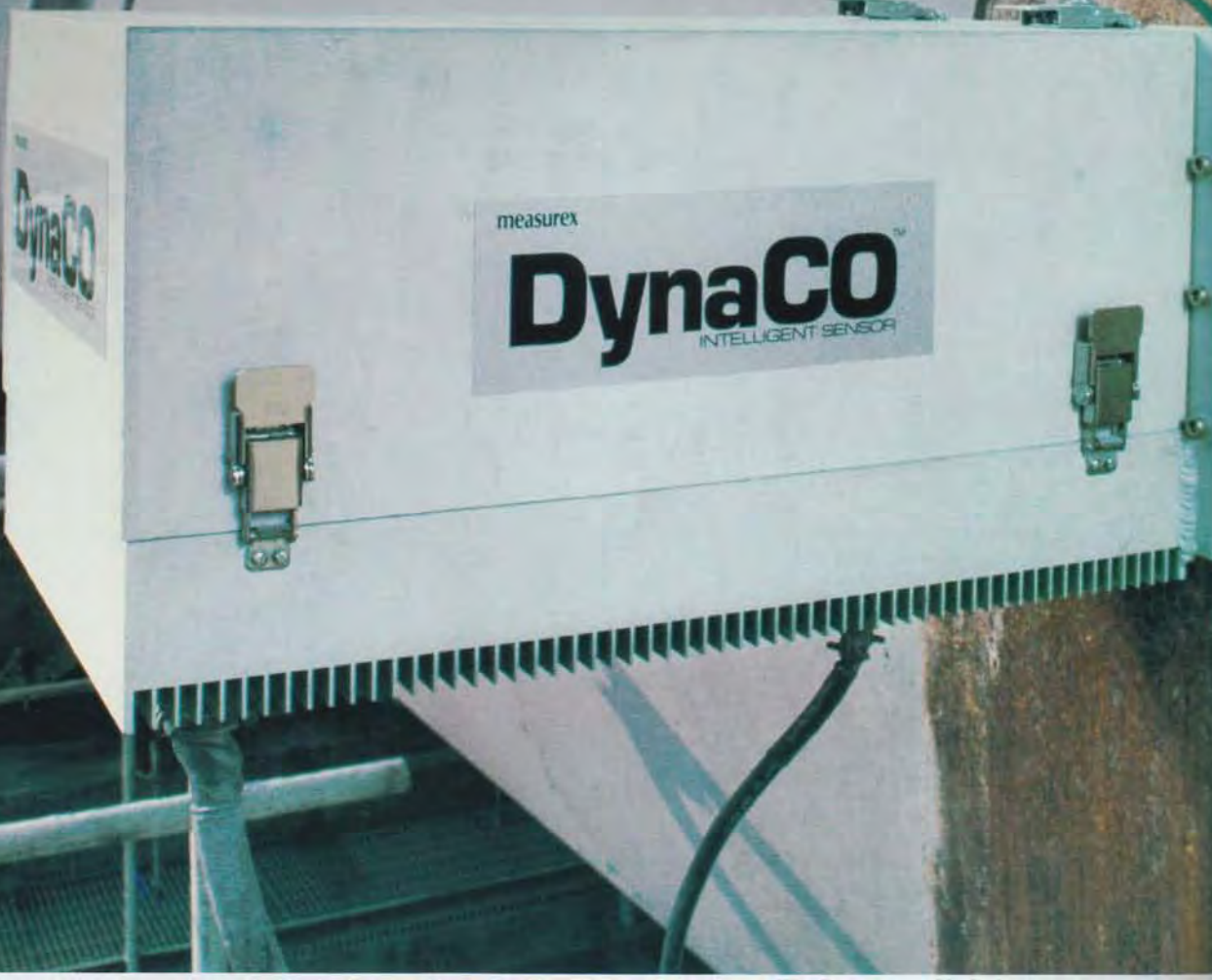
K2FEED END K2BURN ZN T K2OIL FLW

200.0 500.0 2400. 2900. 2.000 6.000

2.5

5.0

7.5





# CHEMICAL PROCESSES

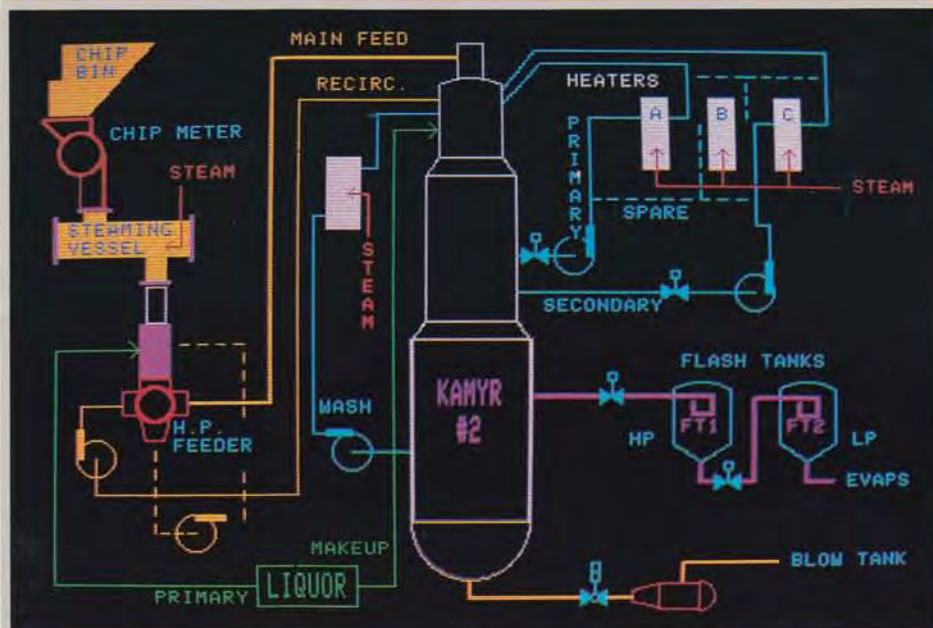
The current economic environment places a strong requirement for increased productivity on the chemical flow process industries. Process control computing systems are needed which give improved control over product quality, reduced energy costs and greater visibility into the process itself.

In pulp mills alone, Measurex has over 135 pulping processes under control worldwide, including continuous and batch digesters, bleach plants, brown stock washers and chemical recovery boilers. These systems typically produce a payback of 12 to 18 months by increasing product yield and lowering energy costs.

The recent introduction of the Measurex 2002 Advanced Lime Kiln Control system provides additional savings for pulping customers by reducing fuel costs by 6 to 10 percent. Stabilizing the lime kiln and causticizing processes also reduces chemical consumption.

Measurex' product offerings in this area were further expanded in 1982 by the announcement of both the 2002 DrierMaster™ system and the 2002 CalcinerMaster™ systems. These systems control the drying processes in direct fired rotary furnaces while at the same time greatly improving production rates.

The VISION 2002 Network significantly expands Measurex' product offering to this vital and growing industry segment.



Sophisticated plant-wide control expands process control capability and streamlines operator interfaces.





More than 1000 field technical personnel are dedicated to digital systems support worldwide.

## SERVICE AND TRAINING

Measurex' commitment to quality and service began with the first system shipment in 1969. Today, there are over 1000 Measurex service employees worldwide dedicated to digital system performance for process control.

The combination of Measurex' extensive training program and the establishment of regional support centers, creates a multi-level service network which provides over 99 percent system availability, high operator usage and long system life.

With the increasing number of installed systems, Measurex created regional support centers. These centers, strategically located throughout the world, support the entire product line, including the new VISION 2002 Network.

The basis for Measurex' field service support is its fully equipped training center and laboratory at corporate headquarters. Classes of limited size are offered in all product lines by instructors with extensive field experience. The courses stress technical excellence and process knowledge by providing a 50 percent hands-on training experience. One third of the 300 course participants in 1982 were customer representatives.



# TUNING MONITOR

LOOP ID: 1 TSF

PERIOD: 5 SEC

OUTPUT

STOCK FLOW

% ERROR

4.5 415

455

RANGE :





## SELECTED FINANCIAL DATA

Fiscal years 1982, 1981, 1980, 1979 and 1978

(Amounts in thousands except for per share data)

|                                       | 1982      | 1981      | 1980      | 1979      | 1978      |
|---------------------------------------|-----------|-----------|-----------|-----------|-----------|
| <b>Operating data</b>                 |           |           |           |           |           |
| Revenues                              | \$118,145 | \$119,702 | \$122,033 | \$119,474 | \$ 88,541 |
| Net income (loss)                     | (350)     | 2,101     | 7,323     | 9,928     | 8,763     |
| Net income (loss) per share           | (.10)     | .60       | 2.09      | 2.82      | 2.60      |
| Dividends per share                   | .38       | .50       | .50       | .50       | .36       |
| <b>Financial position at year end</b> |           |           |           |           |           |
| Working capital                       | \$ 36,390 | \$ 49,373 | \$ 48,719 | \$ 54,474 | \$ 30,798 |
| Total assets                          | 118,652   | 129,256   | 131,668   | 136,192   | 108,140   |
| Long-term debt                        | 9,297     | 14,586    | 18,169    | 27,260    | 5,660     |
| Total debt                            | 12,096    | 18,052    | 22,967    | 33,795    | 21,550    |
| Shareholders' equity                  | 75,318    | 76,570    | 75,534    | 68,164    | 57,284    |
| <b>Statistics and key ratios</b>      |           |           |           |           |           |
| Backlog at year end                   | \$ 36,400 | \$ 44,300 | \$ 30,400 | \$ 37,800 | \$ 31,700 |
| Net income (loss) as a percentage of: |           |           |           |           |           |
| Revenues                              | —         | 2%        | 6%        | 8%        | 10%       |
| Shareholders' equity                  |           |           |           |           |           |
| at beginning of year                  | —         | 3%        | 11%       | 17%       | 18%       |
| Current ratio at year end             | 2.2       | 2.6       | 2.7       | 2.7       | 1.8       |
| Total debt as a percentage of         |           |           |           |           |           |
| year end shareholders' equity         | 16%       | 24%       | 30%       | 50%       | 38%       |



## MANAGEMENT DISCUSSION AND ANALYSIS

### Liquidity and Capital Resources

While operations resulted in a loss for 1982, the Company maintained a strong financial position. Total debt for Measurex, including that of its nonconsolidated finance subsidiaries, was \$19.0 million at the end of 1982, a reduction of \$10.2 million from year end 1981.

Debt of the Corporation was 16 percent of shareholders' equity at year end 1982 representing a 68 percent reduction in the debt to equity ratio since 1979. The current ratio decreased to 2.2.

No significant capital additions outside the ordinary course of business are anticipated, although the Company intends to complete the purchase, for approximately \$1.0 million, of manufacturing facilities presently leased in Waterford, Ireland.

In view of current business conditions, the Board of Directors omitted the fourth quarter dividend on the capital stock. The Board reviews the subject of dividends on a quarterly basis.

The availability of funds under the Company's long-term loan agreement and short-term bank lines of credit remains relatively unchanged from November 29, 1981. Measurex believes that its financial position, future earnings and borrowing capabilities provide adequate flexibility to fund ongoing financial requirements.

### Results of Operations

In 1982 total revenues of \$118.1 million declined \$1.6 million and \$3.9 million from 1981 and 1980, respectively. Sales and installation revenues declined \$7.9 million from 1981 and \$17.2 million from 1980, resulting from the competitive climate and reductions of unit shipments, which reflects adverse business conditions within those industries served by Measurex.

Service revenues increased to \$52.1 million, improving by \$6.4 million over 1981 and \$13.4 million over 1980. These increases in service revenue were due to an increased number of systems being serviced and improved pricing.

The decline in sales and installation margins over the past three years, from a level of 54% in 1980 to 40% in 1982, was the result of competitive conditions, product mix, cost overruns on several large systems, and higher period costs due to the lower number of system shipments.

Service margins have improved from 10% in 1980 to 23% in 1982 as a result of higher service revenue combined with reduced costs resulting from continued control efforts and efficiencies obtained from increased system density.

The increase in product development expense over the past years represents the Company's ongoing investment in future products and technology.

Selling and administrative expenses decreased by \$1.6 million from 1981, reflecting increased efficiency and cost control efforts in addition to decreased promotional expenses. 1981 promotion expenses included costs for the introduction of the 2002 product line. The increase over 1980 is primarily inflation related.

Interest expense has trended down over the past two years as a result of a decline in average borrowings combined with lower interest rates.

During the current year, several of the Company's foreign subsidiaries which previously had incurred operating losses turned profitable. The extraordinary credit for 1982 represents the use by these subsidiaries of the prior period losses to reduce income taxes otherwise payable. The Company's net tax benefit after the credit resulted in an overall tax benefit of 42% of the loss before income taxes and extraordinary credit. In preceding years 1981 and 1980, the Company's tax expense had been 42% and 32% respectively, of income before income taxes. The increase in the tax rate for 1981 resulted from the decrease in system shipments within Europe, reducing the amount of tax holiday income realized by the Company's manufacturing operation in Ireland.



# CONSOLIDATED STATEMENTS OF OPERATIONS

Fiscal years 1982, 1981 and 1980

(Amounts in thousands except per share data)

|                                                                  | 1982      | 1981      | 1980      |
|------------------------------------------------------------------|-----------|-----------|-----------|
| <b>Revenues:</b>                                                 |           |           |           |
| Sales and installation                                           | \$ 66,084 | \$ 74,022 | \$ 83,324 |
| Service                                                          | 52,061    | 45,680    | 38,709    |
|                                                                  | 118,145   | 119,702   | 122,033   |
| <b>Costs and expenses:</b>                                       |           |           |           |
| Sales and installation                                           | 39,853    | 38,620    | 38,514    |
| Service                                                          | 40,015    | 36,739    | 34,666    |
| Product development                                              | 8,193     | 7,301     | 6,317     |
| Selling and administrative                                       | 29,091    | 30,711    | 28,014    |
| Interest expense                                                 | 2,904     | 4,822     | 5,216     |
| Other income and expense                                         | (1,308)   | (2,113)   | (1,463)   |
|                                                                  | 118,748   | 116,080   | 111,264   |
| Income (loss) before income taxes<br>and extraordinary credit    | (603)     | 3,622     | 10,769    |
| Provision for income taxes                                       | (782)     | (1,521)   | (3,446)   |
| Income (loss) before extraordinary credit                        | (1,385)   | 2,101     | 7,323     |
| Extraordinary credit                                             | 1,035     | —         | —         |
| <b>Net income (loss)</b>                                         | \$ (350)  | \$ 2,101  | \$ 7,323  |
| Income (loss) per share before extraordinary credit              | \$ (.39)  | \$ .60    | \$ 2.09   |
| <b>Net income (loss) per share</b>                               | \$ (.10)  | \$ .60    | \$ 2.09   |
| <b>Dividends per share</b>                                       | \$ .38    | \$ .50    | \$ .50    |
| <b>Average number of common and<br/>common equivalent shares</b> | 3,546     | 3,524     | 3,507     |

The accompanying notes are an integral part  
of the financial statements.



# CONSOLIDATED BALANCE SHEETS

Fiscal years 1982 and 1981

(Amounts in thousands except share data)

|                                                     | 1982             | 1981             |
|-----------------------------------------------------|------------------|------------------|
| <b>Assets</b>                                       |                  |                  |
| <b>Current assets:</b>                              |                  |                  |
| Cash                                                | \$ 3,397         | \$ 3,076         |
| Accounts receivable                                 | 32,441           | 41,025           |
| Inventories                                         | 29,651           | 34,881           |
| Prepaid expenses                                    | 1,259            | 786              |
| <b>Total current assets</b>                         | <b>66,748</b>    | <b>79,768</b>    |
| Contracts receivable                                | 6,528            | 3,117            |
| Service parts                                       | 13,147           | 11,760           |
| Property, plant and equipment                       | 23,675           | 23,163           |
| Investments in nonconsolidated finance subsidiaries | 6,866            | 8,335            |
| Other assets                                        | 1,688            | 3,113            |
| <b>Total assets</b>                                 | <b>\$118,652</b> | <b>\$129,256</b> |
| <b>Liabilities and Shareholders' Equity</b>         |                  |                  |
| <b>Current liabilities:</b>                         |                  |                  |
| Notes payable                                       | \$ 2,555         | \$ 3,114         |
| Current portion of long-term debt                   | 244              | 352              |
| Accounts payable                                    | 4,316            | 5,387            |
| Accrued expenses                                    | 19,197           | 18,871           |
| Income taxes payable                                | 1,748            | 2,392            |
| Deferred income taxes                               | 2,298            | 279              |
| <b>Total current liabilities</b>                    | <b>30,358</b>    | <b>30,395</b>    |
| Long-term debt                                      | 9,297            | 14,586           |
| Deferred income taxes                               | 3,679            | 7,705            |
| <b>Shareholders' equity:</b>                        |                  |                  |
| Preferred stock                                     | —                | —                |
| Capital stock, without par value:                   |                  |                  |
| Authorized: 15,000,000 shares; outstanding:         |                  |                  |
| 1982-3,560,829; 1981-3,532,834                      | 35,311           | 34,898           |
| Retained earnings                                   | 40,007           | 41,672           |
| <b>Total shareholders' equity</b>                   | <b>75,318</b>    | <b>76,570</b>    |
| <b>Total liabilities and shareholders' equity</b>   | <b>\$118,652</b> | <b>\$129,256</b> |

The accompanying notes are an integral part of the financial statements.



## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Fiscal years 1982, 1981 and 1980

(Amounts in thousands except share data)

|                                                                      | Capital Stock    |                 | Retained        |                 |
|----------------------------------------------------------------------|------------------|-----------------|-----------------|-----------------|
|                                                                      | Shares           | Amount          | Earnings        | Total           |
| <b>Balance November 30, 1979</b>                                     | 3,411,515        | \$ 32,443       | \$ 35,721       | \$68,164        |
| Net income                                                           | —                | —               | 7,323           | 7,323           |
| Stock issued under employee stock<br>purchase and stock option plans | 26,375           | 513             | —               | 513             |
| Stock issued upon exercise of warrants                               | 50,000           | 1,251           | —               | 1,251           |
| Dividends                                                            | —                | —               | (1,717)         | (1,717)         |
| <b>Balance November 30, 1980</b>                                     | 3,487,890        | 34,207          | 41,327          | 75,534          |
| Net income                                                           | —                | —               | 2,101           | 2,101           |
| Stock issued under employee stock<br>purchase and stock option plans | 44,944           | 691             | —               | 691             |
| Dividends                                                            | —                | —               | (1,756)         | (1,756)         |
| <b>Balance November 29, 1981</b>                                     | 3,532,834        | 34,898          | 41,672          | 76,570          |
| Net loss                                                             | —                | —               | (350)           | (350)           |
| Stock issued under employee stock<br>purchase and stock option plans | 27,995           | 413             | —               | 413             |
| Dividends                                                            | —                | —               | (1,315)         | (1,315)         |
| <b>Balance November 28, 1982</b>                                     | <b>3,560,829</b> | <b>\$35,311</b> | <b>\$40,007</b> | <b>\$75,318</b> |

*The accompanying notes are an integral  
part of the financial statements.*



# CONSOLIDATED STATEMENTS OF CHANGES IN FINANCIAL POSITION

Fiscal years 1982, 1981 and 1980

(Amounts in thousands)

|                                                                                | 1982       | 1981     | 1980     |
|--------------------------------------------------------------------------------|------------|----------|----------|
| <b>Cash provided</b>                                                           |            |          |          |
| <b>Operations:</b>                                                             |            |          |          |
| Income (loss) before extraordinary credit                                      | \$ (1,385) | \$ 2,101 | \$ 7,323 |
| Items not affecting cash:                                                      |            |          |          |
| Depreciation                                                                   |            |          |          |
| Service parts                                                                  | 2,258      | 1,711    | 1,461    |
| Property, plant and equipment                                                  | 2,759      | 2,462    | 2,374    |
| Deferred income taxes                                                          | (2,007)    | (1,948)  | 486      |
| Other, net                                                                     | 40         | 1,451    | 858      |
| Cash provided by operations before extraordinary credit                        | 1,665      | 5,777    | 12,502   |
| Extraordinary credit                                                           | 1,035      | —        | —        |
| Cash provided by operations                                                    | 2,700      | 5,777    | 12,502   |
| Decrease (increase) in:                                                        |            |          |          |
| Inventories and service parts                                                  | 1,585      | (3,270)  | 949      |
| Investments in nonconsolidated finance subsidiaries                            | 1,469      | 4,808    | (2,015)  |
| Accounts and contracts receivable                                              | 5,173      | (240)    | 4,849    |
| Issuance of capital stock under employee stock purchase and stock option plans | 413        | 691      | 1,764    |
| Reclassification of long-term deposits                                         | 1,650      | —        | —        |
| Total cash provided                                                            | 12,990     | 7,766    | 18,049   |
| <b>Cash used</b>                                                               |            |          |          |
| Expenditures for property, plant and equipment                                 | 3,311      | 3,427    | 5,639    |
| Reduction of debt                                                              | 5,956      | 4,915    | 10,828   |
| Decrease (increase) in:                                                        |            |          |          |
| Accounts payable and accrued expenses                                          | 745        | (2,656)  | 1,053    |
| Income taxes payable                                                           | 644        | (759)    | 499      |
| Other, net                                                                     | 698        | 429      | (651)    |
| Dividends                                                                      | 1,315      | 1,756    | 1,717    |
| Total cash used                                                                | 12,669     | 7,112    | 19,085   |
| <b>Increase (decrease) in cash</b>                                             | 321        | 654      | (1,036)  |
| Cash at beginning of period                                                    | 3,076      | 2,422    | 3,458    |
| Cash at end of period                                                          | \$ 3,397   | \$ 3,076 | \$ 2,422 |

The accompanying notes are an integral part of the financial statements.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollar amounts in thousands unless otherwise noted)

### Summary of Significant Accounting Policies

#### Fiscal Year

The Company uses a 52-53 week fiscal year. References to 1982, 1981 and 1980 are for the fiscal years ended November 28, 1982, November 29, 1981 and November 30, 1980, respectively.

#### Consolidation

The consolidated financial statements include all subsidiaries, other than the wholly-owned finance subsidiaries, after elimination of intercompany balances and transactions. The investments in the nonconsolidated finance subsidiaries are reported on the equity basis. Income from the finance subsidiaries included in the Company's consolidated statements of operations is before income taxes and after elimination of amounts earned from parent companies.

#### Foreign Currency Translation

Foreign currency balance sheet accounts are translated into United States dollar equivalents at year end rates of exchange, except for property, plant and equipment, inventories, service parts and certain other accounts which are translated at historical rates. Accounts included in the statements of operations are translated into United States dollar equivalents using rates of exchange which approximate the average rates in effect during the year, except that depreciation of plant, equipment, service parts and costs of inventory used are translated at historical rates.

Net foreign currency exchange adjustments, including those resulting from forward exchange contracts, are included in net income (loss) except for gains and losses resulting from forward exchange contracts which are intended to be a hedge of an identifiable foreign currency commitment. Such forward exchange contract gains or losses are deferred and included in the dollar basis of the related foreign currency transaction.

#### Revenue Recognition

Revenue is recognized in accordance with the following:

- At the time of shipment for products sold to customers or third-party financing institutions;
- At the time of shipment for products financed under lease transactions which qualify as sales-type leases; and
- At the time of performance for services.

Since its inception, it has been the Company's practice to grant its customers an initial period, generally six months following installation, in which to evaluate systems. During the initial period, customers may return the system and receive a refund of all or a portion of monies paid. The Company has provided amounts which, in the opinion of management, are sufficient to absorb any such refunds.

#### Product Development Expenses

The Company is actively engaged in basic technology and applied research and development programs which are designed to develop new or improved products and process applications. The cost of these programs is charged to expense as incurred.

#### Income Taxes

Taxes are provided for items included in the consolidated statements of operations regardless of the period when such items may be reported for tax purposes.

Provision has not been made for income taxes relating to distribution of the total accumulated earnings from the Company's Irish and Domestic International Sales Corporation (DISC) subsidiaries, since it is the Company's present intention to utilize substantially all of the undistributed earnings of these companies in its foreign operations and qualified export activities.

Investment tax credits relating to the acquisition of eligible assets are accounted for using the flow-through method.

#### Inventory Valuation

Inventories are stated at the lower of standard cost (which approximates actual cost determined on a first-in, first-out basis) or market.

Inventories are composed of the following:

|                                    | 1982     | 1981     |
|------------------------------------|----------|----------|
| Purchased parts and components     | \$13,873 | \$18,316 |
| Work in process                    | 8,127    | 9,467    |
| Finished subassemblies and systems | 7,651    | 7,098    |
|                                    | \$29,651 | \$34,881 |



### Depreciation

Property, plant, equipment and service parts are depreciated on a straight-line basis over estimated useful lives which range as follows: buildings and improvements—3 to 60 years; machinery and equipment—3 to 20 years; and service parts—10 years.

### Net Income (Loss) Per Share

Net income (loss) per share is computed based on the weighted average number of common shares outstanding during the year adjusted to reflect the assumed exercise of outstanding employee stock options and warrants to the extent these items had a dilutive effect on the computation.

### Audit Committee of the Board of Directors

The Company has an Audit Committee of the Board of Directors. This Committee, which includes independent directors only, meets with the Company's financial management and its independent accountants at various times during each year and reviews internal control conditions, audit plans and results, and financial reporting procedures.

### Accounts Receivable

Accounts receivable are summarized below:

|                                                | 1982     | 1981     |
|------------------------------------------------|----------|----------|
| Accounts receivable                            | \$37,334 | \$42,854 |
| Less:                                          |          |          |
| Allowance for noncollection and system returns | 4,893    | 1,829    |
|                                                | \$32,441 | \$41,025 |

### Contracts Receivable

Contracts receivable are summarized below:

|                                                | 1982     | 1981    |
|------------------------------------------------|----------|---------|
| Contracts receivable                           | \$10,880 | \$5,376 |
| Less:                                          |          |         |
| Unearned financing income                      | 2,631    | 1,010   |
| Allowance for noncollection and system returns | 73       | 414     |
|                                                | 8,176    | 3,952   |
| Current portion                                | 1,648    | 835     |
|                                                | \$ 6,528 | \$3,117 |

The aggregate amount of payments receivable by the Company in fiscal years subsequent to 1982 is set forth below:

|              |                   |
|--------------|-------------------|
| 1983—\$2,624 | 1986—\$1,901      |
| 1984—\$2,631 | 1987—\$ 993       |
| 1985—\$2,384 | Thereafter—\$ 347 |

### Third-Party Transactions

The Company has agreements with bank leasing subsidiaries under which the leasing companies may purchase Measurex systems subject to leases to Measurex customers. Generally, sales of systems under these agreements are at amounts approximating end user purchase prices.

In addition, at various times, the Company has sold portions of its domestic and foreign lease contracts receivable and the related equipment to certain unrelated third-party lessors and has discounted purchase contracts receivables with unrelated financing institutions.

These transactions have been made on both a non-recourse and full-recourse basis. In certain instances the Company is entitled to participate in revenues received at the conclusion of the basic lease term. In addition, in certain instances, the Company has agreed to assist, for a fee, in remarketing systems when they come off lease.

At November 28, 1982, the Company was contingently liable for approximately \$10.1 million relating to these transactions.

### Service Parts

Service parts are comprised of the following:

|                          | 1982     | 1981     |
|--------------------------|----------|----------|
| Service parts, at cost   | \$16,824 | \$15,599 |
| Less:                    |          |          |
| Accumulated depreciation | 3,677    | 3,839    |
|                          | \$13,147 | \$11,760 |

### Property, Plant and Equipment

Property, plant and equipment are recorded at cost and are comprised of the following:

|                            | 1982     | 1981     |
|----------------------------|----------|----------|
| Land                       | \$ 3,077 | \$ 3,150 |
| Buildings and improvements | 15,180   | 14,746   |
| Machinery and equipment    | 17,563   | 16,057   |
| Other                      | 631      | 436      |
|                            | 36,451   | 34,389   |
| Less:                      |          |          |
| Accumulated depreciation   | 12,776   | 11,226   |
|                            | \$23,675 | \$23,163 |



## Notes Payable

Details of notes payable as of November 28, 1982 are presented below:

|                                                   | Maximum<br>Commitment | Borrowings |
|---------------------------------------------------|-----------------------|------------|
| Multi-currency Working<br>Capital Agreements      | \$33,500              | \$2,555    |
| Canadian Currency<br>Working Capital<br>Agreement | 2,425                 | —          |
|                                                   | \$35,925              | \$2,555    |

The multi-currency Working Capital Agreements are unsecured lines of credit with eight banks which provide for domestic dollar borrowings, Eurocurrency advances or Prime Bankers' Acceptances.

The agreements, which expire during fiscal year 1983, provide for interest rates ranging from below the prime rate of the particular lending bank to 103% of such rate, depending upon the type of borrowing; maintenance of average non-interest bearing demand deposits (not legally restricted) with lending banks in amounts equal to approximately 5% of each bank's domestic dollar borrowing commitment; and, adherence to certain covenants regarding working capital and indebtedness.

## Long-Term Debt

Long-term debt consists of the following:

|                                                                            | 1982    | 1981     |
|----------------------------------------------------------------------------|---------|----------|
| Revolving term loan                                                        | \$3,000 | \$ 8,400 |
| 8¼%, 8¾%, 9¼% mortgages<br>payable in monthly installments<br>through 2009 | 5,499   | 5,576    |
| Other borrowings                                                           | 1,042   | 962      |
|                                                                            | 9,541   | 14,938   |
| Less amount due within one year                                            | 244     | 352      |
|                                                                            | \$9,297 | \$14,586 |

The Company has a Revolving Term Loan Agreement with four banks for a five year unsecured revolving \$20.0 million term loan. At year end 1982 and 1981, \$3.0 million and \$8.4 million, respectively, of notes payable have been reclassified to long-term debt under this agreement.

During the revolving period, the agreement provides for:

- U.S. dollar advances with interest payable at the bank's prime rate plus fees in lieu of compensating balances.  
Bankers' Acceptances with interest computed at the Prime Bankers' Acceptance rate plus commissions.
- Multi-currency advances with interest payable at ⅝% over the London Interbank Offered Rate (LIBOR).

On February 29, 1984, all outstanding Bankers' Acceptances are to be repaid and all outstanding U.S. dollar and multi-currency advances convert to three year term debt with twelve approximately equal quarterly payments at the following rates:

- U.S. dollar advances with interest payable at the bank's prime rate plus ½% with fees in lieu of compensating balances.
- Multi-currency advances with interest payable at 1% over LIBOR.

This loan agreement requires the Company to maintain minimum working capital and indebtedness ratios, interest coverage and a minimum shareholders' equity.

Aggregate principal payments on long-term debt in each of the next five years and thereafter are as follows:

|              |                    |
|--------------|--------------------|
| 1983-\$ 244  | 1986-\$1,258       |
| 1984-\$1,047 | 1987-\$ 426        |
| 1985-\$1,281 | Thereafter-\$5,285 |

## Accrued Expenses

Accrued expenses are comprised of the following:

|                                      | 1982     | 1981     |
|--------------------------------------|----------|----------|
| Accrued payroll and<br>related items | \$ 6,502 | \$ 7,006 |
| Accrued initial service              | 3,948    | 3,047    |
| Customer deposits                    | 2,618    | 1,433    |
| Other                                | 6,129    | 7,385    |
|                                      | \$19,197 | \$18,871 |

## Preferred Stock

The preferred stock has a par value of \$1.00 per share. At year end 1982 and 1981, 1,000,000 shares were authorized but none were outstanding.



## Stock Option Plans

Under the Company's stock option plans, 800,000 shares of capital stock have been reserved for issuance to officers and key employees.

Options may be granted at prices not lower than the fair market value of the Company's capital stock at the date of grant. Options generally become exercisable in four equal annual installments commencing one year from the date of grant. Options expire, if not exercised, within five years from the date of grant.

In October 1981, the Company authorized a regranting of various options at \$16.31 which was approved by shareholders in fiscal year 1982. 245,975 options were rescinded during fiscal year 1982. Employees who rescinded higher priced options lost all vested rights to exercise such options.

A summary of transactions relating to options during fiscal year 1981 and 1982 is set forth below: (Amounts in thousands except per share data)

|                   | Options Outstanding |                 |          |
|-------------------|---------------------|-----------------|----------|
|                   | Shares              | Price Per Share | Amount   |
| November 30, 1980 | 294.9               | \$ 9.75-\$44.00 | \$ 6,796 |
| Granted           | 80.6                | 16.13- 25.81    | 1,958    |
| Terminated        | (40.9)              | 9.75- 44.00     | (1,031)  |
| Exercised         | (21.6)              | 9.75- 18.75     | (295)    |
| November 29, 1981 | 313.0               | 13.25- 29.13    | 7,428    |
| Granted           | 364.0               | 13.31- 17.25    | 5,982    |
| Terminated        | (315.8)             | 13.25- 29.13    | (7,431)  |
| Exercised         | (1.8)               | 13.25- 13.63    | (24)     |
| November 28, 1982 | 359.4               | \$13.31-\$29.13 | \$5,955  |

At year end 1982 and 1981, options to purchase 65,500 shares and 77,900 shares were exercisable at prices ranging from \$16.31 to \$29.13 and from \$13.25 to \$29.13, respectively. Shares available for option grants at year end 1982 and 1981 were 440,600 and 350,900, respectively.

The Company makes no charges to operations in connection with its stock option plans.

## Other Income and Expense

Components of other income and expense are as follows:

|                                   | 1982    | 1981    | 1980    |
|-----------------------------------|---------|---------|---------|
| Interest income                   | \$1,337 | \$1,044 | \$1,404 |
| Income from finance subsidiaries  | 490     | 914     | 559     |
| Foreign exchange adjustments, net | (519)   | 155     | (500)   |
|                                   | \$1,308 | \$2,113 | \$1,463 |

## Income Taxes

The provision for income taxes consists of the following:

|                                                                         | 1982     | 1981      | 1980     |
|-------------------------------------------------------------------------|----------|-----------|----------|
| Current income taxes:                                                   |          |           |          |
| United States                                                           | \$ —     | \$(1,253) | \$ 666   |
| Foreign                                                                 | 3,605    | 2,496     | 2,479    |
| State                                                                   | (16)     | 219       | 295      |
|                                                                         | 3,589    | 1,462     | 3,440    |
| Deferred income taxes:                                                  |          |           |          |
| United States                                                           | (3,487)  | 167       | (1,359)  |
| Foreign                                                                 | 680      | (108)     | 1,365    |
|                                                                         | (2,807)  | 59        | 6        |
| Provision for taxes                                                     | 782      | 1,521     | 3,446    |
| Extraordinary credit from utilization of foreign tax loss carryforwards | (1,035)  | —         | —        |
| Net tax expense (benefit)                                               | \$ (253) | \$ 1,521  | \$ 3,446 |

The major components of the provision not currently payable result from:

|                                                                  | 1982      | 1981   | 1980    |
|------------------------------------------------------------------|-----------|--------|---------|
| Taxes provided on undistributed earnings of foreign subsidiaries | \$ 107    | \$ 211 | \$1,008 |
| Taxes on unrealized intercompany profit in inventory             | 265       | (261)  | (204)   |
| Revenue deferred for tax purposes                                | 146       | 965    | (571)   |
| Tax accounting for:                                              |           |        |         |
| Finance leases                                                   | (276)     | (534)  | (866)   |
| Depreciation                                                     | 607       | (849)  | 97      |
| Inventory reserves                                               | (53)      | 990    | 373     |
| Noncollection and system return reserves                         | (1,295)   | (333)  | (33)    |
| Deferred compensation                                            | 141       | (207)  | —       |
| Unrealized foreign exchange adjustments                          | 23        | (50)   | 160     |
| State income taxes                                               | 212       | 125    | 34      |
| Other                                                            | (42)      | 2      | 8       |
| Book benefit of U.S. tax loss carryforwards                      | (2,475)   | —      | —       |
| Book benefit of investment tax credit carryforwards              | (167)     | —      | —       |
|                                                                  | \$(2,807) | \$ 59  | \$ 6    |



At November 28, 1982 the Company has cumulative net operating loss carryforwards for U.S. income tax purposes of approximately \$5.4 million expiring in 1997. The Company also has investment tax credit carryforwards of approximately \$1.4 million which may be utilized to reduce U.S. income taxes payable. The investment tax credit carryforwards expire in varying amounts during the years 1989 through 1997. Utilization of these net operating loss and investment tax credit carryforwards will not affect net income for financial reporting purposes.

In addition, the Company has net operating loss carryforwards in various foreign subsidiaries of approximately \$10.2 million at current exchange rates. Of these losses, approximately \$7.3 million expire between 1983 and 1987. The balance can be carried forward indefinitely. \$6.7 million of these carryforwards will reduce net tax expense for financial reporting purposes if utilized.

The principal items accounting for the difference between income taxes computed at the U.S. statutory rate and the provision for income taxes are as follows:

|                                                                         | 1982    | 1981   | 1980   |
|-------------------------------------------------------------------------|---------|--------|--------|
| U.S. statutory rate                                                     | (46.0)% | 46.0%  | 46.0%  |
| Effect of:                                                              |         |        |        |
| Income of Irish subsidiary not subject to tax                           | (12.5)  | (22.4) | (35.8) |
| Income of DISC not subject to tax                                       | (31.8)  | (11.2) | (1.7)  |
| Losses of foreign subsidiaries not providing tax benefit                | 176.6   | 46.5   | 19.6   |
| Tax credits                                                             | (105.1) | (19.4) | (1.1)  |
| Translation of foreign currency accounts                                | 59.7    | (5.5)  | .8     |
| Income of foreign subsidiaries taxed at differing statutory rates       | 85.9    | 4.1    | 3.3    |
| State income taxes                                                      | (1.5)   | 2.3    | 1.5    |
| Other items                                                             | 4.4     | 1.6    | (.6)   |
| Provision for income taxes                                              | 129.7   | 42.0   | 32.0   |
| Extraordinary credit from utilization of foreign tax loss carryforwards | (171.7) | —      | —      |
| Net tax expense (benefit)                                               | (42.0)% | 42.0%  | 32.0%  |

The accumulated net income of the Company's DISC for which no provision for income taxes has been made is approximately \$5.2 million at November 28, 1982.

The Company's Irish subsidiary operates under a tax holiday granted by the Republic of Ireland which extends, at a minimum, to 1993. The accumulated undistributed net income of the Irish subsidiary for which no provision for taxes has been made is approximately \$34.3 million at November 28, 1982.

### Employee Benefit Plans

The Company has a profit sharing plan for eligible employees, which provides for contributions of up to 10% of consolidated income before provision for income taxes and amounts payable under the plan.

The Company has a management incentive plan which provides for payments to officers and senior management employees from an annual incentive fund determined by several factors relating to the financial performance of the Company.

The Company has reserved 250,000 shares of its authorized but unissued capital stock for issuance under an employee stock purchase plan. The plan covers substantially all the employees of the parent company and its domestic subsidiaries. The participant's purchase price is 85% of the closing market price on the last trading day of the quarter in which the stock is purchased by the employee. The 15% discount is treated as equivalent to the cost of issuing stock for financial reporting purposes. For tax purposes, it is treated as compensation to the employee, and the resulting tax benefit to the Company is credited to Capital Stock. The Company has issued 56,445 shares of its stock under this plan as of November 28, 1982.



## Business Segments

The Company manufactures and markets sensor-based computer process control systems for use in continuous process industries and energy-intensive applications. The principle markets for its products include the pulp and paper, rubber, plastic and metals industries and steam generating plants.

No single customer accounted for 10% or more of revenues during 1982, 1981 or 1980.

The Company's products are principally distributed and serviced through its own marketing and service organizations. Operations are conducted worldwide and are grouped into three geographic areas: United States, Europe, and Other (primarily Canada, the Far East, and the Southern Hemisphere countries).

The following table summarizes the geographic operations of the Company:

(Amounts in millions)

| 1982                    | United States | Europe  | Other  | Adjustments and Eliminations | Consolidated |
|-------------------------|---------------|---------|--------|------------------------------|--------------|
| Revenues:               |               |         |        |                              |              |
| External                | \$52.9        | \$38.6  | \$26.6 | \$ —                         | \$118.1      |
| Internal                | 25.1          | —       | .4     | (25.5)                       | —            |
| Total                   | \$78.0        | \$38.6  | \$27.0 | \$(25.5)                     | \$118.1      |
| Operating income (loss) | \$ (.9)       | \$ (.7) | \$ 2.0 | \$ .6                        | \$ 1.0       |
| Identifiable assets     | \$70.3        | \$33.3  | \$19.9 | \$ (4.8)                     | \$118.7      |
| 1981                    |               |         |        |                              |              |
| Revenues:               |               |         |        |                              |              |
| External                | \$57.0        | \$37.8  | \$24.9 | \$ —                         | \$119.7      |
| Internal                | 23.0          | —       | .1     | (23.1)                       | —            |
| Total                   | \$80.0        | \$37.8  | \$25.0 | \$(23.1)                     | \$119.7      |
| Operating income (loss) | \$ 6.5        | \$ (.7) | \$ 1.1 | \$ (.6)                      | \$ 6.3       |
| Identifiable assets     | \$68.1        | \$46.7  | \$19.2 | \$ (4.7)                     | \$129.3      |
| 1980                    |               |         |        |                              |              |
| Revenues:               |               |         |        |                              |              |
| External                | \$48.8        | \$48.2  | \$25.0 | \$ —                         | \$122.0      |
| Internal                | 18.7          | —       | .1     | (18.8)                       | —            |
| Total                   | \$67.5        | \$48.2  | \$25.1 | \$(18.8)                     | \$122.0      |
| Operating income        | \$ 6.0        | \$ 7.5  | \$ 1.4 | \$ (.4)                      | \$ 14.5      |
| Identifiable assets     | \$67.1        | \$47.8  | \$21.2 | \$ (4.4)                     | \$131.7      |

- Internal revenues accrue to the manufacturing operations from product sales to non U.S. subsidiaries which are principally sales and service operations.
- Internal selling prices are designed to allocate manufacturing profits to manufacturing entities and sales and service profits to sales and service entities.

- Operating income (loss) is derived by adding interest expense to and deducting other income and expense from income before income taxes.

Of the total U.S. revenue in 1982, 1981 and 1980, approximately \$19.0 million, \$22.0 million and \$12.0 million, respectively, are export sales (all to Other).

Income (loss) before taxes for United States locations for 1982, 1981 and 1980 is \$(6.7) million, \$(.9) million, and \$(.8) million, respectively. Income before taxes for foreign locations for 1982, 1981 and 1980 is \$6.1 million, \$4.5 million and \$11.6 million, respectively.

## Nonconsolidated Finance Subsidiaries

The combined Measurex Credit Companies consist of Measurex Credit Corporation (U.S.), Measurex Credit (Canada) Limited, and Measurex Credit (U.K.) Limited.

Following is a combined summary of the financial information of the nonconsolidated finance subsidiaries:

| Combined Balance Sheets               |         | 1982     | 1981     |
|---------------------------------------|---------|----------|----------|
| Assets:                               |         |          |          |
| Cash                                  |         | \$ 20    | \$ 5     |
| Lease and other contracts receivable  |         | 18,090   | 24,332   |
| Due from parent companies             |         | 7,465    | 5,548    |
| Other assets                          |         | —        | 87       |
|                                       |         | \$25,575 | \$29,972 |
| Liabilities and Shareholders' Equity: |         |          |          |
| Accrued liabilities                   |         | \$ 34    | \$ 177   |
| Bank debt                             |         | 6,900    | 11,095   |
| Obligations under capital leases      |         | 4,310    | 4,817    |
| Shareholders' equity                  |         | 14,331   | 13,883   |
|                                       |         | \$25,575 | \$29,972 |
| Combined Statements of Operations     |         |          |          |
|                                       | 1982    | 1981     | 1980     |
| Interest income                       | \$1,859 | \$2,493  | \$3,003  |
| Earnings from parent companies        | 587     | 1,940    | 648      |
| Total income                          | 2,446   | 4,433    | 3,651    |
| Interest expense                      | 1,355   | 1,573    | 2,328    |
| Other expenses                        | 14      | 6        | 116      |
| Income before income taxes            | 1,077   | 2,854    | 1,207    |
| Provision for income taxes            | 629     | 527      | 1,028    |
| Net income                            | \$ 448  | \$2,327  | \$ 179   |

The Company has agreed to compensate the nonconsolidated finance subsidiaries if their earnings before income taxes and fixed charges are less than one and one-half times the fixed charges related to their outside indebtedness.



## Report of Independent Certified Public Accountants

To the Shareholders  
Measurex Corporation

We have examined the consolidated balance sheets of Measurex Corporation and Subsidiary Companies as of November 28, 1982 and November 29, 1981, and the related consolidated statements of operations, shareholders' equity and changes in financial position for each of the three fiscal years in the period ended November 28, 1982. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the consolidated financial position of Measurex Corporation and Subsidiary Companies at November 28, 1982 and November 29, 1981 and the consolidated results of their operations and changes in their financial position for each of the three fiscal years in the period ended November 28, 1982 in conformity with generally accepted accounting principles applied on a consistent basis.

*Coopers & Lybrand*

San Jose, California  
December 22, 1982

## Supplementary Financial Data

### Interim Financial Information (Unaudited)

The Company's independent public accountants have made a limited review of the 1982 and 1981 interim financial information in accordance with standards for such reviews established by the American Institute of Certified Public Accountants. Their limited review did not constitute an audit and, accordingly, they do not express an opinion on the 1982 or 1981 interim financial information presented below:

(Amounts in thousands except per share data)

|                                                            | Quarter Ended 1982 |          |          |          |
|------------------------------------------------------------|--------------------|----------|----------|----------|
|                                                            | Feb 28             | May 30   | Aug 29   | Nov 28   |
| Revenues                                                   | \$30,343           | \$31,955 | \$28,282 | \$27,565 |
| Gross profit                                               | 10,183             | 11,554   | 7,310    | 9,230    |
| Income (loss) before income taxes and extraordinary credit | 293                | 1,411    | (2,492)  | 185      |
| Income (loss) before extraordinary credit                  | 170                | 819      | (2,070)  | (304)    |
| Extraordinary credit                                       | —                  | —        | 624      | 411      |
| Net income (loss)                                          | 170                | 819      | (1,446)  | 107      |
| Income (loss) per share before extraordinary credit        | .05                | .23      | (.58)    | (.09)    |
| Net income (loss) per share                                | .05                | .23      | (.41)    | .03      |
| Dividends per share                                        | .125               | .125     | .125     | —        |
|                                                            | Quarter Ended 1981 |          |          |          |
|                                                            | Mar 1              | May 31   | Aug 30   | Nov 29   |
| Revenues                                                   | \$28,227           | \$31,085 | \$29,660 | \$30,730 |
| Gross profit                                               | 11,354             | 11,310   | 10,731   | 10,948   |
| Income before income taxes                                 | 1,619              | 1,205    | 325      | 473      |
| Net income                                                 | 1,069              | 692      | 65       | 275      |
| Net income per share                                       | .30                | .20      | .02      | .08      |
| Dividends per share                                        | .125               | .125     | .125     | .125     |

### Market for the Registrant's Common Stock and Related Security Holder Matters

The Company's common shares are listed on the New York and Pacific Stock Exchanges. The price range of the Company's common shares during fiscal 1982 and 1981 follows:

|             | 1982 Price                       |                                  | 1981 Price                       |                                |
|-------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|
|             | High                             | Low                              | High                             | Low                            |
| 1st Quarter | \$17 <sup>3</sup> / <sub>8</sub> | \$14 <sup>3</sup> / <sub>8</sub> | \$27 <sup>7</sup> / <sub>8</sub> | \$23                           |
| 2nd Quarter | 18 <sup>1</sup> / <sub>2</sub>   | 15 <sup>7</sup> / <sub>8</sub>   | 26 <sup>3</sup> / <sub>4</sub>   | 21 <sup>1</sup> / <sub>2</sub> |
| 3rd Quarter | 16 <sup>1</sup> / <sub>8</sub>   | 13                               | 27 <sup>3</sup> / <sub>8</sub>   | 20                             |
| 4th Quarter | 17                               | 13 <sup>5</sup> / <sub>8</sub>   | 20 <sup>1</sup> / <sub>4</sub>   | 13 <sup>7</sup> / <sub>8</sub> |

As of December 31, 1982, there were 1,806 shareholders of record.

The amount of dividends paid per common share was \$.38 in 1982 and \$.50 in 1981.



# CORPORATE DIRECTORY

## **Directors of Measurex Corporation**

**\*Paul Bancroft, III**  
President,  
Chief Executive Officer  
Bessemer Securities  
Corporation  
(Private investment  
company)

**\*\*Dwight C. Baum**  
Advisory Director  
Blyth Eastman Paine  
Webber Incorporated  
(Investment banking firm)

**David A. Bossen**  
President,  
Chief Executive Officer  
Measurex Corporation

**\*Dr. Orion L. Hoch**  
President  
Litton Industries  
(A multi-industry company)

**\*John W. Larson**  
Partner  
Brobeck, Phleger and  
Harrison  
(Law firm)

**\*\*John W. McKittrick**  
President,  
Telecommunications  
Research Corporation  
(Telecommunications  
consulting firm)

**\*\*Graham Tyson**  
Chairman,  
Dataproducts Corporation  
(Manufacturer of computer  
printers)

\*Member of Compensation Committee

\*\*Member of Audit Committee

## **Principal Officers of Measurex Corporation and Subsidiaries**

**David A. Bossen**  
President  
Chief Executive Officer

**John C. Gingerich**  
Executive Vice President

**Fernand Ostiguy**  
President  
Measurex International  
Corporation

**Jerome Raffel**  
Senior Vice President  
Operations

**Donald L. Waite**  
Senior Vice President  
Finance

**Harry D. Biehl**  
Vice President, Service  
Measurex Systems, Inc.

**Dr. Doris S. Bossen**  
Vice President  
Corporate Communications

**John J. Burke**  
Vice President  
Measurex Systems, Inc.

**Morris J. Fealy**  
Vice President  
Building Products-Europe

**Erik J. Hallman**  
Vice President,  
Managing Director  
Measurex Europe-North

**Edwin C. Johns**  
Vice President  
Measurex Systems, Inc.

**Thomas A. King**  
Vice President  
Engineering

**Lance M. Lissner**  
Vice President  
Pacific Operations

**Martin F. McCarthy**  
Managing Director  
Measurex Ireland, Ltd.

**William H. Moore**  
Vice President  
Measurex Systems, Inc.

**Phillip E. Peterson**  
Vice President  
Personnel

**John G. Preston**  
Vice President,  
Managing Director  
Measurex Europe-South

**Phillip R. Trapp**  
Vice President  
Marketing

**Glenn R. Wienkoop**  
Vice President  
U.S. Sales and Service

**Riley R. Willcox**  
Vice President  
Advanced Products Marketing

**Fred R. Bierbrauer**  
Treasurer

**John W. Larson**  
Secretary

## **Transfer Agent and Registrar:**

Bank of America  
N.T.&S.A.  
San Francisco, CA

## **Auditors:**

Coopers & Lybrand  
San Jose, CA

## **General Counsel:**

Brobeck, Phleger and Harrison  
San Francisco, CA

Measurex' common stock  
is listed on the New York and  
Pacific Stock Exchanges and  
trades under the symbol MX.

Measurex' Form 10-K, the  
Company's annual report  
filed with the Securities and  
Exchange Commission, will  
be sent without charge upon  
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Measurex Corporation  
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Cupertino, CA 95014



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