

SECURITIES AND EXCHANGE COMMISSION

FORM 10-K405

Annual report pursuant to section 13 and 15(d), Regulation S-K Item 405

Filing Date: **1999-03-26** | Period of Report: **1998-12-31**
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FILER

BADGER METER INC

CIK: **9092** | IRS No.: **390143280** | State of Incorpor.: **WI** | Fiscal Year End: **1231**
Type: **10-K405** | Act: **34** | File No.: **001-06706** | Film No.: **99573919**
SIC: **3824** Totalizing fluid meters & counting devices

Business Address
4545 WEST BROWN DEER
ROAD
C/O CORPORATE
SECRETARY
MILWAUKEE WI 53223-0099
4143715887

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended DECEMBER 31, 1998

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission file number 1-6706

BADGER METER, INC.
(Exact name of registrant as specified in charter)

WISCONSIN 39-0143280
(State of Incorporation) (I.R.S. Employer Identification No.)

4545 W. BROWN DEER ROAD
MILWAUKEE, WISCONSIN 53223
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: 414-355-0400

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

Title of class:	Name of each exchange
COMMON STOCK	on which registered:
	AMERICAN STOCK EXCHANGE

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 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 S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

The aggregate market value of voting stock held by nonaffiliates of the registrant was \$94,691,712 as of February 26, 1999. At February 26, 1999, the registrant had 2,587,164 shares of Common Stock outstanding and 1,081,846 shares of Class B Common Stock outstanding.

Documents Incorporated by Reference:

Parts I and II incorporate information by reference from the company's 1998 Annual Report to Shareholders.

Part III incorporates information by reference from the definitive Proxy Statement for the Annual Meeting of Shareholders to be held on April 23, 1999 [to be filed with the Securities and Exchange Commission under Regulation 14A within 120 days after the end of the registrant's fiscal year].

Part I

Item 1. Business

Badger Meter, Inc. (the "company") is a marketer and manufacturer of products using flow measurement and control technology serving markets worldwide. The company was incorporated in 1905.

Markets and Products

The company's products are sold to water utilities, original equipment manufacturers and various industrial customers primarily operating in the following markets: energy and petroleum; food and beverage; pharmaceutical; chemical; water, wastewater and process waters; and concrete.

The company has eight major product lines: residential and large commercial/industrial water meters (with related technologies), automotive fluid meters, ultrasonic flowmeters, small valves, natural gas instrumentation, flow tubes and industrial process meters. Water meters and related systems produce the majority of the company's sales. A "water meter system" generally consists of a water meter, a register (some with an interface technology for communicating the reading), a packaging system and the monitoring or computerized management system used to collect and relay the reading.

The company's products are primarily manufactured in the company's Milwaukee, Wisconsin and Tulsa, Oklahoma facilities. Custom molded plastic products are also produced in a facility in Rio Rico, Arizona for use as components in the company's products and, to a limited extent, for sale to original equipment manufacturers. Products are also assembled in facilities in Nogales, Mexico. Assembly and some light manufacturing are done in the Stuttgart, Germany facility.

Badger Meter's products are sold throughout the world through various selling arrangements including direct sales representatives, distributors and independent sales representatives. There is only a moderate seasonal impact on sales, primarily relating to slightly higher sales of certain utility products during the spring and summer months. No single customer accounts for more than 10% of the company's sales.

Competition

There are several competitors in each of the markets in which the company sells its products, and the competition varies from moderate to intense. Major competitors include Sensus Technologies, Inc., Schlumberger Industries, Inc. and ABB-Kent Meters, Inc. A number of the company's competitors in certain markets have greater financial resources. The company believes it currently provides the leading technology in certain types of automated and automatic water meter systems, high precision valves and energy instruments. As a result of significant research and development activities, the company enjoys favorable patent positions for many of its products.

Backlog

The dollar amount of the company's total backlog of unshipped orders at December 31, 1998 and 1997 was \$32,290,000 and \$27,884,000, respectively. Substantially, the entire December 31, 1998 backlog is expected to be shipped in 1999.

Raw Materials

Raw materials used in the manufacture of the company's products include metal or alloys (such as bronze, aluminum, stainless steel, cast iron, brass and stellite), plastic resins, glass, microprocessors and other electronic subassemblies. There are multiple sources for these raw materials, but the company purchases bronze castings and certain electronic subassemblies from single suppliers. The company believes these items would be available from other sources, but that the loss of its current suppliers would result in higher cost of materials, delivery delays, short-term increases in inventory and higher quality control costs. Prices may also be affected by world commodity markets.

Research and Development

Expenditures for research and development activities relating to the development of new products, the improvement of existing products and manufacturing process improvements were \$6,105,000 during 1998, as compared to \$4,397,000 during 1997 and \$3,851,000 during 1996. Research and development activities are primarily sponsored by the company. The company also engages in some joint research and development with other companies.

Intangible Assets

The company owns or controls many patents, trademarks, tradenames and license agreements, in the United States and other countries, related to its products and technologies. No single patent, trademark, tradename or license is material to the company's business as a whole.

Environmental Protection

The company is subject to contingencies relative to compliance with Federal, State and local provisions and regulations relating to the protection of the environment. Currently the company is in the process of resolving an issue relative to a landfill site and a suit alleging a violation of Proposition 65, California's environmental regulation (see Item 3). The company is also involved in litigation filed by the owner of property near one of the company's plants, alleging damage to property value by virtue of spillage from past company operations. The company believes that this suit is without merit. The company does not believe the ultimate resolution of any of these claims will have a material adverse effect on the results of operations. Expenditures during 1998 and 1997 for compliance with environmental control provisions and regulations were not material and the company does not anticipate any material future expenditures.

To insure compliance with all environmental regulations at all company sites, the Board of Directors has a Compliance Committee that monitors the company's compliance with various regulatory authorities in regard to environmental matters, among other things.

Employees

The company and its subsidiaries employed 956 persons at December 31, 1998, of which 247 employees are covered by a collective bargaining agreement with District 10 of the International Association of Machinists. The company is currently operating under a four-year contract with the union, which expires on October 31, 2000. The company has good relations with the union and all of its employees.

Foreign Operations and Export Sales

The company has distributors and sales representatives throughout the world. Additionally, the company has a sales, assembly, light manufacturing and distribution facility in Stuttgart, Germany, a sales and customer service office in Mexico City, and two assembly facilities in Nogales, Mexico. The company exports products manufactured in Milwaukee, WI, Tulsa, OK, and Rio Rico, AZ. The company has international personnel with responsibility for managing the company's activities in all countries outside of the United States and Canada.

Information about the company's foreign operations and export sales is included on Note 10 in the Notes to Consolidated Financial Statements of the company's 1998 Annual Report to Shareholders and such information is incorporated herein by reference.

Financial Information about Industry Segments

The company operates in one industry segment as a marketer and manufacturer of various flow measurement and control products.

Item 2. Properties

The principal facilities utilized by the company at December 31, 1998, are listed below. Except as indicated, the company owns all of such facilities in fee simple.

<TABLE>
<CAPTION>

Location -----	Principal Use -----	Approximate Area (Square Feet) -----
<S>	<C>	<C>
Milwaukee, Wisconsin	Manufacturing and offices	323,000
Tulsa, Oklahoma	Manufacturing and offices	89,500 (1)
Rio Rico, Arizona	Manufacturing and offices	36,000
Nogales, Mexico	Assembly, manufacturing and offices	41,700 (2)
Nogales, Mexico	Assembly, manufacturing and storage	18,350 (3)
Stuttgart, Germany	Assembly, manufacturing and offices	23,000 (4)

</TABLE>

- (1) Includes 30,000 sq. ft. leased facility. Lease term expires December 31, 1999.
- (2) Leased facility. Lease term expires January 31, 2000.
- (3) Leased facility. Lease term expires October 31, 1999.
- (4) Leased facility. Lease term expires December 31, 2005.

In addition to the foregoing facilities, the company leases several sales offices. The company believes that its facilities are generally well maintained and have sufficient capacity for its current needs. The company is nearing completion of the construction of a 67,000 square foot addition to its Milwaukee, Wisconsin facility. The addition is estimated to cost approximately \$12 million and will house a new engineering laboratory, design facility, offices and expanded manufacturing operations. The addition is expected to be completed in early 1999 and will address future capacity requirements.

Item 3. Legal Proceedings

There are currently no material legal proceedings pending with relation to the company, except as discussed below.

In February, 1997, the company, along with other major manufacturers of water meters, was named as a defendant in a California lawsuit filed by the Natural Resources Defense Council. The lawsuit claims that the meter manufacturers are violating the standards established by California's Proposition 65 by selling bronze water meters in California that allegedly leach lead in excess of the Proposition 65 limits.

The company believes that its meters are in compliance with national standards established by the American Water Works Association and that the meters fully comply with the Federal Safe Drinking Water Act. The California standards are unique to California and are set at a level of one-thousandth of the point of no observable effect. Substantially all of the company's sales of residential water meters in California are to, and in response to specifications issued by, water utilities which are exempt from compliance with the Proposition 65 regulation. Also, since 1972 Badger Meter has been the only meter manufacturer to continuously offer a plastic meter as an option to utility customers. The plastic meter fully complies with Proposition 65 and the Federal Safe Drinking Water Act, as certified by the National Sanitation Foundation. The utilities had the opportunity to specify the plastic meter, as many of them did. As such, the company disputes the claims of the lawsuit and does not believe the ultimate resolution of the lawsuit will have a material adverse effect on the results of operations.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of the company's shareholders during the quarter ended December 31, 1998.

Executive Officers of the Company

The following table sets forth certain information regarding the executive officers of the company.

<TABLE>

<CAPTION>

Name	Position	Age at 2/26/99
----	-----	-----
<S>	<C>	<C>
James L. Forbes	President and Chief Executive Officer	66
Robert D. Belan	Executive Vice President	58
William H. Vander Heyden	Vice President - Industrial	62
Theodore N. Townsend	Vice President - International	54
Ronald H. Dix	Vice President - Administration and Human Resources	54
Deirdre C. Elliott	Vice President - Corporate Counsel and Secretary	42
Richard A. Meeusen	Vice President - Finance, Treasurer and Chief Financial Officer	44
Beverly L.P. Smiley	Corporate Controller	49

</TABLE>

There are no family relationships between any of the executive officers. All of the officers are elected annually at the first meeting of the Board of Directors held after each annual meeting of the shareholders. Each officer holds office until his successor has been elected or until his death, resignation or removal. There is no arrangement or understanding between any executive officer and any other person pursuant to which he was elected as an officer.

Mr. Forbes has served as President and Chief Executive Officer for more than five years.

Mr. Belan was elected Executive Vice President in April 1998. From 1992 to 1998, Mr. Belan was Vice President - Utility.

Mr. Vander Heyden has served as Vice President - Industrial for more than five years.

Mr. Townsend joined the company and was elected Vice President - International in February 1996. From 1993 to 1995, Mr. Townsend was Managing Director of International Gas Measurement, based in London, England for twelve companies related to Elster/Kromshroder and American Meter Companies.

Mr. Dix has served as Vice President - Administration and Human Resources for more than five years.

Ms. Elliott has served as Vice President - Corporate Counsel and Secretary for more than five years.

Mr. Meeusen joined the company and was elected Vice President - Finance and elected Chief Financial Officer in November 1995 and was elected Treasurer in January 1996. Prior to joining the company, Mr. Meeusen was Vice President - Finance and Treasurer for Zenith Sintered Products for more than five years.

Ms. Smiley was elected Corporate Controller of the company in

Part II

- Item 5. Market for the Registrant's Common Stock and Related Stockholder Matters
- The information set forth on page 27 in the company's 1998 Annual Report to Shareholders is incorporated herein by reference in response to this Item.
- Item 6. Selected Financial Data
- The information set forth on pages 1 and 29 in the company's 1998 Annual Report to Shareholders is incorporated herein by reference in response to this Item.
- Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
- The information set forth on pages 15, 16 and 17 in the company's 1998 Annual Report to Shareholders is incorporated herein by reference in response to this Item.
- Item 7.a. Quantitative and Qualitative Disclosures of Market Risk
- The information set forth on page 17 in the company's 1998 Annual Report to Shareholders is incorporated herein by reference in response to this Item.
- Item 8. Financial Statements and Supplementary Data
- Consolidated financial statements of the company at December 31, 1998 and 1997 and for each of the three years in the period ended December 31, 1998 and the auditor's report thereon and the company's unaudited quarterly financial data for the two-year period ended December 31, 1998 are incorporated herein by reference from the 1998 Annual Report to Shareholders, pages 18 through 28.
- Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
- None.

Part III

- Item 10. Directors and Executive Officers of the Registrant
- Information required by this Item with respect to directors is included under the headings "Nomination and Election of Directors" and Section 16(a) "Beneficial Ownership Reporting Compliance" in the company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 23, 1999, and is incorporated herein by reference.
- Information concerning the executive officers of the company is included in Part I of this Form 10-K.
- Item 11. Executive Compensation
- Information required by this Item is included under the headings "Nomination and Election of Directors-Director Compensation" and "Executive Compensation" in the company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 23, 1999, and is incorporated herein by reference; provided, however, that the subsection entitled "Executive

Item 12. Security Ownership of Certain Beneficial Owners and Management

Information required by this Item is included under the heading "Stock Ownership of Management and Others" in the company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 23, 1999, and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions

Information required by this Item is included under the headings "Management Review Committee Interlocks and Insider Participation" and "Certain Transactions" in the company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 23, 1999, and is incorporated herein by reference.

Part IV

Item 14. Exhibits, Financial Statement Schedule, and Reports on Form 8-K

(a) Documents filed

1. and 2. Financial Statements and Financial Statement Schedule. See Index to Financial Statements and Financial Statement Schedule on page F-0 which is incorporated herein by reference.
3. Exhibits. See the Exhibit Index included as the last pages of this report which is incorporated herein by reference.

(b) Reports on Form 8-K

No report on Form 8-K was required to be filed by the registrant during the quarter ended December 31, 1998.

SIGNATURES

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

BADGER METER, INC.
Registrant

By: /s/ Richard A. Meeusen

Richard A. Meeusen
Vice President - Finance and Treasurer
Chief Financial Officer
February 12, 1999

By: /s/ Beverly L.P. Smiley

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:

/s/ James O. Wright

James O. Wright
Director and Chairman
February 12, 1999

/s/ James L. Forbes

James L. Forbes
Director, President and
Chief Executive Officer
February 12, 1999

/s/ Robert M. Hoffer

Robert M. Hoffer
Director
February 12, 1999

/s/ Pamela B. Strobel

Pamela B. Strobel
Director
February 12, 1999

/s/ Charles F. James, Jr.

Charles F. James, Jr.
Director
February 12, 1999

/s/ Andrew J. Policano

Andrew J. Policano
Director
February 12, 1999

/s/ Donald J. Schuenke

Donald J. Schuenke
Director
February 12, 1999

/s/ Kenneth P. Manning

Kenneth P. Manning
Director
February 12, 1999

/s/ John J. Stollenwerk

John J. Stollenwerk
Director
February 12, 1999

/s/ James O. Wright, Jr.

James O. Wright, Jr.
Director
February 12, 1999

9

9

BADGER METER, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS
AND CONSOLIDATED FINANCIAL STATEMENT SCHEDULES

<TABLE>
<CAPTION>

	Page References	
	Annual Report to Shareholders Page Number -----	Form 10-K Page Number -----
Item 14(a) 1 -----		
<S>	<C>	<C>
Financial statements:		
Consolidated balance sheets at December 31, 1998 and 1997	19	
Consolidated statements of operations		

for each of the three years in the period ended December 31, 1998	18
Consolidated statements of cash flows for each of the three years in the period ended December 31, 1998	20
Consolidated statements of shareholders' equity for each of the three years in the period ended December 31, 1998	21
Notes to consolidated financial statements	22 - 29

Item 14(a) 2

Financial statement schedules:

Consolidated schedules for each of
the three years in the period ended
December 31, 1998

II - Valuation and qualifying accounts

F-1

</TABLE>

All other schedules are omitted since the required information is not present or is not present in amounts sufficient to require submission of the schedules, or because the information required is included in the financial statements and the notes thereto.

F-0

10

BADGER METER, INC.

SCHEDULE II - CONSOLIDATED VALUATION AND QUALIFYING ACCOUNTS

Years ended December 31, 1998, 1997, and 1996

<TABLE>

<CAPTION>

<S>	<C>	Balance at beginning of year <C>	Additions charged to earnings <C>	Deductions from allowances <C>	Balance at end of year <C>
Allowance for doubtful receivables:					
	1998	\$308,000 =====	\$151,000 =====	\$ 90,000 (a) =====	\$369,000 =====
	1997	\$242,000 =====	\$119,000 =====	\$ 53,000 (a) =====	\$308,000 =====
	1996	\$216,000 =====	\$115,000 =====	\$ 89,000 (a) =====	\$242,000 =====

Warranty/after-sale cost reserve:				
1998	\$3,630,000	\$2,783,000	\$2,027,000	\$4,386,000
	=====	=====	=====	=====
1997	\$1,929,000	\$3,352,000	\$1,651,000	\$3,630,000
	=====	=====	=====	=====
1996	\$691,000	\$2,735,000	\$1,497,000	\$1,929,000
	=====	=====	=====	=====

</TABLE>

Note:

(a) Accounts receivable written off, less recoveries, against the allowance.

F-1

11

EXHIBIT INDEX

<TABLE> <CAPTION> Exhibit No. -----	Exhibit Description -----
<S>	<C>
(3.0)	Restated Articles of Incorporation effective April 24, 1998. [Incorporated by reference from Exhibit (3.0) (i) to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 1998].
(3.1)	Restated By-Laws as amended August 14, 1998. [Incorporated by reference from Exhibit (3.0) (ii) to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 1998].
(4.0)	Loan Agreement, as amended April 30, 1988, between the Registrant and the M&I Marshall & Ilsley Bank relating to the Registrant's revolving credit loan. [Incorporated by reference from Exhibit (4.0) to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 1988].
(4.1)	Loan Agreement between the Firststar Bank Milwaukee, N.A. and the Badger Meter Employee Savings and Stock Ownership Plan and Trust, dated December 1, 1995. [Incorporated by reference from Exhibit (4.3) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1995].
(4.2)	Loan Agreement, as amended December 21, 1998, between the Firststar Bank Milwaukee, N.A. and the Badger Meter Employee Savings and Stock Ownership Plan and Trust.
(4.3)	Rights Agreement, dated May 26, 1998, between Registrant and Firststar Trust Company. [Incorporated by reference to Exhibit (4.1) to the Registrant's Registration Statement on Form 8-A (Commission File No. 1-6706)].
(9.0)	Badger Meter, Inc. Voting Trust Agreement dated June 1, 1953 as amended. [Incorporated by reference from Exhibit (13) to the Registrant's Quarterly Report on Form 10-Q dated April 28, 1967].
(9.1)	Badger Meter Officers' Voting Trust Agreement dated December 18, 1991. [Incorporated by reference from Exhibit (9.1) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991].

- (10.0) * Badger Meter, Inc. Restricted Stock Plan, as amended. [Incorporated by reference from Exhibit (4.1) to the Registrant's Form S-8 Registration Statement (Registration No. 33-27649)].
- (10.1) * Badger Meter, Inc. 1989 Stock Option Plan. [Incorporated by reference from Exhibit (4.1) to the Registrant's Form S-8 Registration Statement (Registration No. 33-27650)].
- (10.2) * Badger Meter, Inc. 1993 Stock Option Plan. [Incorporated by reference from Exhibit (4.3) to the Registrant's Form S-8 Registration Statement (Registration No. 33-65618)].
- (10.3) * Badger Meter, Inc. 1995 Stock Option Plan [Incorporated by reference from Exhibit (4.1) to the Registrant's Form S-8 Registration Statement (Registration No. 33-62239)].
- (10.4) * Badger Meter, Inc. 1997 Stock Option Plan. [Incorporated by reference from Exhibit (4.1) to the Registrant's Form S-8 Registration Statement (Registration No. 333-28617)].

</TABLE>

*A management contract or compensatory plan or arrangement.

EXHIBIT INDEX (CONTINUED)

<TABLE>

<CAPTION>

Exhibit No.

Exhibit Description

<S>

- (10.5) * Badger Meter, Inc. Deferred Compensation Plan. [Incorporated by reference from Exhibit (10.5) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1993].
- (10.6) Badger Meter, Inc. Employee Savings and Stock Ownership Plan [Incorporated by reference from Exhibit (4.1) to the Registrant's Form S-8 Registration Statement (Registration No. 033-62241)].
- (10.7) * Long-Term Incentive Plan. [Incorporated by reference from Exhibit (10.6) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1995].
- (10.8) * Badger Meter, Inc. Supplemental Non-Qualified Unfunded Pension Plan. [Incorporated by reference from Exhibit (10.7) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1995].
- (13.0) Portions of the Annual Report to Shareholders that are incorporated by reference.
- (21.0) Subsidiaries of the Registrant.
- (23.0) Consent of Ernst & Young LLP, Independent Auditors.
- (27.0) Financial Data Schedule.
- (99.0) Definitive Proxy Statement for the Annual Meeting of Shareholders to be held April 23, 1999. [To be filed with the Securities and Exchange Commission under Regulation 14A within 120 days after the end of the Registrant's fiscal year. With the exception of the information incorporated by reference into Items 10, 11, 12 and 13 of this Form 10-K, the definitive Proxy Statement is not deemed filed as part of this report].

</TABLE>

*A management contract or compensatory plan or arrangement.

FIRST AMENDMENT TO LOAN AGREEMENT

This First Amendment to Loan Agreement is dated as of the 21 day of December, 1998 by and between First Wisconsin National Bank Milwaukee now known as Firststar Bank Milwaukee, N.A. (herein called the "BANK") and the Badger Meter Employee Savings and Stock Ownership Plan and Trust (herein known as the "ESSOP").

RECITALS

WHEREAS, the Bank has previously provided to the ESSOP a One Million Dollar (\$1,000,00.00) Revolving Loan pursuant to a Loan Agreement dated as of December 1, 1995 (the "LOAN AGREEMENT") for the purpose of acquiring from time to time the common stock of Badger Meter, Inc. for the benefit of the participants of the ESSOP (the "LOAN"); and

WHEREAS, the Loan Agreement is guaranteed by Badger Meter, Inc. (herein called the "GUARANTOR") pursuant to a Guaranty dated as of December 1, 1995 (the "GUARANTOR"); and

WHEREAS, the ESSOP and Guarantor have requested the Bank to increase the amount of the Loan from One Million Dollars (\$1,000,000.00) to Two Million Six Hundred Thousand Dollars (\$2,600,000.00).

AGREEMENTS

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Loan Agreement is hereby amended and restated as follows:

1. The term "NOTE" shall mean the Revolving Credit Note attached hereto as Exhibit A which amends and restates the existing \$1,000,000 Promissory Note dated as of December 1, 1995, issued under the Loan Agreement.
2. The term "LIBOR RATE" shall mean the per annum offered rate for deposits in United States dollars for one, two, three and six month interest periods (the "INTEREST PERIODS") which appear on the Bloomberg electronic rate terminals at the Bank's money

center, as of 11:00 AM, London time, each Banking Day. If the appropriate Bloomberg Rate Screen is not accessible, the applicable LIBOR Rate will be determined by the Lender on the basis of other electronic information and other broker's quotes or offered rates for deposits in United States dollars. As used herein, "BANKING DAY" shall mean any day Bank's money center is open for business.

3. Section 2.1 "Stock Acquisition Loan" shall be amended in its entirety to read as follows:

"From time to time prior to December 31, 2005 (the "MATURITY DATE") or the earlier termination of this Loan Agreement, the ESSOP may borrow from the Bank for purposes of financing the acquisition of Badger Meter, Inc. common stock for the benefit of the participants of the ESSOP up to the aggregate principal amount outstanding at any one time of Two Million Six Hundred Thousand Dollar (\$2,600,000.00) (the "LOAN AMOUNT"). All Loans hereunder will be evidenced by a single promissory note of ESSOP payable to the order the Bank in the principal amount of the Loan Amount (the "NOTE") provided that ESSOP will be obligated to pay only the amounts actually disbursed and outstanding thereunder, together with accrued interest thereon, at the rates and dates specified herein and therein. Notwithstanding the foregoing, the Loan Amount will be automatically reduced by the amount of any principal payments made by ESSOP on the Note at any time, and the face amount of the Note shall be automatically reduced in an equal amount on said date, without further amendment by the parties."

4. Section 2.2 "Interest", Subsection (a) shall be amended by deleting the first three sentences thereof and inserting the following:

"The unpaid outstanding principal balance of the Note shall bear interest at rate equal to, at ESSOP's option, one or more of the following: (a) The prime rate of interest as announced and in effect from time to time at the Bank, with the rate hereon changing as and when such rate changes (such a loan a "PRIME RATE LOAN" and such a rate a "PRIME RATE"); or (b) 1.50% per annum in excess of the LIBOR Rate (such a loan a "EURODOLLAR LOAN" and such a rate a "LIBOR RATE"). In the event that ESSOP fails to select a LIBOR Rate at the end of any LIBOR Rate Interest Period, such loan shall automatically convert to a Prime Rate Loan at the then prevailing Prime Rate. No more than ten Eurodollar Loans may be in

effect at any one time and each Eurodollar Loan shall be at a minimum principal amount of \$100,000. Interest shall be computed for the actual number of days principal is unpaid, using a daily factor obtained by dividing the stated interest rate by 365."

5. Section 2.2 "Interest", Subsection (c) shall be amended in its entirety as follows:

"The Note may be prepaid in whole or in part, at the option of the ESSOP at any time, provided however, that the ESSOP shall give the Bank at least one day prior written notice of any such prepayment. Accrued interest on the amount prepaid shall also be paid on the date of prepayment. In the event of prepayment of less than all of the outstanding balance of such Note, such prepayment shall be in the minimum principal amount of Five Thousand Dollars (\$5,000.00) or a multiple thereof. To the extent at the time of any prepayment there exists both a Prime Rate Loan and a Eurodollar Loan, the prepayment shall be applied to the Prime Rate Loan first, until there is no outstanding principal balance thereon, and the remainder, if any, applied to the oldest outstanding Eurodollar Loan. There shall be no prepayment indemnity for any prepayment of a Prime Rate Loan. In the event any Eurodollar Loan is prepaid prior to the end of the Interest Period, the ESSOP hereby agrees to indemnify the Bank against any funding loss or expense's which the Bank may sustain or incur by reason of the liquidation or re-employment of deposits or other funds acquired by the Bank to fund or maintain any Eurodollar Loan as reasonably determined by Bank."

6. The following are conditions precedent to the effectiveness of this Amendment:
- A. Bank's receipt of a Reaffirmation of Guaranty from Badger Meter, Inc.;
 - B. Bank's receipt of an updated Borrowing Resolution from the ESSOP evidencing its authority to borrow up to Two Million Six Hundred Thousand Dollar (\$2,600,000.00) from Bank;
 - C. An Updated legal opinion from the ESSOP's counsel that the ESSOP is duly authorized to enter into this Loan Amendment, to borrow the additional funds available thereunder, and to otherwise perform its obligations hereunder;
 - D. Bank's receipt of a First Amendment to Pledge Agreement executed by ESSOP; and
 - E. Payment to Bank by the Guarantor of a \$2,000 closing fee (1/8 of 1% of \$1,600,000).
7. Except as specifically amended hereby, the Loan Agreement shall

remain in full force and effect in accordance with its terms. All warranties and representations contained therein are hereby reconfirmed as of the date hereof. All collateral previously given to secure the Loan Agreement continues as security and all guarantees of the obligations under the Loan Agreement remain in full force and effect. This is an amendment, not a novation.

8. This First Amendment shall not be construed as or be deemed to be a waiver by the Bank of existing defaults by ESSOP, whether known or undiscovered. All agreements, representations and warranties made herein shall survive the execution of this Amendment.
9. Pursuant to the Guaranty, the Guarantor shall be responsible for payment of all fees and out-of-pocket disbursements incurred by the Bank in connection with the preparation, execution, delivery, administration and enforcement of the Agreement, including all costs of collection, and including, without limitation, the fees and disbursements of counsel (including inside counsel) for the Bank.
10. This First Amendment shall only become effective upon execution by the ESSOP and the Bank, and approval by all guarantors and any other third party required by the Bank.

15

3

11. This First Amendment shall be governed by and construed in accordance with the internal laws of the State of Wisconsin.
12. This First Amendment may be signed in any number of counterparts, each of which shall be considered an original, but when taken together, shall constitute one document.
13. The ESSOP represents and warrants that the execution, delivery and performance of the Agreement and this First Amendment and the documents referenced herein are within the authority of the ESSOP.

Dated as of the 21 day of December, 1998.

BADGER METER EMPLOYEE SAVINGS AND
STOCK OWNERSHIP PLAN AND TRUST
BY: MARSHALL & ILSLEY TRUST COMPANY,
SOLELY AS TRUSTEE

By:

Name and Title:

ATTESTED:

By:

Name and Title:

FIRSTAR BANK MILWAUKEE, N.A.

By:

Name and Title:

FIRST AMENDMENT TO PLEDGE AGREEMENT

This First Amendment to Pledge Agreement is dated as of the 21 day of December, 1998 by and between Firstar Bank Milwaukee, N.A. and Badger Meter Employee Savings and Stock Ownership Plan and Trust (the "ESSOP").

RECITALS

WHEREAS, the Bank has previously provided to the ESSOP an One Million Dollar (\$1,000,000.00) Revolving Loan pursuant to a Loan Agreement dated as of

December 1, 1995 (the "LOAN AGREEMENT") for the purpose of acquiring from time to time the common stock of Badger Meter, Inc. for the benefit of the participants of the ESSOP (the "LOAN"); and

WHEREAS, the ESSOP has requested the Bank to increase the amount of the Loan from One Million Dollars (\$1,000,000.00) to Two Million Six Hundred Thousand Dollar (\$2,600,000.00).

AGREEMENTS

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Pledge Agreement is hereby amended as follows:

- 1. A new paragraph 1 shall be added as follows:

"Effective as of December 21, 1998, all common stock of Badger Meter, Inc. acquired by the ESSOP with the proceeds from the Loan as increased to \$2,600,000 (the "ESSOP STOCK"), shall be deemed Pledged Stock hereunder, and shall be subject to this Pledge Agreement upon their acquisition. All ESSOP Stock shall be held as Pledge Shares by Firststar Trust Company in a collateral pledge account in the name of the Bank for the benefit of the ESSOP, and shall be promptly delivered to Firststar Trust Company so as to maintain their identity and status as Pledged Stock hereunder, and to preserve Bank's rights vis-a-vis such Pledged Stock as proved for herein. As such Pledged Stock is acquired, the original certificates and a properly completed irrevocable stock power shall be promptly delivered to Firststar Trust Company as provided herein."

- 2. The remaining numbered paragraphs shall be renumbered starting with (2), et seq.

In all other respects, the Pledge Agreement remains unchanged and in full force and effect.

BADGER METER EMPLOYEE SAVINGS AND STOCK OWNERSHIP PLAN AND TRUST BY: MARSHALL & ILSLEY TRUST COMPANY, SOLELY AS TRUSTEE

By: _____ Name and Title: _____

ATTESTED:

By:

Name and Title:

ACKNOWLEDGMENT OF GUARANTOR

The undersigned acknowledges and agrees to all of the foregoing and agree that its Guaranty of Specific Transaction dated December 1, 1995 continues to guarantee the obligations of the Borrower to the Bank as amended hereby and by any prior amendments.

Dated as of December 21, 1998.

BADGER METER, INC.

By:

Name and Title:

AMENDED AND RESTATED
REVOLVING CREDIT NOTE

\$2,600,000

December 21, 1998

FOR VALUE RECEIVED, the undersigned borrower (the "BORROWER"), promises to pay to the order of Firststar Bank Milwaukee, N.A. (the "BANK"), at its main office in Milwaukee, Wisconsin, the principal sum of Two Million Six Hundred

Thousand and 00/100 Dollars (\$2,600,000.0), payable December 31, 2005 (the "MATURITY DATE").

Interest. The unpaid outstanding principal balance of the Note shall bear interest at rate equal to, at Borrower's option, one or more of the following: (a) The prime rate of interest as announced and in effect from time to time at the Bank, with the rate hereon changing as and when such rate changes (such a loan a "PRIME RATE LOAN" and such a rate a "PRIME RATE"); or (b) 1.50% per annum in excess of the LIBOR Rate (such a loan a "EURODOLLAR LOAN" and such a rate a "LOAN RATE").

Interest on the outstanding principal amount of the Note shall be payable per the Loan Agreement described below, with a final payment of any accrued interest due at the Maturity Date, or the earlier termination of the Loan Agreement.

Principal. The unpaid principal balance of this Note as may be outstanding from time to time hereunder, may be paid in the Borrowers sole discretion, at any time subject to the provisions of the Loan Agreement described below, but in any event, the entire unpaid principal balance shall be due and payable on December 31, 2005.

Interest shall be computed for the actual number of days principal is unpaid, using a daily factor obtained by dividing the stated interest rate by 365. Principal and interest not paid when due shall bear interest from and after the due date until paid at a rate of 2% per annum plus the rate otherwise payable hereunder.

In no event will the interest rate hereunder exceed that permitted by applicable law. If any interest or other charge is finally determined by a court of competent jurisdiction to exceed the maximum amount permitted by law, the interest or charge shall be reduced to the maximum permitted by law, and the Bank may credit any excess amount previously collected against the balance due or refund the amount to the Borrower.

Without affecting the liability of any Borrower, endorser, surety or guarantor, the Bank may, without notice, renew or extend the time for payment, accept partial payments, release or impair any collateral security for the payment of this Note, or agree not to sue any party liable on it.

This Amendment and Restated Revolving Credit Note constitutes the Note issued under a certain Loan Agreement dated as of December 1, 1995 between the Borrower and the Bank, to which Agreement reference is hereby made for a statement of the terms and conditions under which loans evidenced hereby were or may be made and a description of the terms and conditions upon which the maturity of this Note may be accelerated, and for a description of the collateral securing this Note.

This Revolving Credit Note is an amendment and restatement in its entirety of that certain One Million Dollar (\$1,000,000.00) Promissory Note issued under the Loan Agreement (the "ORIGINAL LOAN"); and this Revolving Credit

Note is intended to evidence a continuation and restatement of that Original Note, is not intended as a refinancing or substitution of such Original Note.

7

BADGER METER EMPLOYEE SAVINGS AND
STOCK OWNERSHIP PLAN AND TRUST
BY: MARSHALL & ILSLEY TRUST COMPAY,
SOLELY AS TRUSTEE

By: _____
Name and Title: _____

ATTESTED:

By: _____
Name and Title: _____

8

REAFFIRMATION OF GUARANTY

To: Firststar Bank Milwaukee, N.A. (THE "BANK")

The undersigned (the "GUARANTOR", whether one or more) has executed Continuing Guarant(ies) (Unlimited), Continuing Guarant(ies) (Limited), or Guarant(ies) of Specific Transaction dated December 1, 1995 (collectively the "GUARANTY") guaranteeing all of the obligations of Badger Meter Employee Savings

and Stock Ownership Plan and Trust (the "BORROWER") to the Bank, whether currently existing or arising in the future.

The Bank will be extending a new loan to the Borrower, or renewing, restructuring or otherwise amending an existing loan to the Borrower, as evidenced by the following documents, among others:

Amended and Restated Revolving Credit Note; First Amendment to Loan Agreement

The Guarantor hereby confirms that the guaranty remains in full force and effect, and the definition of "Obligations" in the Guaranty specifically includes the obligations identified above, as well as any renewals, amendments or refinancing thereto (including an increase in the principal amount of the loan).

This Reaffirmation is not intended to affect or limit the continuing and unlimited nature of the Guaranty, and the Guarantor reaffirms that consent by the Guarantor to any additional loans, refinancings, amendments and other changes in any agreements between the Bank and the Borrower is not necessary, as described in the Guaranty. All collateral securing the Guaranty also continues as security, and all other terms of the Guaranty are hereby reaffirmed.

The Guarantor represents that the Guarantor has reviewed the Borrower's financial condition prior to executing this Reaffirmation; and the Guarantor specifically relieves the Bank of any obligation to advise the Guarantor of the Borrower's current financial condition, or any changes in the Borrower's financial condition in the future.

The Guarantor hereby acknowledges the receipt of a copy of this Guaranty, IMPORTANT: READ BEFORE SIGNING. THE TERMS OF THIS AGREEMENT SHOULD BE READ CAREFULLY BECAUSE ONLY THOSE TERMS IN WRITING ARE ENFORCEABLE. NO OTHER TERMS OR ORAL PROMISES NOT CONTAINED IN THIS WRITTEN CONTRACT MAY BE LEGALLY ENFORCED. YOU MAY CHANGE THE TERMS OF THIS AGREEMENT ONLY BY ANOTHER WRITTEN AGREEMENT. THIS NOTICE SHALL ALSO BE EFFECTIVE WITH RESPECT TO ALL OTHER CREDIT AGREEMENTS NOW IN EFFECT BETWEEN YOU AND THIS LENDER. A MODIFICATION OF ANY OTHER CREDIT AGREEMENTS NOW IN EFFECT BETWEEN YOU AND THIS LENDER, WHICH OCCURS AFTER RECEIPT BY YOU OF THIS NOTICE, MAY BE MADE ONLY BY ANOTHER WRITTEN INSTRUMENT. ORAL OR IMPLIED MODIFICATIONS TO SUCH CREDIT AGREEMENTS ARE NOT ENFORCEABLE AND SHOULD NOT BE RELIED UPON.

Dated as of: December 21, 1998

(Individual Guarantor)

Badger Meter, Inc.

Guarantor Name (Corporation or Partnership)

(SEAL) a

Guarantor Name

By:

Name and Title:

(SEAL) By:

Guarantor Name

Name and Title:

Portions of Annual Report to Shareholders that are incorporated by reference.

22

2

(Page 1 of Annual Report to Shareholders)

BADGER METER, INC.

FINANCIAL HIGHLIGHTS
December 31, 1998 and 1997

<S>	1998		1997		% CHANGE
<CAPTION>	<C>	<C>	<C>	<C>	<C>
OPERATIONS (in thousands)					
Net sales	\$	143,813	\$	130,771	10.0
Net earnings	\$	8,247	\$	6,522	26.4
PER SHARE					
Net earnings:					
Basic	\$	2.28	\$	1.83	24.6
Diluted	\$	2.12	\$	1.65	28.5
Cash dividends declared:					
Common Stock	\$.60	\$.48	25.0
Class B Common Stock	\$.54	\$.44	22.7
Net book value	\$	13.13	\$	11.62	13.0
YEAR-END FINANCIAL POSITION (in thousands)					
Working capital	\$	10,776	\$	13,870	(22.3)
Current ratio		1.3 to 1		1.5 to 1	(13.3)
Long-term debt	\$	2,600	\$	928	180.2
Shareholders' equity	\$	47,848	\$	41,467	15.4
Net earnings as a percent of equity		17.2%		15.7%	9.6
=====					
OTHER					
Number of employees		956		972	(1.6)
Number of shareholders:					
Common Stock:					
In employee plans		810		770	5.2
Of record		576		596	(3.4)
Class B Common Stock		12		12	0
Shares outstanding at December 31:					
Common Stock		2,538,077		2,444,274	3.8
Class B Common Stock		1,107,840		1,125,570	(1.6)
=====					

</TABLE>

23

3

(Page 15 to 17 of Annual Report to Shareholders)

MANAGEMENT'S DISCUSSION AND ANALYSIS

BUSINESS DESCRIPTION

Badger Meter is a leading marketer and manufacturer of products using flow

measurement and control technology developed both internally and with other technology companies. Its products are used to measure and control the flow of liquids and gases in a variety of applications. The company has eight primary product lines: residential and commercial/industrial water meters (with related technologies), automotive fluid meters, ultrasonic flowmeters, small valves, natural gas instrumentation, flow tubes and industrial process meters.

Water meters and related systems produce the majority of the company's sales. A "water meter system" generally consists of a water meter, a register (some with a digital interface technology for communicating the reading), a packaging system and the monitoring or computerized management system used to collect and relay the reading. Badger Meter's strategy is to solve customers' metering needs with its proprietary meter reading systems or other systems available through alliances within the marketplace. In both alternatives, the company provides the meter that generates a mechanical signal and the device that converts the signal into a digital form. That signal may then be read by either a propriety meter reading system or systems developed by other technology companies.

RESULTS OF OPERATIONS

SALES

Badger Meter's sales increased \$13.0 million and \$14.8 million, or 10.0% and 12.7% in 1998 and 1997, respectively. Sales trends are primarily affected by new product sales and general market conditions. Residential water meter sales for the past several years have been impacted by both privatizations of water services and a continued industry movement away from manual-read meters to automated meter reading technologies.

Both the 1998 and 1997 sales increases included major product shipments as part of a large metering contract for the City of Philadelphia. 1997 sales also included international sales for projects in Manila and Mexico City, but 1998 saw a significant decrease in these sales as a result of the international financial situation and the anticipated end of the Mexico City contract. This decrease in international water meter sales was more than offset by increased domestic sales of radio-frequency automated meter reading systems and commercial/industrial water meters, and worldwide sales of automotive fluid meters.

Badger Meter continues to improve existing products and to develop and acquire new products. In 1998, the company completed the acquisition of a fire service product line. In late 1997, the company acquired a line of electromagnetic flowmeters. New product developments primarily relate to the areas of meter reading systems, commercial/industrial water meters, automotive fluid meters, valves and natural gas instrumentation. Increases in sales of new products depend upon the rate of acceptance of the new technologies, both domestically and internationally, overall market conditions and competition. Sales of mature product lines are directly related to the strength of the various markets utilizing those products and the development of products to replace them.

International sales are comprised primarily of sales of automotive fluid meters and valves in Europe, sales of automated meter reading technologies in Mexico, and sales of valves and other metering products throughout the world. In Europe, sales are made in both U.S. dollars and German marks. All other international sales are made in U.S. dollars. The company is able to partially hedge its German mark exposure.

GROSS PROFIT MARGINS

Gross profit margins were 39.9%, 37.3% and 36.7% for 1998, 1997 and 1996, respectively. These margins have steadily increased as higher sales volumes have enabled the company to leverage its fixed manufacturing costs. In 1998, production of certain product lines neared capacity levels, resulting in even higher margins. In addition, significant cost reductions over the past several years have resulted from capital investment to improve manufacturing processes and systems and from the company's cost improvement programs.

OTHER FACTORS

Selling, engineering and administrative costs increased 13.8% in 1998 and 12.0% in 1997. Both years reflect increased research and engineering costs primarily related to the development of products in connection with market alliances, acquisition of new product lines, and the continued upgrade and expansion of existing product lines. Also, 1997 was affected by higher incentive compensation costs and costs associated with the formation and development of the international sales organization.

Interest expense increased in both 1998 and 1997 as a result of higher debt balances primarily due to the funding of the Milwaukee facility expansion and

product line acquisitions, as well as general working capital needs related to the increased business activity. The impact of increased debt balances was partially offset by lower average interest rates.

INCOME TAXES

Income tax as a percentage of earnings before income taxes was 38.3%, 36.1% and 37.2% for 1998, 1997 and 1996, respectively. The increase from 1997 to 1998 was primarily due to decreased foreign sales resulting in a corresponding reduction in tax credits and increased tax rates on foreign operations. The decrease in the percentage from 1996 to 1997 was due primarily to lower taxes on foreign operations and favorable settlements of tax examinations.

NET EARNINGS AND EARNINGS PER SHARE

Higher sales and improved margins generated record earnings for both 1998 and 1997. Net earnings increased 26.4% in 1998 and 27.2% in 1997. Diluted earnings per share increased 28.5% in 1998 and 18.7% in 1997. While there was an increase in shares outstanding in each period, the principal reason for the variance from the net earnings percentage increases is the decrease from 1997 to 1998 in dilutive stock options outstanding with relatively higher exercise prices.

LIQUIDITY AND CAPITAL RESOURCES

Cash provided by operations increased from \$5.2 million in 1997 to \$14.7 million in 1998 due primarily to higher earnings. In 1997, cash provided by operations decreased from 1996 due to increased inventory, receivables and deferred tax asset balances, which offset higher earnings. The impact of these items on 1998 was considerably less, due to efforts made to balance inventory levels and due to reduced international receivables, which typically have a longer collection period.

Receivables increased only 3.2% during 1998, even though sales increased 10%. Again, the lower increase in receivables was primarily related to reduced international receivables. Inventories increased only 3.7% due to efforts made to balance inventory levels, as previously mentioned.

Capital expenditures included \$9.8 million in 1998 and \$1.3 million in 1997 related to the Milwaukee facility addition. The remaining expenditures were made to continue expansion of production capacity to meet higher sales requirements, to improve manufacturing processes to achieve higher quality and lower costs, and to improve facilities for marketing, engineering and administrative personnel.

In addition to the capital expenditures, the company also made approximately \$3.6 million in other investments during 1997, increasing the total other assets to \$6.1 million as of December 31, 1997. These investments primarily related to funds deposited in escrow in connection with the acquisition of a fire service product line, which was in process as of December 31, 1997. The acquisition was completed in 1998, at which time the funds were allocated to the appropriate inventory, equipment and intangibles accounts.

Badger Meter spent \$2.7 million in 1998 and \$1.8 million in 1997 to acquire treasury stock. These expenditures were offset by funds generated through the issuance of stock related to the exercise of stock options. Also during 1998, the Badger Meter Employee Savings and Stock Ownership Plan (the ESSOP) borrowed an additional \$1.9 million from a local bank and used those funds to purchase stock from the company.

25

5

In 1998 and 1997, capital expenditures and other investing activities exceeded cash generated by operations, causing the company to increase bank borrowings in those years. Total short-term debt at December 31, 1998, was \$14.3 million, consisting of commercial paper and bank debt. Long-term debt also increased to \$2.6 million at December 31, 1998, due to the increase in the ESSOP debt. This resulted in a corresponding increase in the employee benefit stock balance in the company's equity accounts.

Other significant changes in balance sheet accounts during 1998 include an increase in intangible assets of \$802,000 due to intangibles associated with the fire service product line acquisition. Prepaid pension decreased \$489,000 as a result of normal pension expense with no funding payments required in 1998 due to the overfunded status of the plan. Other assets decreased \$2.9 million due to the allocation of the product line acquisition costs previously discussed.

Badger Meter has a net deferred tax asset of \$2.9 million, reflecting the net temporary differences between financial reporting and tax reporting. The majority of this net asset relates to deferred payments to employee benefit plans and is expected to reverse as future payments exceed expenses. The increase in the deferred tax asset of \$666,000 during 1998 relates to the

increased accruals for employee benefit plans and after-sale costs.

Payables increased \$3.0 million during 1998 due to increased business activity and amounts due in connection with the Milwaukee facility addition. Other accrued liabilities increased \$756,000 during 1998, primarily due to provisions for after-sale costs. Current income taxes decreased \$779,000 due to the timing of estimated tax payments. The \$348,000 decrease in accrued non-pension postretirement benefits was related to normal retiree medical expenditures exceeding amounts required to be accrued under accounting rules. Other accrued employee benefits increased \$736,000 due primarily to increased employee deferred compensation.

Reinvested earnings increased during 1998 due to net income, partially offset by dividend payments. Common stock and capital in excess of par value both increased during 1998 due to stock issued in connection with the exercise of stock options and ESSOP transactions.

Badger Meter's financial condition remains strong. The company believes that its operating cash flows, available borrowing capacity and ability to raise capital through the sale of Common Stock provide adequate resources to fund ongoing operating requirements and future capital expenditures related to expansion of capacity and development of new products.

ENVIRONMENTAL MATTERS

The company believes it is in compliance with the various environmental statutes and regulations to which the company's domestic and international operations are subject. Currently, the company is in the process of addressing two environmental issues as well as litigation alleging a violation of Proposition 65, California's environmental regulation. The company does not believe the ultimate resolution of any of these claims will have a material adverse effect on the results of operations.

YEAR 2000 MATTERS

Badger Meter has reviewed its exposure to potential computer software problems relating to the advent of the year 2000. Management believes that the company has adequately addressed this issue in the software incorporated into the products that it sells. The company has also reviewed internal non-information technology systems and is in the process of testing and upgrading those systems, as necessary.

Regarding information technology systems, many of the software programs used by Badger Meter are already compliant with the requirements of year 2000 processing. The remaining systems are currently being upgraded to new vendor versions, which will address the year 2000 issue in addition to providing increased functionality. These remaining upgrades are expected to be completed during the summer of 1999 prior to any anticipated impact of the year 2000 on the company's operations. Testing will begin as soon as the implementation is complete.

If the year 2000 issue is not properly addressed by the company and its vendors, the company could incur additional transaction processing costs and there could be interruptions in the company's supply chain, resulting in increased costs as the company moves to alternate vendors. However, the company does not expect to have any significant problems with its products, systems or vendors as a result of this issue. Total expected costs (in excess of the normal software upgrade costs) are less than \$100,000.

MARKET RISK

In the ordinary course of business, the company is exposed to various market risks, including commodity prices, foreign currency rates and interest rates. The company manages these risks through a combination of interest rate swaps and foreign loans. The company does not hold or issue derivative instruments for trading purposes.

Badger Meter's foreign currency risk relates to the sale of products to foreign customers, specifically European customers as all other foreign sales are made in U.S. dollars. The company uses lines of credit with German banks to offset currency exposure related to European receivables and other monetary assets. The company's exposure to European currency fluctuations has been further reduced by the stabilization of inter-European currencies through the introduction of the Euro. As of December 31, 1998 and 1997, the company's foreign currency net monetary assets were fully offset by comparable debt, resulting in no exposure.

As of December 31, 1998 and 1997, the company had only floating-rate debt. Although the company occasionally uses interest rate swap agreements to hedge the effects of changes in interest rates on a portion of the company's debt, there were no such agreements existing as of December 31, 1998 or 1997. Without any interest rate swap agreements in place, the company's future annual interest costs will fluctuate based on short-term interest rates.

FORWARD LOOKING STATEMENTS

Certain statements in this report, as well as other information provided from time to time by the company or its employees, may contain forward looking statements that involve risks and uncertainties that could cause actual results to differ materially from those in the forward looking statements. The words "anticipate", "believe", "estimate", "expect", "think", and "objective" or similar expressions are intended to identify forward looking statements. The forward looking statements are based on the company's current views and assumptions and involve risks and uncertainties that include, among other things: the success or failure of new product developments; the actions of competitors; changes in the domestic economic conditions, including housing starts; changes in foreign economic conditions, including currency fluctuations; changes in laws and regulations; changes in customer demand and fluctuations in the prices of and availability of purchased raw materials and parts. Some or all of these factors are beyond the company's control.

27

7

(Page 18 of Annual Report to Shareholders)

BADGER METER, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1998, 1997 and 1996

<TABLE> <CAPTION> (In thousands except per share amounts)	1998	1997	1996
<S>	<C>	<C>	<C>
Net sales	\$143,813	\$130,771	\$116,018
Cost of sales	86,502	82,034	73,490
Gross margin	57,311	48,737	42,528
Selling, engineering and administration	43,317	38,077	33,993
Operating earnings	13,994	10,660	8,535
Interest expense	630	455	368
Earnings before income taxes	13,364	10,205	8,167
Provision for income taxes	5,117	3,683	3,040
Net earnings	\$8,247	\$6,522	\$5,127
Earnings per share:			
Basic	\$2.28	\$1.83	\$1.46
Diluted	\$2.12	\$1.65	\$1.39
Shares used in computation of:			
Basic	3,624	3,560	3,511
Impact of dilutive stock options	272	401	187
Diluted	3,896	3,961	3,698

</TABLE>

See accompanying notes.

28

(Page 19 of Annual Report to Shareholders)

BADGER METER, INC.

CONSOLIDATED BALANCE SHEETS
December 31, 1998 and 1997

<TABLE> <CAPTION> (Dollars in thousands)	1998	1997
<S>	<C>	<C>
ASSETS		
Current assets:		
Cash	\$ 2,371	\$ 1,055
Receivables (Note 3)	19,814	19,193
Inventories:		
Finished goods	5,270	4,095
Work in process	10,089	10,871
Raw materials	7,044	6,632
Total inventories	22,403	21,598
Prepaid expenses	1,064	693
Total current assets	45,652	42,539
Property, plant and equipment:		
Land and improvements	2,965	2,792
Buildings and improvements	18,360	12,902
Machinery and equipment	58,609	48,713
Less accumulated depreciation	(42,523)	(40,423)
Net property, plant and equipment	37,411	23,984
Intangible assets, at cost less accumulated amortization	1,452	650
Prepaid pension (Note 7)	6,262	6,751
Deferred income taxes (Note 8)	2,930	2,264
Other assets (Note 7)	3,238	6,109
Total assets	\$96,945	\$82,297
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Short-term debt (Note 4)	\$14,315	\$11,245
Payables	10,174	7,196
Accrued compensation and employee benefits	5,521	5,339
Other accrued liabilities	4,386	3,630
Income and other taxes	480	1,259
Total current liabilities	34,876	28,669
Accrued non-pension postretirement benefits (Note 7)	7,459	7,807
Other accrued employee benefits (Notes 5 and 7)	4,162	3,426
Long-term debt (Note 7)	2,600	928
Commitments and contingencies (Note 6)		
Shareholders' equity: (Notes 2, 5 and 7)		
Common Stock, \$1 par; authorized 5,000,000 shares; issued 3,391,941 shares in 1998 and 3,240,263 shares in 1997	3,392	3,240
Class B Common Stock, \$.10 par; authorized 5,000,000 shares; issued 1,107,840 shares in 1998 and 1,125,570 in 1997	111	112
Capital in excess of par value	12,732	8,315
Reinvested earnings	39,198	33,057
Less: Employee benefit stock	(2,606)	(917)
Treasury stock, at cost, 853,864 shares in 1998 and 795,989 shares in 1997	(4,979)	(2,340)
Total shareholders' equity	47,848	41,467
Total liabilities and shareholders' equity	\$96,945	\$82,297

</TABLE>

See accompanying notes.

(Page 20 of Annual Report to Shareholders)

BADGER METER, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
Years ended December 31, 1998, 1997 and 1996

<TABLE> <CAPTION> (Dollars in thousands)	1998	1997	1996
<S>	<C>	<C>	<C>
Operating activities:			
Net earnings	\$ 8,247	\$ 6,522	\$ 5,127
Adjustments to reconcile net earnings to net cash provided by operations:			
Depreciation	4,499	3,725	3,522
Amortization	176	228	598
Noncurrent employee benefits	1,088	614	(883)
Deferred income taxes	(666)	(1,007)	279
Changes in:			
Receivables	(621)	(3,695)	(1,838)
Inventories	(805)	(4,092)	(1,672)
Current liabilities other than short-term debt	3,137	2,658	4,880
Prepaid expenses and other	(371)	225	(135)
Total adjustments	6,437	(1,344)	4,751
Net cash provided by operations	14,684	5,178	9,878
Investing activities:			
Property, plant and equipment	(17,926)	(8,349)	(5,382)
Other - net	1,893	(3,616)	(548)
Net cash used for investing activities	(16,033)	(11,965)	(5,930)
Financing activities:			
Bank borrowings (repayments)	2,842	8,548	(2,941)
Dividends	(2,106)	(1,665)	(1,479)
Stock options and ESSOP	4,586	1,597	639
Purchase of treasury stock	(2,657)	(1,761)	(221)
Net cash provided by (used for) financing activities	2,665	6,719	(4,002)
Increase (decrease) in cash	1,316	(68)	(54)
Cash - beginning of year	1,055	1,123	1,177
Cash - end of year	\$ 2,371	\$ 1,055	\$ 1,123
Supplemental disclosures of cash flow information:			
Cash paid during the year for:			
Income taxes	\$ 6,466	\$ 3,419	\$ 2,348
Interest (including \$208 of interest capitalized during facility construction in 1998)	\$ 864	\$ 441	\$ 378

</TABLE>

See accompanying notes.

30

10

(Page 21 of Annual Report to Shareholders)

BADGER METER, INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
Years ended December 31, 1998, 1997 and 1996

<TABLE> <CAPTION> (In thousands except per share amounts)	Common Stock	Class B Common Stock	Capital in excess of par value	Reinvested earnings	Employee benefit stock/ adjustments	Treasury stock	Total
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Balance, December 31, 1995	\$1,552	\$56	\$7,832	\$24,552	\$(1,471)	\$(358)	\$32,163
Net earnings				5,127			
Pension liability adjustment					369		
Comprehensive income							5,496
Cash dividends, \$.43 per Common share				(1,039)			(1,039)
Cash dividends, \$.39 per Class B Common share				(440)			(440)
Restricted stock plan (Note 5):							
Amortization of unearned compensation					40		40

Shares canceled			(9)		9		0
Tax benefit on vested restricted stock			13				13
Stock options exercised (Note 5)	25		429				454
Tax benefit on stock options (Note 5)			103				103
Tax benefit on dividends (Notes 5 and 7)			27				27
Shares purchased by ESSOP participants	1		36				37
Treasury stock issued			5				5
Treasury stock purchased						(221)	(221)
Two-for-one stock split	1,577	56	(1,633)				0

Balance, December 31, 1996	3,155	112	6,803	28,200	(1,053)	(579)	36,638

Net earnings				6,522			6,522
Cash dividends, \$.48 per Common share				(1,172)			(1,172)
Cash dividends, \$.44 per Class B Common share				(493)			(493)
Restricted stock plan (Note 5):							
Amortization of unearned compensation					36		36
Tax benefit on vested restricted stock			150				150
Employee stock ownership plan (Note 7):							
Amortization of unearned compensation					100		100
Stock options exercised (Note 5)	81		761				842
Tax benefit on stock options (Note 5)			511				511
Tax benefit on dividends (Notes 5 and 7)			23				23
Shares purchased by ESSOP participants	4		67				71
Treasury stock purchased						(1,761)	(1,761)

Balance, December 31, 1997	3,240	112	8,315	33,057	(917)	(2,340)	41,467

Net earnings				8,247			8,247
Cash dividends, \$.60 per Common share				(1,501)			(1,501)
Cash dividends, \$.54 per Class B Common share				(605)			(605)
Restricted stock plan (Note 5):							
Amortization of unearned compensation					11		11
Tax benefit on vested restricted stock			109				109
Employee stock ownership plan (Note 7):							
Amortization of unearned compensation					100		100
Stock options exercised (Note 5)	54		564				618
Tax benefit on stock options (Note 5)			268				268
Tax benefit on dividends (Notes 5 and 7)			55				55
Shares purchased by ESSOP participants	98		3,437				3,535
Treasury stock purchased		(1)				(2,657)	(2,658)
Treasury stock issued			(16)			18	2
ESSOP Loan					(1,800)		(1,800)

Balance, December 31, 1998	\$3,392	\$111	\$12,732	\$39,198	\$(2,606)	\$(4,979)	\$47,848
=====							

</TABLE>

See accompanying notes.

1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

PROFILE Badger Meter (the company) is a leading marketer and manufacturer of products using flow measurement and control technology developed both internally and with other technology companies. Its products are used to measure and control the flow of liquids and gases in a variety of applications. The company's products include water meters and associated systems, wastewater meters, industrial process meters, automotive fluid meters, small valves and natural gas instruments.

CONSOLIDATION The consolidated financial statements include the accounts of the company and its wholly owned subsidiaries.

REVENUE RECOGNITION Revenues are recognized upon shipment of product. The company estimates and records provisions for warranties and other after-sale costs in the period the sale is reported. Such provisions are included in other accrued liabilities.

INVENTORIES Inventories are valued at the lower of cost (first-in, first-out method), or market.

PROPERTY, PLANT AND EQUIPMENT Property, plant and equipment are stated at cost. Depreciation is provided over the estimated useful lives of the respective assets, principally by the straight-line method.

INTANGIBLE ASSETS Costs of purchased patents are amortized over the lives of the patents. Accumulated amortization at December 31, 1998 and 1997, was \$2,697,000 and \$2,521,000, respectively.

TREASURY STOCK Treasury stock is stated at cost. In 1996, the Board of Directors authorized the repurchase of up to 350,000 shares of stock. During 1998 and 1997, the company repurchased 75,605 and 67,799 shares respectively, which were added to treasury stock. As of December 31, 1998, the company has repurchased 155,404 shares or 44% of the authorized amount.

RESEARCH AND DEVELOPMENT Research and development costs are charged to expense as incurred and amounted to \$6,105,000, \$4,397,000, and \$3,851,000 in 1998, 1997 and 1996, respectively.

USE OF ESTIMATES The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

FOREIGN CURRENCY TRANSLATION The company's functional currency for all of its foreign subsidiaries is the U.S. dollar. Translation adjustments and transaction gains and losses are recognized in consolidated income as incurred.

ACCOUNTING PRONOUNCEMENTS In June 1998, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 133 (SFAS 133), "Accounting for Derivative Instruments and Hedging Activities," which will become effective for 2000. The company's hedging activities are discussed in Note 4. The company does not believe that SFAS 133 will have a material effect on its results of operations, financial position or disclosures.

During 1998, the company adopted Statement of Position 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use", which requires that certain computer software costs be capitalized. The impact was not material.

RECLASSIFICATIONS Certain reclassifications have been made to the 1997 and 1996 consolidated financial statements to conform to the 1998 presentation.

32

12

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

2 COMMON STOCK

Holders of Class B Common Stock are restricted in their ability to transfer such shares although they may convert their shares of Class B Common Stock into shares of Common Stock at any time. Holders of Common Stock are entitled to cash dividends per share equal to 110% of all dividends declared and paid on each share of the Class B Common Stock. Holders of Class B Common Stock are entitled to ten votes per share on any matters brought before the shareholders of the company while holders of Common Stock are entitled to one vote per share. Liquidation rights are the same for both classes of stock.

On May 15, 1998, the Board of Directors of the company adopted a Shareholder Rights Plan declaring a dividend of one right for each share of the company's common stock outstanding. In the event a person or group acquires or seeks to acquire 20% or more of the outstanding common stock of the company, the rights may be exercised (except by the acquiring person whose rights are canceled). Upon exercise, each right entitles the holder to purchase from the company one share of common stock at an initial exercise price of \$140 (subject to adjustment) or, upon the occurrence of certain events, common stock of the company or the acquiring company having a market value equivalent to two times the exercise price. Subject to certain conditions, the rights are redeemable by the Board of Directors for \$.01 per right and are exchangeable for shares of common stock. The rights have no voting power and expire on May 26, 2008.

3 TRANSACTIONS WITH AFFILIATED COMPANY

The company carries its 15% interest in a Mexican company, Medidores Azteca, S.A. (Azteca) at cost (\$75,000). During 1998, 1997 and 1996, the company sold approximately \$996,000, \$1,500,000, and \$1,175,000 of product to Azteca. Trade receivables from Azteca at December 31, 1998 and 1997, were \$486,000 and \$608,000, respectively.

4 SHORT-TERM DEBT AND CREDIT LINES

Short-term debt at December 31, 1998 and 1997, consisted of:

<TABLE> <CAPTION> (In thousands)	1998	1997
<S>	<C>	<C>
Notes payable to banks	\$1,786	\$1,617
Commercial paper	12,501	9,565
Other	28	63
Total	\$14,315	\$11,245

</TABLE>

The company has \$39,790,000 of short-term credit lines with domestic and foreign banks which includes a \$25,000,000 commercial paper line of credit. At December 31, 1998, \$25,503,000 was unused and available to the company under the lines. The weighted-average interest rate on the outstanding balance was 5.46% and 5.81% at December 31, 1998 and 1997. The company occasionally uses interest rate swap agreements to hedge the effects of changes in the interest rates on the company's outstanding commercial paper, although no such agreements existed as of December 31, 1998 or 1997.

5 RESTRICTED STOCK AND STOCK OPTION PLANS

A. RESTRICTED STOCK PLAN

The company's Restricted Stock Plan (the Plan) provided for the award of up to 200,000 shares of the company's Common Stock to certain officers and key employees and for the reimbursement to certain participants for the personal income tax liability resulting from such awards. The company provides for any income tax liability ratably throughout the restricted period. Plan participants are entitled to cash dividends and to vote their respective shares.

33

13

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS December 31, 1998, 1997 and 1996

The sale or transfer of the shares is limited during the restricted period, not exceeding eight years. All eligible shares have been issued. The value of such stock was established by the market price on the date of grant. Restrictions on 11,000 shares expired during 1998.

Unearned compensation was charged for the market value of the restricted shares as these shares were issued in accordance with the Plan. The unearned compensation is shown as a reduction of shareholders' equity in the accompanying Consolidated Balance Sheets and is being amortized ratably over the restricted period.

During 1998, 1997 and 1996, \$11,000, \$36,000, and \$40,000 was charged to expense relating to the Plan.

B. STOCK OPTION PLANS

The company has four stock option plans which provide for the issuance of options to key employees and directors of the company. Each plan authorizes the issuance of options to purchase up to an aggregate of 200,000 shares of Common Stock, with vesting periods of up to five years and maximum option terms of ten years. As of December 31, 1998, options to purchase approximately 74,000 shares are available for issue.

The following table summarizes the transactions of the company's stock option plans for the three-year period ended December 31, 1998:

<TABLE> <CAPTION>	Number of Shares	Weighted-Average Exercise Price
<S>	<C>	<C>
Unexercised options outstanding - December 31, 1995	349,260	\$9.64
Options granted	144,168	\$12.96
Options exercised	(49,200)	\$9.22
Options forfeited	(8,468)	\$10.67
Unexercised options outstanding - December 31, 1996	435,760	\$10.77
Options granted	173,696	\$22.36

Options exercised	(81,742)	\$10.31
Options forfeited	(7,628)	\$12.59

Unexercised options outstanding -		
December 31, 1997	520,086	\$14.68
Options granted	32,600	\$35.56
Options exercised	(53,486)	\$11.54
Options forfeited	(4,600)	\$19.97

Unexercised options outstanding -		
December 31, 1998	494,600	\$16.35
=====		
Price range \$8.38 - \$12.38		
(weighted-average contractual life of 5.2 years)	272,004	\$10.48
Price range \$14.81 - \$22.50		
(weighted-average contractual life of 8.2 years)	172,896	\$21.25
Price range \$24.13 - \$35.57		
(weighted-average contractual life of 9.0 years)	49,700	\$31.42
=====		
Exercisable options -		
December 31, 1996	241,610	\$9.39
December 31, 1997	243,282	\$10.35
December 31, 1998	319,040	\$12.50
=====		

</TABLE>

34

14

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

As allowed by SFAS 123, "Accounting for Stock-Based Compensation", the company has elected to continue to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" (APB 25) in accounting for its stock option plans. Under APB 25, the company does not recognize compensation expense upon the issuance of its stock options because the option terms are fixed and the exercise price equals the market price of the underlying stock on the grant date. The company has determined the pro-forma information as if the company had accounted for stock options granted since January 1, 1995, under the fair value method of SFAS 123. The Black-Scholes option pricing model was used with the following weighted-average assumptions:

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Risk-free interest rate	5.7%	6.5%	5.5%
Dividend yield	1%	1%	3%
Volatility factor	34%	23%	17%
Weighted-average expected life	5.0 years	8.2 years	4.6 years

</TABLE>

The weighted-average fair value of options granted in 1998, 1997 and 1996 were \$12.89, \$8.92 and \$2.11 per share, respectively. If the company had recognized compensation expense based on these values, the company's pro-forma net earnings and both basic and diluted earnings per share would have been reduced by \$336,000 or \$.09 per share for 1998 and \$299,000 or \$.08 per share for 1997. The pro-forma effect of these options on 1996 was not material. These pro-forma calculations only include the effects of options granted since January 1, 1995. As such, the impacts are not necessarily indicative of the effects on reported net income of future years.

6 COMMITMENTS AND CONTINGENCIES

A. COMMITMENTS

The company leases equipment and facilities under operating leases, some of which contain renewal options. Future minimum lease payments consisted of the following at December 31, 1998:

<TABLE>
<CAPTION>
(In thousands)

<S>	<C>
1999	\$643

2000	272
2001	207
2002	161
2003 and thereafter	484

Total minimum lease payments \$1,767
=====

</TABLE>

Total rental expense charged to operations under all operating leases was approximately \$1,561,000, \$1,447,000 and \$1,294,000 in 1998, 1997 and 1996, respectively.

35

15

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

B. CONTINGENCIES

In the normal course of business, the company is named in legal proceedings. There are currently no material legal proceedings pending with respect to the company.

The company is subject to contingencies relative to environmental laws and regulations. Currently the company is in the process of resolving an issue relative to a landfill site and a suit alleging violation of Proposition 65, California's environmental regulation. The company is also involved in litigation filed by the owner of property near one of the company's plants, alleging damage to property value by virtue of spillage from past company operations. The company believes that this suit is without merit. Further, the company does not believe the ultimate resolution of any of these claims will have a material adverse effect on the results of operations.

The company has evaluated its worldwide operations to determine if any risks and uncertainties exist that could severely impact its operations in the near term. The company does not believe that there are any significant risks. However, the company does rely on single suppliers for certain castings and components in several of its product lines. Although alternate sources of supply exist for these items, loss of certain suppliers could temporarily disrupt operations. The company attempts to mitigate these risks by working closely with key suppliers and by purchasing business interruption insurance where appropriate.

The company reevaluates its exposures on a periodic basis and makes adjustments to reserves as appropriate.

36

16

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

7 EMPLOYEE BENEFIT PLANS

A. PENSION PLAN

The company maintains a non-contributory defined benefit pension plan for its employees. The following table sets forth the components of net periodic pension expense for the years ended December 31, 1998, 1997 and 1996:

<TABLE>
<CAPTION>
(In thousands)

	1998	1997	1996
<S>	<C>	<C>	<C>
Service cost - benefits earned during the year	\$1,734	\$1,616	\$1,044
Interest cost on projected benefit obligations	2,659	2,415	2,249
Expected return on plan assets	(3,532)	(3,324)	(3,086)
Net amortization and deferral	(373)	(356)	(319)
Net periodic pension cost (credit)	\$488	\$351	\$ (112)

=====

</TABLE>

The following table provides a reconciliation of benefit obligations, plan assets and funded status:

<TABLE> <CAPTION> (In thousands)	1998	1997
<S>	<C>	<C>
Change in benefit obligation:		
Benefit obligation at beginning of year	\$34,653	\$32,202
Service cost	1,734	1,616
Interest cost	2,659	2,415
Actuarial (gain) loss	1,506	(211)
Benefits paid	(2,719)	(1,369)
Projected benefit obligation as of September 30	\$37,833	\$34,653
Change in plan assets:		
Fair value of plan assets as of beginning of year	\$42,168	\$37,346
Actual return on plan assets	1,530	6,187
Company contributions	0	4
Benefits paid	(2,719)	(1,369)
Fair value of plan assets as of September 30	\$40,979	\$42,168
Reconciliation:		
Funded status as of September 30	\$3,146	\$7,515
Unrecognized net transition asset	(847)	(1,270)
Unrecognized prior service cost	(2,511)	(2,673)
Unrecognized net actuarial loss	6,474	3,179
Prepaid pension asset as of September 30 and December 31	\$6,262	\$6,751

</TABLE>

Actuarial assumptions used in the preparation of the above data:

<TABLE> <CAPTION>	1998	1997
<S>	<C>	<C>
Discount rate	7.0%	7.5%
Expected return on plan assets	9.0%	9.0%
Rate of compensation increase	5.0%	5.0%

</TABLE>

37

17

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

B. OTHER POSTRETIREMENT BENEFITS

The company has certain postretirement plans that provide medical benefits for retirees and eligible dependents. The following table sets forth the components of net periodic postretirement medical expense for the years ended December 31, 1998, 1997 and 1996:

<TABLE> <CAPTION> (In thousands)	1998	1997	1996
<S>	<C>	<C>	<C>
Service cost, benefits attributed for service of active employees for the period	\$100	\$111	\$103
Interest cost on the accumulated postretirement benefit obligation	501	515	656
Unrecognized prior service credit	(236)	(236)	(59)
Unrecognized net loss	57	54	21
Net periodic postretirement benefit cost	\$422	\$444	\$721

</TABLE>

The following table provides a reconciliation of benefit obligations. It is the company's policy to fund health care benefits on a cash basis. Since there are no plan assets, the plan is unfunded.

(In thousands)	1998	1997
Change in benefit obligation:		
Benefit obligation at beginning of year	\$7,035	\$7,213
Service cost	100	111
Interest cost	501	515
Actuarial (gain) loss	(33)	(360)
Benefits paid	(770)	(444)
Projected benefit obligation and unfunded status as of December 31	6,833	7,035
Unrecognized prior service credit	2,062	2,298
Unrecognized net actuarial loss	(1,436)	(1,526)
Accrued postretirement benefit cost as of December 31	\$7,459	\$7,807

</TABLE>

The discount rate used to measure the accumulated postretirement benefit obligation was 7.0% for 1998 and 7.5% for 1997. Since the company has established fixed company contribution amounts for retiree health care benefits, future health care cost trends do not impact the company's accruals or provisions.

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

C. BADGER METER EMPLOYEE SAVINGS AND STOCK OWNERSHIP PLAN

In 1991, the company formed The Badger Meter Employee Savings and Stock Ownership Plan (the ESSOP) and guaranteed a loan made to the ESSOP which had been used to purchase Common Stock of the company from shares held in treasury. The company is obligated to contribute sufficient cash to the ESSOP to enable it to repay the loan principal and interest. Each payment releases shares of Common Stock (22,856, 11,428 and 5,626 shares in 1998, 1997 and 1996) for allocation to participants in the ESSOP.

The principal amount due on the original loan was \$700,000 at December 1, 1998 and \$900,000 at December 31, 1997. In December of 1998, the ESSOP refinanced the loan and increased it by \$1,900,000 to the December 31, 1998 balance of \$2,600,000. The terms of the loan allow variable payments of principal with the final principal and interest payment due December 31, 2005. Interest may be charged at either Prime Rate or at LIBOR plus 1.5%. As of December 31, 1998, the LIBOR-based loan had an interest rate of 6.6%.

The ESSOP includes a voluntary 401(k) savings plan which allows domestic employees to defer up to 15% of their income on a pretax basis. The company matches 25% of each employee's contribution, with the match percentage applying to a maximum of 7%, 7% and 6% of the employee's salary for 1998, 1997 and 1996, respectively. The match is paid in company stock. For 1998, 1997 and 1996, respectively, 11,428, 11,428 and 16,038 shares of Common Stock released through principal and interest payments on the ESSOP debt were allocated to participants.

In addition to the match, the company may, at the discretion of the Board of Directors, allocate additional available shares to non-represented participants who are not covered by a collective bargaining agreement. An additional 1,797 and 1,016 shares were allocated for 1997 and 1996, respectively.

The obligation related to the ESSOP has been recorded as long-term debt and a like amount of unearned compensation has been recorded as a reduction of shareholders' equity in the accompanying Consolidated Balance Sheets. Charges to expense were \$200,000, \$132,000 and \$239,000 in 1998, 1997 and 1996, respectively. The company also incurred interest on the ESSOP loan of \$5,000,

\$19,000 and \$33,000 which was net of dividends on unallocated ESSOP shares of \$45,000, \$47,000 and \$37,000 for 1998, 1997 and 1996, respectively. These amounts are included in interest expense in the accompanying Consolidated Statements of Operations.

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

8 INCOME TAX EXPENSE

Details of earnings before income taxes and the related provision for income taxes are as follows:

<TABLE> <CAPTION> (In thousands)	1998	1997	1996
<S>	<C>	<C>	<C>
Earnings before income taxes:			
Domestic	\$13,107	\$9,953	\$7,825
Foreign	257	252	342
Total	\$13,364	\$10,205	\$8,167
Income taxes:			
Current:			
Federal	\$4,180	\$3,301	\$2,286
State	878	672	434
Foreign	167	56	41
Deferred:			
Federal	(60)	(344)	195
State	(18)	(61)	(57)
Foreign	(30)	59	141
Total	\$5,117	\$3,683	\$3,040

The components of the net deferred tax asset as of December 31, were as follows (in thousands):

<TABLE> <CAPTION> DEFERRED TAX ASSETS:	1998	1997
<S>	<C>	<C>
Receivables	\$166	\$110
Inventories	394	292
Accrued compensation	752	772
Other payables	2,079	1,442
Non-pension postretirement benefits	2,885	3,005
Accrued employee benefits	1,732	1,551
Total deferred tax assets	8,008	7,172
DEFERRED TAX LIABILITIES:		
Depreciation	2,331	1,960
Prepaid pension	2,422	2,600
Other	325	348
Total deferred tax liabilities	5,078	4,908
Net deferred tax asset included in balance sheet	\$2,930	\$2,264

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 1996

The provision for income tax differs from the amount which would be provided by applying the statutory U.S. corporate income tax rate in each year due to the following items:

<TABLE> <CAPTION> (In thousands)	1998	1997	1996
<S>	<C>	<C>	<C>
Provision at statutory rate	\$4,544	\$3,470	\$2,776
State income taxes, net of federal tax benefit	568	403	312
Foreign income taxes	50	30	66
Tax benefit of FSC	(78)	(190)	(201)
Other	33	(30)	87
Actual provision	\$5,117	\$3,683	\$3,040

</TABLE>

No provision for federal income taxes is made on the earnings of foreign subsidiaries that are considered permanently invested or that would be offset by foreign tax credits upon distribution. Such undistributed earnings at December 31, 1998, were \$669,000.

9 FAIR VALUE OF FINANCIAL INSTRUMENTS

Cash, receivables and payables are reflected in the financial statements at fair value. Short-term debt is comprised of notes payable drawn against the company's lines of credit and commercial paper. Because of the short-term nature of these instruments, the carrying value approximates the fair value. Long-term debt relates to the company's guarantee of the ESSOP debt, which is offset by a similar amount in shareholders' equity.

10 INDUSTRY SEGMENT

The company is a marketer and manufacturer of flow measurement and control instruments, which comprise one reportable segment due to similarities in the nature of the products, production processes, customers and methods of distribution. Information regarding geographic areas is as follows:

<TABLE> <CAPTION> (In thousands)	1998	1997	1996
<S>	<C>	<C>	<C>
Revenues:			
United States	\$127,371	\$105,811	\$94,207
Foreign	\$16,442	\$24,960	\$21,811
Long-Lived Assets:			
United States	\$46,899	\$36,420	\$29,129
Foreign	\$1,464	\$1,074	\$702

</TABLE>

BADGER METER, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1998, 1997 and 199611 QUARTERLY RESULTS OF OPERATIONS (UNAUDITED), COMMON STOCK PRICE AND
DIVIDENDS

<TABLE>

<CAPTION>

	QUARTER ENDED			
	MARCH 31	JUNE 30	SEPTEMBER 30	DECEMBER 31
<S>	<C>	<C>	<C>	<C>
(IN THOUSANDS EXCEPT PER SHARE DATA)				
1998				
Net sales	\$ 33,499	\$ 36,430	\$ 39,370	\$ 34,514
Gross margin	\$ 13,443	\$ 14,267	\$ 15,743	\$ 13,858
Net earnings	\$ 1,597	\$ 2,295	\$ 2,404	\$ 1,951
Earnings per share:				
Basic	\$.44	\$.63	\$.66	\$.54
Diluted	\$.41	\$.59	\$.62	\$.50
Dividends declared:				
Common	\$.15	\$.15	\$.15	\$.15
Class B	\$.14	\$.14	\$.14	\$.14
Stock price:				
High	\$ 40.50	\$ 38.13	\$ 40.63	\$ 39.50
Low	\$ 30.00	\$ 35.13	\$ 25.00	\$ 26.00
Quarter-end close	\$ 35.88	\$ 35.44	\$ 29.25	\$ 35.63

1997				
Net sales	\$ 31,702	\$ 34,104	\$ 33,207	\$ 31,758
Gross margin	\$ 11,478	\$ 12,624	\$ 12,480	\$ 12,155
Net earnings	\$ 1,310	\$ 1,900	\$ 1,821	\$ 1,491
Earnings per share:				
Basic	\$.37	\$.53	\$.51	\$.42
Diluted	\$.35	\$.50	\$.46	\$.38
Dividends declared:				
Common	\$.11	\$.12	\$.12	\$.12
Class B	\$.10	\$.11	\$.11	\$.11
Stock price:				
High	\$ 24.00	\$ 31.50	\$ 57.50	\$ 50.00
Low	\$ 18.13	\$ 21.00	\$ 29.25	\$ 36.88
Quarter-end close	\$ 23.25	\$ 29.63	\$ 49.06	\$ 40.75

</TABLE>

Badger Meter, Inc. Common Stock is listed on the American Stock Exchange under the symbol BME. There is no market for Badger Meter Class B Common Stock due to transfer restrictions. Class B Common Stock is equivalent in value to Common Stock. Earnings per share is computed independently for each quarter. As such, the annual per share amount may not equal the sum of the quarterly amounts due to rounding. Shareholders of record as of December 31, 1998 and 1997, totaled 576 and 596 for Common Stock and 12 and 12 for Class B Stock, respectively. Voting trusts are counted as single shareholders for this purpose.

42

22

BADGER METER, INC.
REPORT OF INDEPENDENT AUDITORS

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Shareholders
Badger Meter, Inc.

We have audited the accompanying consolidated balance sheets of Badger Meter, Inc. as of December 31, 1998 and 1997, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1998. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audits 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, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Badger Meter, Inc. at December 31, 1998 and 1997, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles.

(Page 29 of Annual Report to Shareholders)

BADGER METER, INC.

TEN YEAR SUMMARY OF SELECTED DATA
Years ended December 31 (in thousands except per share data)

<TABLE>
<CAPTION>

	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989
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OPERATING RESULTS										
Net sales	\$143,813	130,771	116,018	108,644	99,155	84,497	82,106	78,417	77,100	72,266
Research and development	\$ 6,105	4,397	3,851	3,858	3,278	3,642	4,119	4,046	3,863	3,614
Earnings before income taxes	\$ 13,364	10,205	8,167	5,911	4,974	3,306	1,160	2,419	3,507	3,798
Earnings before changes in accounting	\$ 8,247	6,522	5,127	3,719	3,216	2,164	802	1,648	2,332	2,375
Cumulative effect of changes in accounting	\$ 0	0	0	0	0	0	(4,684)	0	0	0
Net earnings (loss)	\$ 8,247	6,522	5,127	3,719	3,216	2,164	(3,882)	1,648	2,332	2,375
Earnings to sales *	5.7%	5.0%	4.4%	3.4%	3.2%	2.6%	1.0%	2.1%	3.0%	3.3%
PER COMMON SHARE										
Basic earnings before changes in accounting	\$ 2.28	1.83	1.46	1.06	.93	.64	.24	.49	.73	.77
Cumulative effect of changes in accounting	\$ 0	0	0	0	0	0	(1.38)	0	0	0
Basic earnings (loss)	\$ 2.28	1.83	1.46	1.06	.93	.64	(1.14)	.49	.73	.77
Cash dividends declared:										
Common Stock	\$.60	.48	.43	.39	.35	.32	.30	.30	.30	.29
Class B Common Stock	\$.54	.44	.39	.36	.32	.29	.28	.28	.28	.26
Price range - high	\$ 40.63	57.50	20.81	13.50	14.00	11.00	8.88	9.00	9.94	11.44
Price range - low	\$ 25.00	18.13	12.38	11.06	9.50	8.88	7.38	6.81	6.50	8.00
Closing price	\$ 35.63	40.75	19.19	13.25	11.94	9.56	8.75	7.69	6.94	9.81
Book value	\$ 13.13	11.62	10.32	9.16	8.38	7.66	7.31	8.61	8.29	8.39
SHARES OUTSTANDING										
Common Stock	2,538	2,444	2,426	2,387	2,377	2,281	2,282	2,280	2,274	1,938
Class B Common Stock	1,108	1,126	1,126	1,126	1,126	1,126	1,126	1,126	1,126	1,149
FINANCIAL POSITION										
Working capital	\$ 10,776	13,870	17,645	16,178	14,569	12,010	9,876	9,842	18,365	13,803
Current ratio	1.3 to 1	1.5 to 1	2.0 to 1	2.1 to 1	1.7 to 1	1.6 to 1	1.6 to 1	1.6 to 1	3.3 to 1	2.1 to 1
Net cash provided by operations	\$ 14,684	5,178	9,878	12,026	6,342	2,969	3,833	5,410	5,132	3,342
Capital expenditures	\$ 17,926	8,349	5,382	4,493	3,553	3,121	3,496	3,335	4,901	4,376
Total assets	\$ 96,945	82,297	66,133	60,527	61,993	57,627	53,895	51,199	50,670	46,672
Long-term debt	\$ 2,600	928	1,091	1,000	1,200	1,400	1,700	1,900	10,400	5,183
Shareholders' equity	\$ 47,848	41,467	36,638	32,163	29,351	26,074	24,894	29,303	28,168	25,897
Debt to total capitalization	26.1%	22.7%	9.2%	16.8%	28.4%	34.9%	34.2%	28.7%	30.5%	29.2%
Return on shareholders' equity *	17.2%	15.7%	14.0%	11.6%	11.0%	8.3%	3.2%	5.6%	8.3%	9.2%
Price/earnings ratio *	15.6%	22.3	13.1	12.5	12.8	15.1	37.2	15.9	9.6	12.7

</TABLE>

* PRIOR TO ACCOUNTING CHANGES

BADGER METER, INC.

SUBSIDIARIES OF THE REGISTRANT

The company's subsidiaries are listed below. All of the subsidiaries of the company listed below are included in the consolidated financial statements.

<TABLE>
<CAPTION>

Name -----	Percentage of ownership -----	State or Country in which organized -----
<S>	<C>	<C>
Badger Meter Europe, GmbH	100%	Federal Republic of Germany
Badger Meter de Mexico, S.A. de C.V.	100%	Mexico
Badger Meter Limited	100%	United Kingdom
Badger Meter de Las Americas, S.A. de C.V.	100%	Mexico
Badger Meter Export, Inc. (a large FSC)	100%	Virgin Islands (U.S.)
Badger/Instromet LLC	50%	Wisconsin
Badger Meter Canada	100%	Canada

</TABLE>

CONSENT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

We consent to the incorporation by reference in this Annual Report on Form 10-K of Badger Meter, Inc., of our report dated January 27, 1999, included in the 1998 Annual Report to Shareholders of Badger Meter, Inc.

Our audits also included the financial statement schedule of Badger Meter, Inc. listed in Item 14(a). This schedule is the responsibility of the company's management. Our responsibility is to express an opinion based on our audits. In our opinion, the financial statement schedule referred to above, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects, the information set forth therein.

We also consent to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 33-27649, 33-27650, 33-65618, 33-62239, 33-62241 and 333-28617) pertaining to the Badger Meter, Inc. Restricted Stock Plan, Badger Meter, Inc. 1989 Stock Option Plan, Badger Meter, Inc. 1993 Stock Option Plan, Badger Meter, Inc. 1995 Stock Option Plan, Badger Meter, Inc. Employee Savings and Stock Ownership Plan, and Badger Meter, Inc. 1997 Stock Option Plan, of our report dated January 27, 1999, with respect to the consolidated financial statements and schedule of Badger Meter, Inc. included or incorporated by reference in the Annual Report (Form 10-K) for the year ended December 31, 1998.

Ernst & Young LLP

Milwaukee, Wisconsin
March 22, 1999

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This schedule contains summary financial information from the Company's Annual Report to Shareholders for the year ended December 31, 1998 incorporated by reference in the Annual Report on Form 10-K and is qualified in its entirety by reference to such 10-K.

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