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## **ROTARY-TYPE GAS DISPLACEMENT METERS**

**Secretariat**



**American Gas Association**

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# CONTENTS

CONTENTS .....	i
DISCLAIMER AND COPYRIGHT .....	iii
PREFACE .....	iv
HISTORY OF THE DEVELOPMENT OF THIS STANDARD .....	v
ACCREDITED STANDARDS COMMITTEE B109 .....	vi
SCOPE .....	1
<b>PART I</b> .....	<b>2</b>
DEFINITIONS .....	2
<b>PART II</b> .....	<b>7</b>
<b>CONSTRUCTION REQUIREMENTS FOR QUALIFYING NEW TYPE METERS</b> .....	<b>7</b>
2.1 SCOPE .....	7
2.2 DIMENSIONS .....	7
2.3 MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) .....	7
2.4 STRENGTH OF METER CONNECTIONS .....	8
2.5 METER INDEX WINDOW IMPACT RESISTANCE TESTS .....	8
2.6 DESIGN SAFETY FACTOR .....	8
2.7 DIFFERENTIAL PRESSURE TAPS .....	8
2.8 METER IDENTIFICATION .....	9
2.9 FLOW DIRECTION IDENTIFICATION .....	9
2.10 METER OUTPUT REGISTRATION IDENTIFICATION .....	9
2.11 PROTECTION OF METERS .....	9
2.12 MECHANICAL METER INDEX .....	9
2.13 CORROSION AND CHEMICAL RESISTANCE OF INTERNAL PARTS .....	10
2.14 CORROSION AND CHEMICAL RESISTANCE OF EXTERNAL PARTS .....	10
2.15 TEMPERATURE RESISTANCE TEST .....	11
<b>PART III</b> .....	<b>12</b>
<b>PERFORMANCE REQUIREMENTS FOR QUALIFYING NEW METERS AND NEW-TYPE METERS</b> ....	<b>12</b>
3.1 SCOPE .....	12
3.2 RATED CAPACITY .....	12
3.3 ACCURACY .....	12
3.4 NOISE AND VIBRATION .....	12
3.5 STARTING RATE TEST FOR NEW TYPE METERS .....	13
3.6 PRESSURE AND LEAK TEST CONDITIONS FOR NEW METERS .....	13
3.7 DIFFERENTIAL PRESSURE TEST CONDITIONS .....	13
<b>PART IV</b> .....	<b>14</b>
<b>IN-SERVICE PERFORMANCE</b> .....	<b>14</b>
4.1 SCOPE .....	14
4.2 TEST CONDITIONS .....	14
4.3 IN-SERVICE PERFORMANCE PROGRAMS .....	14
<b>PART V</b> .....	<b>15</b>
<b>METER INSTALLATION</b> .....	<b>15</b>
5.1 SCOPE .....	15
5.2 GENERAL .....	15
5.3 LOCATION .....	15
5.4 INSTALLATION .....	15
5.5 METER SHUT OFF .....	16
5.6 METER SUPPORT .....	16
5.7 METER SIZING .....	16
5.8 SPACING OF METERS .....	16
5.9 IDENTIFICATION .....	16
5.10 ON-SITE INSPECTION .....	16
5.11 SPECIAL SERVICE .....	16
5.12 DUAL METER INSTALLATIONS .....	16
<b>PART VI</b> .....	<b>17</b>
<b>AUXILIARY DEVICES FOR GAS METERS</b> .....	<b>17</b>
6.1 SCOPE .....	17
6.2 PRESSURE SYSTEM .....	19
6.3 TEMPERATURE SYSTEM .....	19
6.4 VOLUME INDICATOR .....	21

6.5 INSTRUMENT CHART DRIVES .....	21
6.6 CIRCULAR CHARTS .....	22
6.7 RECORDERS .....	24
6.8 AUTOMATIC INTEGRATORS .....	25
6.9 CONSTANT-PRESSURE-COMPENSATING INDEX .....	26
6.10 REMOTE METER READING DEVICES .....	27
6.11 INSTRUMENT ADAPTOR PLATES .....	28
6.12 INSPECTION AND TESTING CLASSIFICATION .....	28
<b>PART VII .....</b>	<b>30</b>
<b>TEST METHODS AND EQUIPMENT .....</b>	<b>30</b>
7.1 SCOPE .....	30
7.2 MEASUREMENT REFERENCE BASE .....	30
7.3 UNITS OF MEASURE .....	30
7.4 BASE CONDITIONS .....	30
7.5 METER TESTING SYSTEMS .....	31
7.6 CALIBRATION OF METER TESTING SYSTEMS .....	34
<b>APPENDIX A .....</b>	<b>36</b>
<b>DIFFERENTIAL TESTING .....</b>	<b>36</b>
<b>APPENDIX B .....</b>	<b>37</b>
<b>METER ACCURACY .....</b>	<b>37</b>
<b>APPENDIX C .....</b>	<b>38</b>
<b>BAR CODE FOR METERS AND AUXILIARY DEVICES .....</b>	<b>38</b>
<b>APPENDIX D .....</b>	<b>39</b>
<b>PROVER BELL CALIBRATION BY PHYSICAL MEASUREMENT .....</b>	<b>39</b>

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## PREFACE

This publication represents a basic standard for safe operation, substantial and durable construction, and acceptable performance for rotary-type gas displacement meters.

It is recognized that during any transition period to the metric system, sizes and dimensions need to be expressed in either the metric system or the inch-pound system or in both. In this document, both systems are used, with the inch-pound units given preference. In most cases, a soft conversion from existing inch-pound values is shown. Soft conversion implies a change in nomenclature only; in this document, the alternative nomenclatures (metric and inch-pound) are shown by using parentheses and can be used interchangeably. Hard conversion is used to express metric values in (closely equivalent) round inch-pound units. Bracketed values are not to be used interchangeably with the corresponding metric values.

Nothing in this standard is to be considered as in any way indicating a measure of quality beyond compliance with the provisions it contains. It is designed to allow the construction and performance of displacement meters that may exceed the various provisions specified in any respect. In its preparation, recognition was intended to be given to the possibility of improvement through ingenuity of design. As progress takes place, revisions may become necessary. When they are believed desirable, recommendations should be forwarded to the Chairman of ANSI B109 Committee, Operating and Engineering Section, American Gas Association, 400 North Capitol Street, NW, 4<sup>th</sup> Floor, Washington, DC 20001, U.S.A.

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# HISTORY OF THE DEVELOPMENT OF THIS STANDARD

Following approval of the Standard for Gas Displacement Meters (Under 500 Cubic Feet per Hour Capacity), ANSI B109.1, in 1973, a subcommittee was appointed to develop a standard covering rotary-type gas displacement meters.

Five drafts of the standard were prepared and reviewed by the subcommittee before a final draft was prepared and submitted to American National Standards Committee B109 for its consideration on June 20, 1979. Subsequent to adoption by the committee, the first edition of the standard for rotary-type gas displacement meters was approved as American National Standard by the American National Standards Institute, Inc., on April 14, 1980.

The second edition was approved as American National Standard by the American National Standards Institute, Inc., on January 9, 1987. Major changes included the additions of: Part VI on Auxiliary Devices for Gas Meters; Part VII on Test Methods and Equipment; and informative Appendices for bar coding of meters and auxiliary devices, and prover calibration.

In the third edition, minor editorial changes were made. The third edition was approved on November 12, 1992.

This is the fourth edition of standard B109.3, in which several additions/deletions have been made to avoid any ambiguity, to make it more consistent and to improve upon some requirements. Substantive changes have been shown by a bar [ | ] in the margin.

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## **SCOPE**

This standard applies to rotary-type positive displacement meters designed for revenue measurement of fuel gas.

Part I comprises a list of definitions and terms used throughout the standard.

Part II covers the construction requirements for qualifying new-type rotary meters.

Part III covers the performance requirements for qualifying new meters and new-type rotary meters.

Part IV covers “in-service” performance requirements for rotary-type meters.

Part V addresses installation requirements for these meters.

Part VI pertains to auxiliary devices used with meters covered by this standard.

Part VII covers test methods and equipment.