IGEM
Institution of
Gas Engineers & Managers

IGEM/GM/PRS/3
Communication 1805

Meter regulators for gas flow rates not exceeding 6 m^3 h^{-1} and inlet pressures not exceeding 75 mbar

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SECTION 1 : INTRODUCTION

1.1 This Specification is part of a series of Institution of Gas Engineers and Managers (IGEM) publications, providing a specification for selecting meter regulators.

1.2 British Gas and latterly, National Grid Metering (NGM) developed a series of specifications for key metering components based on its own suite of product requirements. These documents were made available to meter installers and purchasers under the title of Product Requirement Specification (PRS) 'e' documents. Originally these Specifications were made available through Advantica, as they were known at the time.

NGM has transferred the ownership of these documents to IGEM to make them available to the wider industry. It is some years since the original 'e' documents were updated and these have been withdrawn.

1.3 This Specification has been drafted by an IGEM Working Group, appointed and subsequently approved by IGEM's Gas Measurement Committee, and has been approved by IGEM's Technical Coordinating Committee on behalf of the Council of IGEM.

1.4 Manufacturers supplying meter regulators for gas flow rates not exceeding 6 $m^3 h^{-1}$ and inlet pressures not exceeding 75 mbar, are to conform to the requirements of this Specification, and to any other relevant documents to which reference is made herein.

1.5 Details on the installation of domestic-sized gas meters and associated components are given in BS 6400-1.

1.6 Attention is drawn to the need to take appropriate precautions to ensure safety when carrying out the methods of test required by this specification. The Control of Substances Hazardous to Health (COSHH) Regulations are required to be observed.

1.7 Terms such as "maximum operating pressure" (MOP), "maximum incidental pressure" (MIP) and "operating pressure" (OP) are used to reflect gas pressure terminology used in European standards. These terms will arise in all relevant IGEM Standards and, possibly, in other standards. Other new terms have been introduced to assist in recognition of design information to be transferred between interested parties.

1.8 This Specification makes use of the term "must", "shall" and "should" when prescribing particular requirements:

- the term "must" identifies a requirement by law in Great Britain (GB) at the time of publication
- the term "shall" prescribes a requirement which, it is intended, will be complied with in full and without deviation
- the term "should" prescribes a requirement which, it is intended, will be complied with unless, after prior consideration, deviation is considered to be acceptable.

Such a term may have different meanings when used in legislation, or Health and Safety Executive (HSE) Approved Codes of Practice (ACoPs) or guidance, and reference needs to be made to such statutory legislation or official guidance for information on legal obligations.

1.9 New and improved practices may be adopted prior to this Specification being updated. Amendments to this Specification will be issued when necessary and their publication will be announced in the Journal of IGEM and elsewhere as appropriate.

1.10 Requests for interpretation of this Specification in relation to matters within its scope, but not precisely covered by the current text, should be addressed to Technical Services, IGEM, IGEM House, High Street, Kegworth, Derbyshire, DE74 2DA. Such requests will be submitted to the relevant Committee. Any advice given by or on behalf of IGEM does not imply acceptance of any liability, and does not relieve any party of their obligations.

1.11 This Specification was published in June 2017.

SECTION 2 : SCOPE

2.1 This Specification sets out the product requirements for meter regulators and covers regulators for use with 2nd family gas at flow rates not exceeding 6 $m^3 h^{-1}$. Regulators to this Specification are suitable for a maximum operating pressure not exceeding 75 mbar and a maximum incidental pressure of 200 mbar. The operating temperature range of the regulators is -20°C to +60°C.

2.2 Sample regulators are subjected to a type test at a pressure of 350 mbar for gas tightness and lock-up.

2.3 The Specification applies to regulators with inlet and outlet connections in line or at right angles and threaded internally (Rc) to BS EN 10226. The type A regulator has inlet connection of Rc¾ and outlet connection of Rc¾ or 1" union to BS 746 with the axis of the outlet vertical. The type B regulator has an inlet connection of Rc¾ (this may be achieved using a reducing bush threaded Rc¾) and an outlet connection of Rc1 with the axes of both connections in the horizontal plane. The type C regulator has connections of Rc¾ with the inlet and outlet connections in line.

2.4 This Specification sets out the requirements for testing the product as follows:

- materials for corrosion resistance
- gas tightness, performance and mechanical life
- durability to mechanical stress
- during production.

2.5 This Specification requires consideration of the life cycle of the product and its potential effect on the environment.

2.6 All pressures quoted in this Specification are gauge pressures unless otherwise stated.

2.7 Italicised text is informative and does not represent formal requirements.

2.8 Appendices are informative and do not represent formal requirements unless specifically referenced in the main sections via the prescriptive terms "must", "shall" or "should".