Gas Industry Standard

GIS/E48:2006

Specification for

Polyethylene service line tracing equipment

Cadent
Your Gas Network

Northern Gas Networks

SGN
Your gas. Our network.

WALES&WEST UTILITIES

Contents

Foreword

Gas Industry Standards (GIS) are revised, when necessary, by the issue of new editions. Users should ensure that they are in possession of the latest edition. Contractors and other users external to Gas Transporters should direct their requests for copies of a GIS to the department or group responsible for the initial issue of their contract documentation.

Comments and queries regarding the technical content of this document should be directed in the first instance to the contract department of the Gas Transporter responsible for the initial issue of their contract documentation.

This standard calls for the use of procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Compliance with this engineering document does not confer immunity from prosecution for breach of statutory or other legal obligations.

Mandatory and non-mandatory requirements

For the purposes of a GIS the following auxiliary verbs have the meanings indicated:

can indicates a physical possibility;

may indicates an option that is not mandatory;

shall indicates a GIS requirement;

should indicates best practice and is the preferred option. If an alternative method is used then a suitable and sufficient risk assessment needs to be completed to show that the alternative method delivers the same, or better, level of protection.

Disclaimer

This engineering document is provided for use by Gas Transporters and such of their contractors as are obliged by the terms of their contracts to comply with this engineering document. Where this engineering document is used by any other party, it is the responsibility of that party to ensure that the engineering document is correctly applied.

Brief history

First published as T/SP/E48	February 2004
Editorial update to comply with GRM	August 2004
Edited by BSI in accordance with BS 0-3:1997	August 2006
Reviewed on behalf of the Gas Distribution Networks' Technical Standard Forum by BSI	September 2013
Reviewed by TSF	June 2018

1 Scope

This Gas Industry Standard specifies requirements for polyethylene service line tracing equipment purchased or hired for use by the gas transporter.

2 Terms and definitions

For the purposes of this standard the following terms and definitions apply.

2.1
polyethylene service line tracing equipment
equipment for tracing polyethylene pipe routes in domestic, commercial and industrial gas services from the property back to the main by both an in-line trace and an end-point trace

NOTE Normally provided as a glass-fibre rod, or similar, on a coiled drum/frame arrangement which is pushed down the polyethylene service to enable detection of its possible route from property to main.

3 Application

The polyethlyene service line tracing equipment shall be able to trace polyethylene pipes in domestic, commercial and industrial gas services from the property back to the main.

It shall be possible to use the equipment on services below 30 mbar operating pressure but it should be able to be used at operating pressures up to a maximum of 2 bar.

It shall be able to enter the gas supply under “live gas” conditions via the meter control valve or house entry fitting with no release of gas.

The equipment shall be able to be maintained on at least a 12 monthly basis.

It shall be compatible with the current range of pipe and cable locators used by the gas transporter that operate at 33 Khz frequency range, and shall not be affected by general outside electrical interference.

It shall be small enough to enter a 12 mm diameter hole to enable entry into the existing polyethylene or steel pipework.

It shall be flexible enough to be able to cope with insertion around 90° bends ranging from 19 mm (¾ in) diameter and above (down to 73 mm radius bends).

It shall be able to operate/detect at a minimum pipe depth of 1 m from the surface, when the pipe is buried in dry sand.

It shall be able to provide accuracy of detection to within 0.2 m.

It shall be capable of use at a minimum distance of 30 m from property with no deterioration in performance.

4 Strength

The equipment shall be designed and constructed to ensure it is robust enough to withstand everyday usage, which may include use in excavations, building sites and inside properties.

It shall also be designed and constructed, so that its operation is unaffected by site conditions such as contamination by mud or water. As the equipment will be used outside in potentially wet conditions, i.e. rain, it shall be sufficiently waterproof to allow normal operation under these circumstances.

The equipment shall be made from materials which are unlikely to become distorted.

It shall have sufficient rigidity to pass through bends and coupler points that may offer resistance, as the old mains and service pipes are constructed using couplers to join lengths of pipe.

5 Construction and materials

The equipment shall be resistant to petroleum-based products such as oil, petrol and diesel, etc.

It shall be no more than 21 kg in mass to conform to current manual handling legislation for single person movement.

6 Handling characteristics

The equipment shall be designed with suitable handholds to ensure that an operative can securely grip the equipment during use and/or transportation.

The equipment shall have no sharp edges or other protrusions that can injure hands, fingers, etc. when lowering, lifting or transporting.

7 Marking

Products conforming to GIS/E48 shall be permanently marked with the following information:

a) the number and date of this standard, i.e. GIS/E48:2006 [1)];

b) the name or trademark of the manufacturer or their appointed agent;

c) the manufacturer's contact details;

d) production date;

e) model and serial number;

f) where authorized, the product conformity mark of a third party certification body, e.g. BSI Kitemark.

NOTE Attention is drawn to the advantages of using third party certification of conformance to a standard.

8 Storage

The equipment shall be supplied with a carrying case which shall be capable of securely storing the components when not in use.

9 User instructions

User instructions shall be provided with each item of equipment.

[1)] Marking GIS/E48:2006 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

10 Maintenance

The equipment shall have access to internal parts only through use of a special tool to help ensure only those persons deemed competent undertake any maintenance activities on the units.

Each unit of equipment shall be provided with clear instructions detailing how any fitted batteries and bulbs or any other component can be exchanged or maintained without invalidating product certification.