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Hose and hose assemblies for asphalt and bitumen —

Part 1: Specification for flexible metallic hose and hose assemblies

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Piping Systems Components Standards Policy Committee (PSE/-) to Technical Committee PSE/12, upon which the following bodies were represented:

- British Compressed Gases Association
- British Gas plc
- British Rubber Manufacturers' Association Ltd.
- Electricity Association
- Energy Industries Council
- Engineering Equipment and Materials Users' Association
- LP Gas Association
- Ministry of Defence
- Petrol Pump Manufacturer's Association
- United Kingdom Petroleum Industry Association Ltd.

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Foreword

This Part of BS 6130 has been prepared under the direction of the Piping Systems Components Standards Policy Committee. It supersedes BS 6130:1981, which is withdrawn. It is one of a series concerned with hose and hose assemblies for conveying petroleum products. It specifies requirements for ensuring the integrity and standardization of two types of metallic hose and hose assembly for conveying asphalt and bitumen, which are hazardous materials at temperatures where they can flow readily.

Corrugated hose with a temperature limit of 400 °C has been introduced with details on construction, manufacture and testing.

It is envisaged that rubber hose and hose assemblies will be specified in BS 6130-2.

Asbestos has been specified for the strip wound hose constructions covered by this Part of BS 6130 as the only packing material that can meet the duty required although other alternative materials are being considered.

The manufacture of all asbestos-based products is covered by the requirements of the control of Asbestos at Work Regulations 1987, introduced on 1 March 1988. These set out comprehensive provisions covering work activities involving exposure to asbestos. Advice on how to comply with these regulations can be obtained from the manufacturers of the material, from the Asbestos Information Centre, Derby Road, Widnes, Cheshire WH8 9ND, from the local area office of the Health and Safety Executive or from the Environmental Health Department of the Local Authority.

Particular note has to be taken of the Asbestos Products (Safety) Regulations 1985, made under the Consumer Safety Act 1978 and of the Asbestos (Prohibitions) Regulations 1988 made under the Health and Safety at Work etc. Act 1974, which prohibit the supply of products containing amosite or crocidolite and set out requirements for the labelling of all products containing asbestos.

All the above legislation implements European Directives.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing product surveillance which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes are forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 6130 specifies requirements for the design, manufacture, performance, testing and marking of two basic types of metallic hose and hose assembly for dockside, road and rail loading and unloading of asphalt and bitumen. The standard covers nominal sizes DN 80 to DN 250 with working pressures of 5 bar and 12 bar.¹⁾

NOTE This standard allows a number of options. Therefore, to assist the purchaser, a checklist of the options, together with the other information to be supplied in the enquiry and order is given in Annex A.

2 References

2.1 Normative references

This Part of BS 6130 incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the inside back cover. Subsequent amendments to, or revisions of, any of these publications apply to this Part of BS 6130 only when incorporated in it by updating or revision.

2.2 Informative references

This Part of BS 6130 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this Part of BS 6130, the following definitions apply.

3.1 tube

plain cylindrical uncorrugated material which may be processed during manufacture to become hose

3.2 hose

flexible leak-tight metal element of an assembly without fittings or covering

3.3 braid

layer (or layers) of cylindrically woven wires covering the hose and attached to the hose ends and fittings, restraining the hose against elongation

3.4 hose assembly

hose with end fittings attached, complete with braid and/or other covering, if required, ready for service

3.5

corrugated flexible metallic hose

pressure-tight hose made from tube with annular corrugations made by deforming the metal

3.6

strip wound flexible metallic hose

pressure-tight hose made from helically wound preformed strip generally with right-hand lead, whose turns, incorporating a packing, are connected together by double overlapping

3.7

ferrule

metal sleeve used on corrugated hose assemblies to restrict the bending of the corrugations affected by heat during the attachment of end fittings

3.8

external sleeve/protection coil

device used to provide protection to the external surface of the hose against mechanical damage and/or against corrosion from the external environment

3.9

packed fitting

leak-proof end fitting that is screwed on to the tube and packed, then locked by means of a back nut

3.10

design pressure

maximum pressure at which a hose assembly is designed to be serviceable

3.11

maximum operating temperature

highest temperature to which the hose will be subjected

NOTE The maximum operating temperature includes adequate margins to cover uncertainties in service conditions.

3.12

burst pressure

pressure at which any part of the hose assembly fails

3.13

cyclic life

minimum number of complete cycles which, at the test conditions, the hose is designed to withstand without failure

3.14

bend radius

radius of a bend measured to the hose centre line

¹⁾ 10 bar = 1 MPa = 1×10^6 N/m².