

Guide for

Laying of asbestos-cement pipelines

[ISO title: Asbestos-cement pipelines — Guide for laying]

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	Trades Union Congress

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Asbestos Cement Manufacturers' Association Limited	Ductile Iron Pipe Association
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Confederation of British Industry	Royal Institution of Chartered Surveyors
Country Landowners' Association	The Pipeline Industries Guild
Department of Energy (Petroleum Production Division)	

This British Standard, having been prepared under the direction of the Civil Engineering and Building Structures Standards Committee, was published under the authority of the Executive Board and comes into effect on 29 August 1980

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National foreword

This British Standard has been prepared under the direction of the Civil Engineering and Building Structures Standards Committee and is identical with ISO 4482:1979 “*Asbestos-cement pipelines — Guide for laying*” published by the International Organization for Standardization (ISO). ISO 4482:1980 was produced, as a result of international discussions in which the United Kingdom took an active part.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication, without deviation, as a British Standard. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Cross-references

International Standard	Corresponding British Standard
ISO 4483:1979	BS 5886:1980 <i>Methods for field pressure testing of asbestos-cement pipelines</i> (Identical)

The references to ISO 160, ISO 881 and ISO 2785, for which there are no corresponding British Standards, constitute informative matter only and since no mandatory requirements are involved, the validity of this British Standard is not affected.

The related British Standard for ISO 160 is BS 486 “*Asbestos-cement pressure pipes*”.

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 and field of application

This International Standard specifies the recommended procedure for the installation of asbestos-cement pipelines for both pressure and non-pressure applications. It covers the types of laying conditions most commonly encountered in practice. Where special or exceptional conditions apply, it is the responsibility of the pipeline designer and the site engineer to give suitable instructions to supplement this International Standard.

Reference should be made to ISO 160 (sub-clause 3.2 and clause A.7) for pressure pipes; ISO 881 (sub-clause 3.2) for sewerage and drainage pipes; ISO 2785 and ISO 4483.

This International Standard does not cover those aspects which affect the owner or occupier of the land through which the pipeline passes. The requirements of national statutory regulations and code of practice standards which deal with these aspects must be observed both prior to and in the course of installation and reinstatement.

This International Standard does not contradict other similar documents either already existing or which may exist in different countries. Its aim is to unify the principles of laying asbestos-cement pipes.

Installation by thrust boring and pipe jacking methods which require the use of highly specialized techniques are not covered by this International Standard.

2 References

ISO 160, *Asbestos-cement pressure pipes and joints*¹⁾.

ISO 881, *Asbestos-cement pipes, joints and fittings for sewerage and drainage*¹⁾.

ISO 2785, *Guide to the selection of asbestos-cement pipes subject to external loads with or without internal pressure*.

ISO 4483, *Asbestos-cement pipelines — Field pressure testing*.

3 Handling and storage

3.1 General recommendations

Throughout the operations covered by this International Standard, safety of the public and the site personnel shall be taken into account.

Care shall be taken in handling pipes, joints and fittings to avoid severe impact or other damage. In particular, they should not be dropped or, when slung, be allowed to collide with solid objects. The pipes may be rolled under control on a surface free from protuberances.

The pipeline installer shall provide, at the outset, suitable equipment for unloading pipes and fittings at the agreed delivery point and also for stacking and stringing out.

3.2 Off-loading

Heavy pipes and bulky fittings shall be lifted by suitable mechanical means.

The whole sequence of operations shall be carried out without snatch, taking care to ensure that any hooks used are of the flattened type suitably padded to prevent damage at the pipe ends.

If, for pipes in sizes up to 600 mm diameter, mechanical equipment is not available, the pipes may be unloaded laterally down planks under the manual restraint of at least two suitably anchored ropes. The planks shall have ample beam strength and be of sufficient length to ensure that the gradient does not exceed 45°. The planks should be placed at about 1/5 of the pipe length from each end. Each rope should be looped once around the pipe (or twice for heavier pipes) and have one end securely attached to the vehicle. The free ends should be fed out simultaneously and slowly by men standing on the vehicle.

For pipes in sizes over 600 mm diameter, mechanical equipment should be used.

3.3 Stacking of pipes

The first layer of pipes should be placed on two timber runners set on a firm foundation and situated about 1/5 of the pipe length from each end. The width of the runner is a function of the mass of the stack. Wedges should be firmly nailed in position at the ends of each runner. Where the pipes are delivered to site in bundles, they may remain bundled until commencement of laying.

Subsequent layers should be placed either by nesting in pyramid fashion or by placing on additional runners (prismatic stacking). The latter method is recommended for small diameter pipes or where space is limited. Wedges should be nailed to the ends of each runner.

The height of the stack should be limited to suit the handling facilities available on site but should not exceed that recommended by the manufacturers.

¹⁾ At present at the stage of draft. (Revision of ISO/R 160 and ISO/R 881.)