LABC warranty

TECHNICAL MANUAL

VERSION 11

18: COLD WATER SUPPLY

18. Cold Water Supply

Contents

Limitations of Functional Requirements

1. These Functional Requirements do not and will not apply to create any policy liability for any remedial works carried out by the contractor or otherwise, nor to any materials used in those remedial works).
2. The guidance provided in this Section, is guidance that provides a suggested solution to meeting the Functional Requirements. If an alternative solution is selected, then this must still meet the Functional Requirements.

Workmanship

1. All work is to be carried out by a technically competent person in a workmanlike manner.

Materials

1. All materials should be stored, installed and protected correctly in a manner that will not cause damage or deterioration of the product.
2. All materials, products and building systems shall be appropriately tested and approved for their intended purpose.

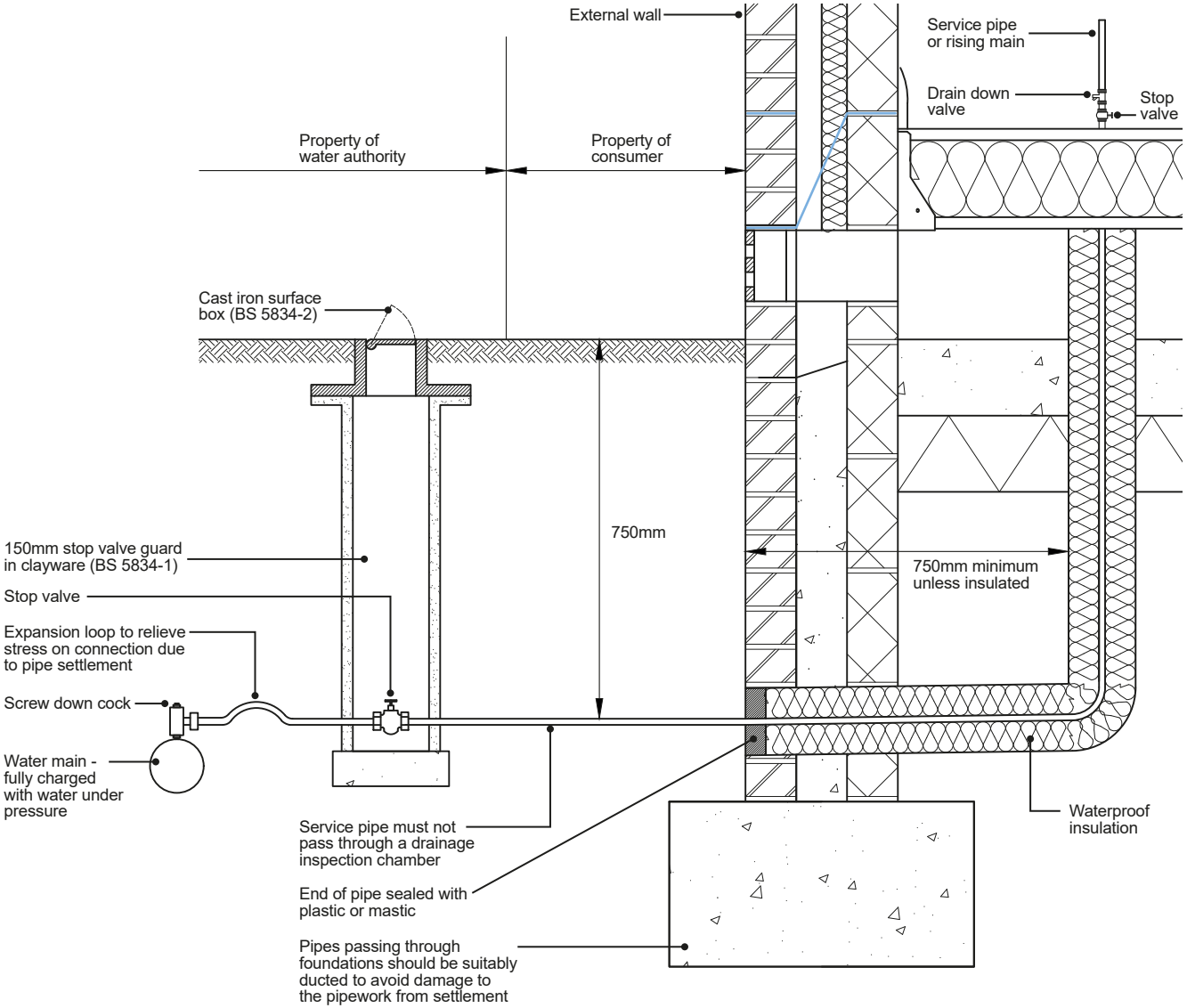
Design

1. Cold water supply to plumbing, boilers and heating appliances shall be designed, constructed and installed so that they:
    a. Provide evidence to demonstrate the installation meets Building Regulations
    b. Do not adversely affect the structural stability of the building;
    c. Prevent the entry of hazardous ground substances, external moisture or vermin;
    d. Are constructed using non-hazardous materials;
    e. Are durable and robust;
    f. Are safe and convenient in use.
2. Cold water service - an adequate cold water service shall be provided which is:
    a. Suitable for normal domestic purposes;
    b. Protected against frost.

18.
Cold Water Supply

18.1
Cold Water Supply to Plumbing, Boilers, and Appliances

Installation of incoming water services



Cold water services

Each building should have an adequate supply of cold water. The water supply should be fed from below ground and insulated to prevent freezing.

Cold water systems may have provision for storage or be directly connected to the main supply. Drinking water needs to be supplied directly from the main supply.

Cold water pipes and storage cisterns located in roof spaces and other unheated areas should be appropriately insulated to the relevant standards.

Cold water storage cisterns will require the capacity specified in the design. Suitable support should be given for the cistern filled with water.

To stop the cistern bottom being deformed, permanent support is to be given where necessary. Adequate materials for support platforms are:
- Softwood boarding.
- Marine plywood.
- Chipboard type P5.
- Oriented Strand Board type OSB3 to British Standards.

All water tanks should be accessible. Gangway boarding is required to each cistern opening from the roof space access. An area of 1m² of boarding is to be provided next to cisterns to permit routine maintenance.

Water storage cisterns should be protected from contamination by a rigid, close-fitting cover (which is not air tight) that excludes light and insects.

Holes should be formed with a cutter in the positions shown in the design.

Overflows in warning pipes should be no less than 19mm diameter and situated 25mm from the shut off water level in the cistern. The pipe may dip below the water level in accordance with water regulations. Alternatively, the pipe should terminate vertically downwards, or a tee should be fitted horizontally at the discharge end.

Draining down facility

Cold water installations require the capability to be drained down.

Use of materials

Materials that are safe and minimise the risk of corrosion are to be used for pipes and fittings for water services. The recommendations of the water supplier with regard to materials and fittings should be followed.

It may be necessary to fit aluminium protector rods in areas where the corrosion of copper cylinders occurs. These are to be fitted during manufacture, in accordance with the relevant British Standards.

Installation of building services

All items should be installed to ensure satisfactory operation.

Items to be taken into account include:
- Locations and fittings of pipes and cable service entries through the substructure.
- Services must be sleeved or ducted through structural elements (and not solidly embedded) to prevent damage. Fire stopping may also be required. Services should not to be located in the cavity of an external wall, except for electricity meter tails.
- Only to be buried in screeds where permitted by relevant Codes of Practice.

Where copper pipes are permitted in floor screeds, they should be:
- Sleeved or wrapped so that they can move freely along the length and at joints and bends.
- Jointed with capillary joints.

A metallic tape should be applied to the pipework where plastic pipework is hidden within or behind wall surfaces, which would otherwise not be located by a metal detector.

Jointing of pipes and fittings

Proprietary joints should be made strictly in accordance with the manufacturer's instructions.

Only fluxes recommended by the pipe manufacturer should be used, and all traces should be removed immediately after jointing. Fluxes containing lead are not acceptable.

Suitable clips or brackets are to be used to secure pipes. Fixings should be installed adequately and spaced to stop sagging but not restrict thermal movement. Where needed, pipes should have adequate falls.

Sufficient room should be allowed for thermal expansion and contraction to avoid damage and noise from pipe movement.

Notches and drillings

Floor joists should not be excessively notched or drilled. Please refer to the 'Upper Floors' section for further guidance.

Taps

Cold taps should be located to the right of the hot water tap.

Concealed services

If the services are hidden in walls or floors, they need to be positioned so that any significant cracking of the surface cannot occur.

Chasing of masonry cavity walls

If chases in masonry walls are necessary, their depth should not exceed:

- One-sixth the thickness of the single leaf for horizontal chases.
- One-third the thickness for vertical chases.

Hollow blocks should not be chased unless specifically permitted by the manufacturer.

Please refer to the 'Internal Walls' section for further guidance.

Services within or beneath floors

Protection through wrapping or ducting is necessary when pipes are situated under floor screeds. Thermal expansion allowances are to be made, especially at changes of direction.

The insulating material around the pipework needs to be a minimum of 25mm in thickness. The screed thickness should still be at least 25mm where pipes cross over.

Fire stopping

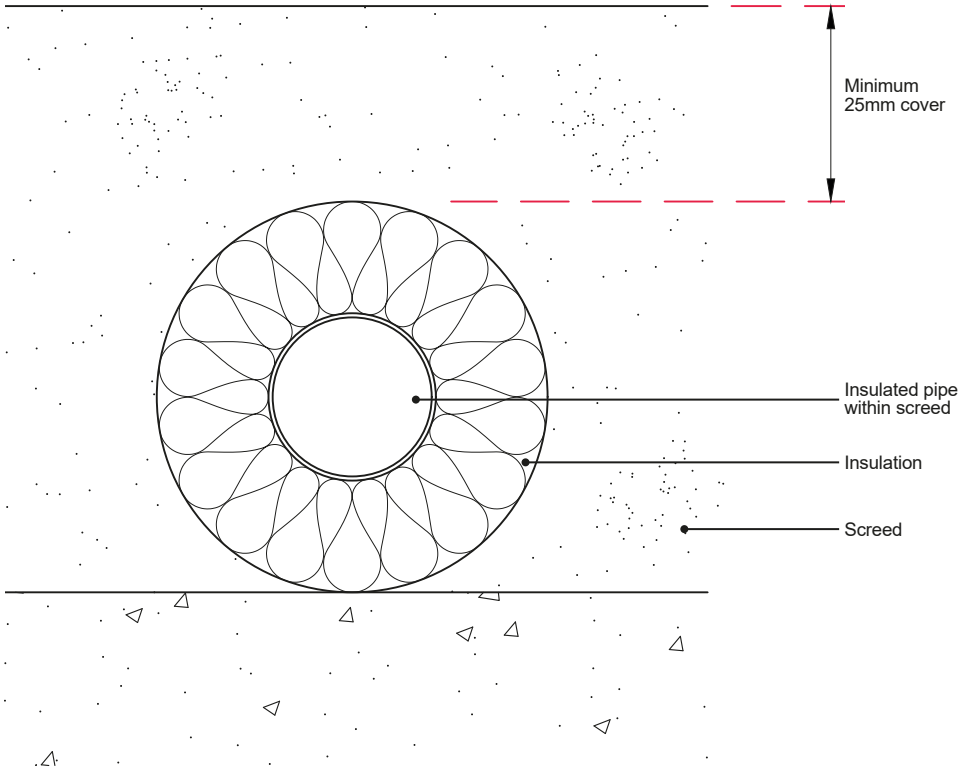
Fire stopping is required around services that penetrate fire-resisting floors, walls or partitions. If proprietary systems are used, they should be installed using the manufacturer's recommendations.

Please refer to the 'Internal Walls' and 'Upper Floors' sections for further guidance.

Supplementary bonding

Where required the pipework should be fitted with supplementary earth bonding.

Positioning of pipes in screeds



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