

INSTALL+™

Dual Certified (BS EN 10255 & 10217-1) Mechanical Suitability

Our product range, with its wide choice in size, gauge and finish, ensures our conveyance tube is equally suitable for new, whole system design and for general maintenance applications.

INSTALL+™ (dual certified to BS EN 10255^[1] & 10217-1^[2]) is manufactured to a proven process undergoing rigorous control for uniformity and exacting tolerances. Our stretch reduced product undergoes a normalizing process resulting in a tube that can be cold worked with added confidence.



INSTALL+™ mechanical suitability

Suitability for threading

INSTALL+™ tube can be supplied with 'Screwed and Socketed' (S&S) ends (screwed both ends, with one socket fitted). The screwed ends are taper threads conforming to BS EN 10226^[3] (equivalent to BS 21^[4]) and the sockets are heavy type parallel threaded sockets conforming to BS EN 10241^[5] (equivalent to BS 1387^[6] & BS 1740^[7]).

Heavy and medium weight INSTALL+™ tube is also suitable for site threading. To ensure trouble free threading, the threading machine must be maintained in good condition and an appropriate thread cutting lubricant employed. Care must also be taken to produce a thread of the correct size. Whilst specialist threaded gauges are unlikely to be available on site, for gauging purposes we recommend using the fitting that the tube will be mated to.

Suitability for bending

INSTALL+™ tube is particularly suitable for hot and cold bending, although for successful bending the equipment used needs to be correctly set-up.

The following centre line bend radii should not be less than:

- For hot bending 3D (where D = outside tube diameter).
- For cold bending 5D.

Bending of galvanised tube

Galvanised tube cannot be hot bent without damaging the coating. For cold bending of galvanised tube, we recommend that the bend radius should not be less than 8D. It should be noted that there is a risk of disbondment of the zinc coating during bending. To ensure that service life is not compromised, any such disbondment should be repaired by the application of a zinc rich paint (per BS EN ISO 1461^[8]).

Suitability for welding

Self colour INSTALL+™ tube is suitable for all types of metal arc and gas welding without any special precautions. Care should be exercised to ensure that fittings being welded to tubes are also of weldable quality. Steel sockets supplied by Corus with INSTALL+™ tube are weldable in sizes 15 to 150 nb (nominal bore).

For welding of red-painted INSTALL+™ tube, specific health and safety precautions may be necessary. Corus Tubes recommends that surfaces are taken back to bare steel and adequately prepared prior to welding.

Additional care and attention is required if welding galvanised tube. Note: this is not recommended as welding can damage the zinc coating and post welded surface repair may not be possible. Suitable health and safety precautions should be taken.

Suitability for site roll grooving

INSTALL+™ is available pre-grooved, either red-painted or galvanised. If site grooving is required INSTALL+™ tube can be roll-grooved, provided suitable precautions are taken.

For example:

- It may be necessary to locally remove the internal weld bead, if present.
- Ensure that the tube is adequately prepared prior to grooving.
- Ensure that the site equipment is correctly set-up and maintained.
- Tube ends sealing surfaces must be free from projections and other indentations.

It should be noted that there is a risk of disbondment of galvanised coatings during roll-grooving, particularly in the tube bore directly underneath the groove. Any such disbondment should be repaired by the application of a zinc rich paint (per BS EN ISO 1461^[8]).



References

- [1] BS EN 10255: 2004-A1: 2007 Non-alloy steel tubes suitable for welding and threading. Technical delivery conditions.
- [2] BS EN 10217-1: 2002-A1: 2006 Welded steel tubes for pressure purposes. Technical delivery conditions. Part 1: Non-alloy steel tubes with specified room temperature properties
- [3] BS EN 10226-1: 2004 Pipe threads where pressure tight joints are made on the threads. Part 1: Taper external threads and parallel internal threads – dimensions, tolerances and designation.
- [4] BS 21: 1985 – A1: 1990 Specification for pipe threads for tubes and fittings where pressure-tight joints are made on the threads (metric dimensions).
- [5] BS EN 10241: 2000 Steel threaded pipe fittings.
- [6] BS 1387: 1985 – A1: 1989 Specification for screwed and socketed steel tubes and tubulars for plain end steel tubes suitable for welding or for screwing to BS 21 pipe threads. (Withdrawn 1-6 – 2006).
- [7] BS 1740: 1971 Specification for wrought steel pipe fittings (screwed BS 21 R-series thread). Metric units. (Withdrawn 15-7-2000).
- [8] BS EN ISO 1461: 2009 Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods.

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