



HDPE Pressure Pipe Overview

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HDPE Pipe Material Advances

Considerable strides have been made in improving the quality of HDPE material and its long term ability to withstand pressure. The current SABS specification, SANS 4427, covers 3 different material grades (PE63, PE80 and PE100). These three material grades have different properties which enable them to be classified with minimum required strengths (MRS) of 6.3 MPa, 8,0 MPa and 10.0 MPa respectively. Applying a design coefficient of 1.25 (safety factor) to the MRS gives the design stress used by SANS 4427 for these materials (5.0 MPa, 6.3 MPa and 8.0 MPa respectively) with the result that the wall thickness for a particular size and class becomes progressively less as the change is made to a material with a higher MRS.

Quality Assurance

Marley Pipe Systems (and previously Marley SA) has been an SABS mark holder for over 40 years. Products are manufactured to the relevant SABS specifications at plants in Port Shepstone and Nigel. Both manufacturing facilities conform to the ISO 9001 Quality Management system. Fully audited Quality Control laboratories are operational at both facilities, where scheduled and random testing of products is carried out.



Applications

Marley Pipe Systems have for several years been confidently supplying their range of HDPE pipes, fittings and saddles for successful use in a variety of potable water applications in the Civil, Agricultural, Municipal, Mining and Industrial sectors. Because of the good chemical resistance and abrasion resistance properties they are also extensively used in chemical, waste and slurry applications.

Features and Benefits

- ✓ *Good impact strength: Little handling and installation damage*
- ✓ *Excellent corrosion resistance: Long and efficient service life*
- ✓ *Good chemical resistance: Wide variety of applications*
- ✓ *Low mass: Easy handling*
- ✓ *Flexibility: Easy installation*
- ✓ *Long lengths available: Fewer joints*
- ✓ *Good abrasion resistance: Can be used to pump slurries*
- ✓ *Good UV resistance: Can be used in exposed locations*
- ✓ *Low friction losses: Lower pumping costs*
- ✓ *Several jointing methods: Wide variety of applications*
- ✓ *Extensive range of fittings: Wide variety of installations*

Specifications

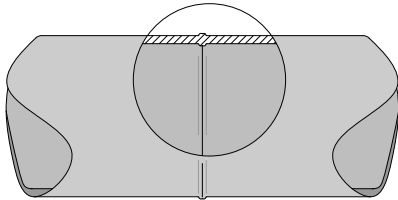
The HDPE pipes manufactured by Marley Pipe Systems are manufactured to, and carry the SABS mark for SANS 4427. Please consult the Marley HDPE Pipe Specification PDF for more information.

Jointing

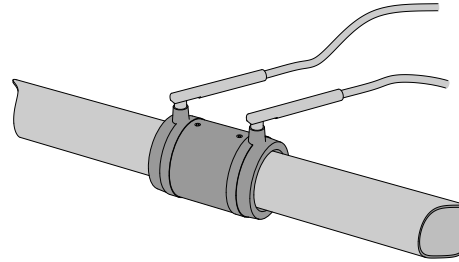
One of the greatest features of HDPE pipes is the fact that a wide variety of jointing systems is available to suit a whole range of applications. The jointing systems can be divided into permanent jointing and detachable jointing. The schematic below illustrates the available systems.

Permanent Jointing

Buttwelding



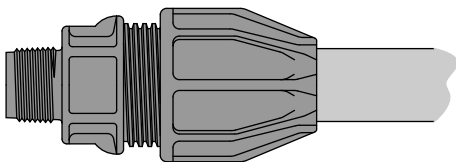
Electro-fusion



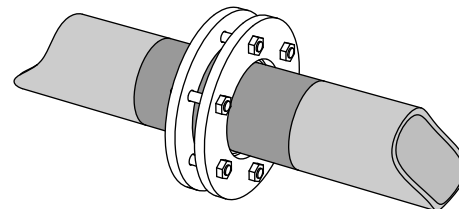
Both buttwelding and electro-fusion systems allow transition to detachable joints.

Non-Permanent (detachable) Jointing

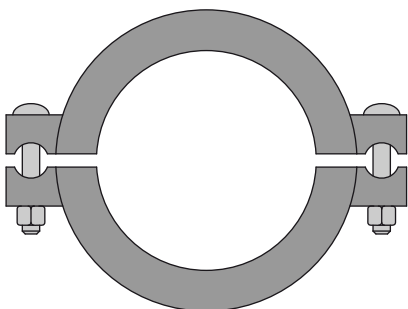
Compression Fittings



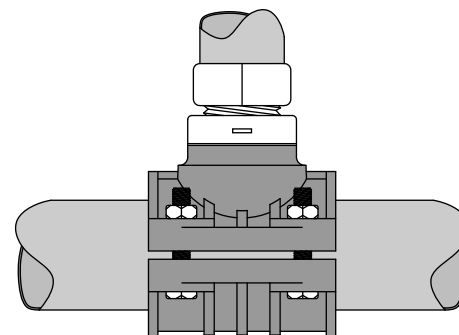
Flanging



Tak System



Magnum Saddles





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Disclaimer

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