SINTALOCK® STEEL PIPELINE SYSTEM
DN 300 TO DN 1800. RESTRAINED RUBBER RING JOINT

FEATURES

Steel Mains SINTALOCK joint consists of a rubber ring joint and external site fillet weld

With no need to enter pipes for welding or lining reinstatement, safety is increased, corrosion protection enhanced and laying rates improved

SINTALOCK eliminates the need for thrust blocks, significantly reducing construction time

SINTALOCK is available for 324-1829mm outside diameter pipe

Type I and Type II joints are available dependant upon pipe diameter and rated pressure required

Each joint provides an angular deflection of up to 1.1º

Unique joint design means the lining is unaffected by the fillet welding process

Suitable for potable and non-potable applications

DESCRIPTION

Increased pressure rating

Based on Steel Mains testing and research, the SINTALOCK Joint Type I allowable operating hoop stress will now be equal to 65% of the material yield strength (YS) for 300MPa steel

The increase in the pressure rating of the SINTALOCK Joint Type I is the result of testing and recalibrating the basis of the original design. The initial pressure rating criteria was found to be excessively conservative resulting in a single welded joint that was far more robust than the currently accepted welded pipe joints and even the pipe itself

Therefore the joint rated pressure has been raised from 36% of YS for hoop stress to 65% YS for 300 grade steel to better align with the strength of other elements in the pipeline. This will result in a more economical pipeline design

Following over two years of extensive research and development, Steel Mains is introducing a revolutionary, new joint technology - SINTALOCK Joint Type II

Physical fatigue testing as well as finite element analysis on a range of wall thickness and pipe diameters have been performed to determine the joint configuration and allowable operating pressures

The SINTALOCK Joint Type II is rated at a pressure corresponding to 72% Yield Strength with a maximum of 3.5MPa rated pressure (RP) for 300 MPa YS pipe steel

SINTALOCK does not require internal welding or lining reinstatement and enables construction of a fully end restrained pipeline without the need for concrete thrust blocks

This is a significant improvement on welded joints as it eliminates the safety issues associated with entry

TECHNICAL DATA

Size Range 324 to 1829mm

Rated Pressures Up to 5.0MPa*

Temperature Range -40˚ to 70˚C

End Connections AS 1579 - Arc-welded steel pipes and fittings for water and wastewater

Standards AS 1579 - Arc-welded steel pipes and fittings for water and wastewater**

Certifications Certified to AS/NZS 6800 - Suitable for contact with drinking water

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** SINTALOCK Joint Type II StandardMark™ approval pending

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SINTALOCK JOINT TYPE I

SINTALOCK JOINT TYPE II

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** SINTALOCK Joint Type II StandardMark™ approval pending

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