Australian Government
Department of Home Affairs

Request for Revocation of a Tariff Concession Order (TCO) or Commercial Tariff Concession Order (CTCO)

Please open this form using Adobe Acrobat Reader.

Either type in the fields provided or print this form and complete it using a pen and BLOCK LETTERS. Tick where applicable ☑

This form must be completed by a local producer of substitutable goods who wishes to request the revocation of a TCO or CTCO. All material is regarded as "commercial-in-confidence" and treated in accordance with the Privacy statement on page 6.

The form should be read carefully before being completed. A reference to a Part, section or subsection in this form is a reference to a provision of Part XVA of the *Customs Act 1901*, unless otherwise specified. A reference to TCO in this form is a reference to a TCO or a CTCO.

If you require advice concerning this form, please email **tarcon@homeaffairs.gov.au**

Details of the TCO or CTCO to which revocation request refers

Gazetted description of goods:	TCO number: 18180210
PIPES, ductile iron, having all of the following: a) cemnet mortar OR polyurethane lined; b) polyurethane OR zinc and aluminum OR zinc coated; c) epoxy OR bitumen finish coat Stated use: Transporting water, sewerage, fluid above and below ground	

Local manufacturer details

Name: Steel Mains Pty Ltd			
Business address: 125 - 175 Patullos Lane, Somerton, VICTORIA 3062			
Postal address (if the same as business address write "as above"): as above			
Australian Business Number (ABN): 004 843 056		Reference: NA	
Company contact: s47F	Facsimile number: NA	Phone number: s47F	Mobile number: s47F
Email address: dean.connell@steelmains.com			

Agent / broker details (if applicable)

Agent's name: NA			
Business address:			
Postal address (if the same as business address write "as above"):			
Australian Business Number (ABN):		Agent's reference:	
Agency contact:	Facsimile number:	Phone number:	Mobile number:
Email address:			

Details of the substitutable goods produced in Australia

1. Describe your locally produced substitutable goods

"Substitutable goods" are defined in subsection 269B(1) as "goods produced in Australia that are put, or are capable of being put, to a use that corresponds with a use (including a design use) to which the goods are the subject of the application or of the TCO can be put".

NOTE: Substitutable goods do not have to be identical to the goods that are the subject of the TCO or meet the terms of the wording of the TCO.

PIPES, mild steel, having, but not limited to, all of the following;
a) cement mortar OR polyethylene lined
   - bitumen finish coat on cement mortar lining if required
b) polyethylene OR epoxy OR alternative paint system coated

Steel Mains, and its antecedents, have been supplying steel coated and cement mortar lined pipe into the Australian water and wastewater market for over 100 years: Including welded (restrained) and rubber ring (unrestrained) joint types.

2. State the use(s) to which the substitutable goods are put or are capable of being put

Transporting water, sewerage, fluid below and above ground

Pressure and non-pressure applications

3. Attachments

Attach technical, illustrative, descriptive material and/or a sample and/or coloured photographs to enable a full and accurate identification and understanding of the substitutable goods.

NOTE: A reference to a website only is not sufficient and may result in your revocation request being rejected without further consideration.

4. Local manufacturers

Are you aware of any other local manufacturers producing substitutable goods?

☑ YES ☐ NO If NO, go to question 6

5. If YES to question 4

If yes to question 4, please provide details of any goods produced in Australia which are substitutable for the goods covered/ described by the TCO, and the names and addresses of the manufacturers of those goods. This information may assist your revocation request if further information is required in respect of Australian production of substitutable goods.

RPC Pipe Systems: Manufacture Glass Reinforced Plastic (GRP) pipe
- 11 Christie Rd, Lonsdale, South Australia 5160

Multiple Plastic pipe suppliers nationally: PVC and HDPE pipe

6. Production of goods in Australia

Section 269D provides:

(1) For the purposes of this Part, goods, other than unmanufactured raw products, are taken to be produced in Australia if the goods are wholly or partly manufactured in Australia.

(2) For the purposes of this Part, goods are to be taken to have been partly manufactured in Australia if at least one substantial process in the manufacture of the goods was carried out in Australia.

(3) Without limiting the meaning of the expression ***substantial process in the manufacture of the goods***, any of the following operations or any combination of those operations does not constitute such a process:

(a) operations to preserve goods during transportation or storage;

(b) operations to improve the packing or labelling or marketable quality of goods;

(c) operations to prepare goods for shipment;

(d) simple assembly operations;

(e) operations to mix goods where the resulting product does not have different properties from those of the goods that have been mixed.

A **Are the goods wholly or partly manufactured in Australia?** ☑ YES ☐ NO

B **Is at least one substantial process in the manufacture of the goods carried out in Australia?** ☑ YES ☐ NO

If yes, please specify at least one major process involved. If available coloured photographs, diagrams or schematics relating to the production of your substitutable goods may also be attached.

Product is 100% manufactured in Australia.

Major raw material inputs:
- Steel: Mild Steel Coils supplied by Bluescope Australia - Wollongong, NSW
- Primary Coating: Polyethylene (MDPE): Formulated, ground and packaged in s47G
- Primary Lining: Cement Mortar (Sand and Cement): Local suppliers to both Somerton, Vic and Kwinana, WA

Pipe Manufacture: Steel Coil rolled, welded, formed, coated and lined at two (2) Steel Mains manufacturing facilities
- Somerton, Victoria
- Kwinana, Western Australia

Steel Mains has capacity: Over 70,000 tonnes of pipe per year
Sizes: DN100 - DN2500

Steel Mains employs over 200 people nationally

7. Production of goods in the ordinary course of business

Answer 7.1 if you consider your substitutable goods are made-to-order capital equipment (see below). For all other goods, go to 7.2 on page 6.

7.1 Substitutable goods being made-to-order capital equipment

(i) "made-to-order capital equipment" means a particular item of capital equipment that is made in Australia on a one-off basis to meet a specific order rather than being the subject of regular or intermittent production and that is not produced in quantities indicative of a production run.

(ii) capital equipment means goods which, if imported into Australia, would be goods to which Chapters 84, 85, 86, 87, 89 or 90 of Schedule 3 to the *Customs Tariff Act 1995* would apply.

If your goods do not fall into both (i) and (ii) above, go to 7.2 on page 6.

Substitutable goods that are made-to-order capital equipment are taken to have been produced in Australia in the ordinary course of business if:

(a) a producer in Australia could produce substitutable goods, in respect of the goods the subject of the TCO or CTCO, with existing facilities; and

(b) the substitutable goods the producer could produce would be made-to-order capital equipment; and

(c) in the 5 years before the request for revocation was lodged, the producer has made goods requiring the same labour skills, technology and design expertise as the substitutable goods the producer could produce; and

(d) the producer in Australia is prepared to accept an order to supply the substitutable goods in respect of goods the subject of the TCO.

A Could the applicant produce substitutable goods, in respect of the goods the subject of the TCO, with existing facilities? ☐ YES ☐ NO

B Would the substitutable goods the applicant could so produce be made-to-order-capital equipment? ☐ YES ☐ NO

C Has the applicant in the last 5 years made goods requiring the same labour skills, technology and design expertise as substitutable goods to the goods the subject of the TCO application? ☐ YES ☐ NO

If yes, describe the goods made during this period and the relevant labour skills, technology and design expertise related to the production of these goods.

Please provide an invoice, order or tender document for the goods.

NA

D Is the applicant prepared to accept an order to supply substitutable goods for the goods the subject of the TCO? ☐ YES ☐ NO

7.2 Substitutable goods other than made-to-order capital equipment

Substitutable goods (other than made-to-order capital equipment and for goods sent out of Australia for repair) in relation to goods the subject of a TCO application are taken to be produced in Australia in the ordinary course of business if:

(a) they have been produced in Australia in the 2 years before the application was lodged; or

(b) they have been produced, and are held in stock in Australia; or

(c) they are produced in Australia on an intermittent basis and have been so produced in the 5 years before the application was lodged;

and a producer in Australia is prepared to accept an order to supply such goods.

A	**Have the goods been produced in Australia in the last 2 years?**	☑ YES	☐ NO
B	**Have the goods been produced and are they held in stock in Australia?**	☑ YES	☐ NO
C	**If the goods are produced in Australia on an intermittent basis, have they been so produced in the 5 years before the revocation request was lodged?**	☑ YES	☐ NO
D	**Are you prepared to accept an order for the goods?**	☑ YES	☐ NO

Attach a copy of **at least one invoice** showing the sale of substitutable goods to customers in the 2 years prior to the date of the TCO application. If the goods are produced on an intermittent basis, then the invoice/s may be from the 5 years prior to the date. If production has ceased, but stock is still on hand in Australia, attach a copy of stock records to this effect. In the absence of a sale, please provide relevant advertising material, such as a catalogue, to demonstrate that you were prepared to accept an order for the substitutable goods in the above periods. An order cancelled by the customer may also suffice.

8. Commencement of production of substitutable goods

What was the date on which you were first prepared to accept an order?
This date **must** be on or before the date the revocation request was lodged.
01-Jan-2000

Are the goods still in production? ☑ YES ☐ NO

If the answer is no, when did production cease? / /

9. If, in your opinion, a narrower TCO is appropriate, please suggest an amended form of words that will exclude the locally produced goods from the goods the subject of the revocation and at the same time preserve concessional entry for the balance of the imported goods.

NA

Privacy statement

Information provided on this form may be disclosed to a number of agencies including the Department of Infrastructure and Regional Development, the Australian Federal Police, the Australian Criminal Intelligence Commission, the Attorney-General's Department and the Department of Foreign Affairs and Trade. Any false or misleading statements may result in penalty action under Section 243T or 243U of the *Customs Act 1901*. Personal information is collected, used, stored and disclosed by the Department of Home Affairs (the Department) in accordance with the Australian Privacy Principles in schedule 1 of the *Privacy Act 1988*. Further information regarding how the Department, collects, stores, uses and discloses personal information may be found in form 1442i *Privacy notice*. More information about how the Department handles personal information can be found in the Department's Privacy policy at **www.homeaffairs.gov.au/about/access-accountability/privacy**

Notes

(a) Section 269SB(1) states if a TCO is in force on a particular day; and a person claiming to be a producer in Australia of substitutable goods in relation to the goods covered by that TCO is of the view that if the TCO were not in force on that particular day and that particular day were the day on which the TCO application was lodged, the TCO would not have been made; the person may request the Comptroller-General of Customs to revoke the TCO.

(b) Section 269SB(2) requires a request for the revocation of a TCO (or CTCO) to be in writing, be in an "approved form", contain such information as the form requires, and be signed in the manner indicated in the form.
This is the approved form for the purposes of that section.

(c) Sub item 38(1) of Schedule 1 to the *Customs Amendment Act 1996* provides that for the purposes of revocation of a CTCO, the *Customs Act 1901* as amended by the first mentioned Act applies as though the CTCO were a TCO.

(d) The request will be date stamped on the day it is first received by an officer of Customs. Any resultant revocation comes into force on that day. Instructions on how this form may be lodged are provided at the end of this form.

(e) **All questions relevant to your request must be answered.**

(f) Where the form provides insufficient space to answer a question, an answer may be provided in an attachment. The attachment should clearly identify the question to which it relates.

(g) If you wish to provide any additional information in support of your request, that information may be provided in an attachment.

(h) The Comptroller-General of Customs may require you to substantiate, with documentary evidence and/or a site visit to your premises, information provided in relation to the request for revocation.

(i) Section 269SC provides that the Comptroller-General of Customs may revoke a TCO (or CTCO) and make a narrower TCO in its place.

(j) Further information on the Tariff Concession System is available in the *Domestic manufacturers: importers* page on the Internet at **www.homeaffairs.gov.au/busi/domestic-manufacturers-and-importers** or by emailing **tarcon@homeaffairs.gov.au**

(k) Decisions made as a result of a local manufacturer revocation request pursuant to section 269SB may, upon application, be subject to internal review within 28 days of gazettal of the decision pursuant to section 269SH and then possible further review by the Administrative Appeals Tribunal pursuant to section 269SHA and section 273GA.

Applicant's declaration

I, s47F	Position held s47F
Company (if applicable) Steel Mains Pty Ltd	

declare that:

1. I have the authority to act on behalf of the company/applicant;
2. To the best of my knowledge and belief the information contained in this form including any attachments is correct and that no relevant information has been omitted;
3. I have ensured that all required questions are completed and supporting documents are provided; and
4. I agree, in submitting this form by electronic means (including facsimile) that, for the purposes of subsection 14(1) of the *Electronic Transactions Act 1999*, this application will be taken to have been lodged when it is first received by an officer of Customs, or if by email to **tarcon@homeaffairs.gov.au**, when it is first accessed by an officer of Customs, as specified in subsection 269F(4) of the *Customs Act 1901*.

Signature s47F	Date 08-Feb-2019

NOTE: Section 234 of the *Customs Act 1901* provides that it is an offence to make a statement to an officer that is false or misleading in a material particular or to omit or cause to be omitted from a statement any matter or thing reckless as to the fact that without the matter or thing the statement is misleading in a material particular.

Checklist

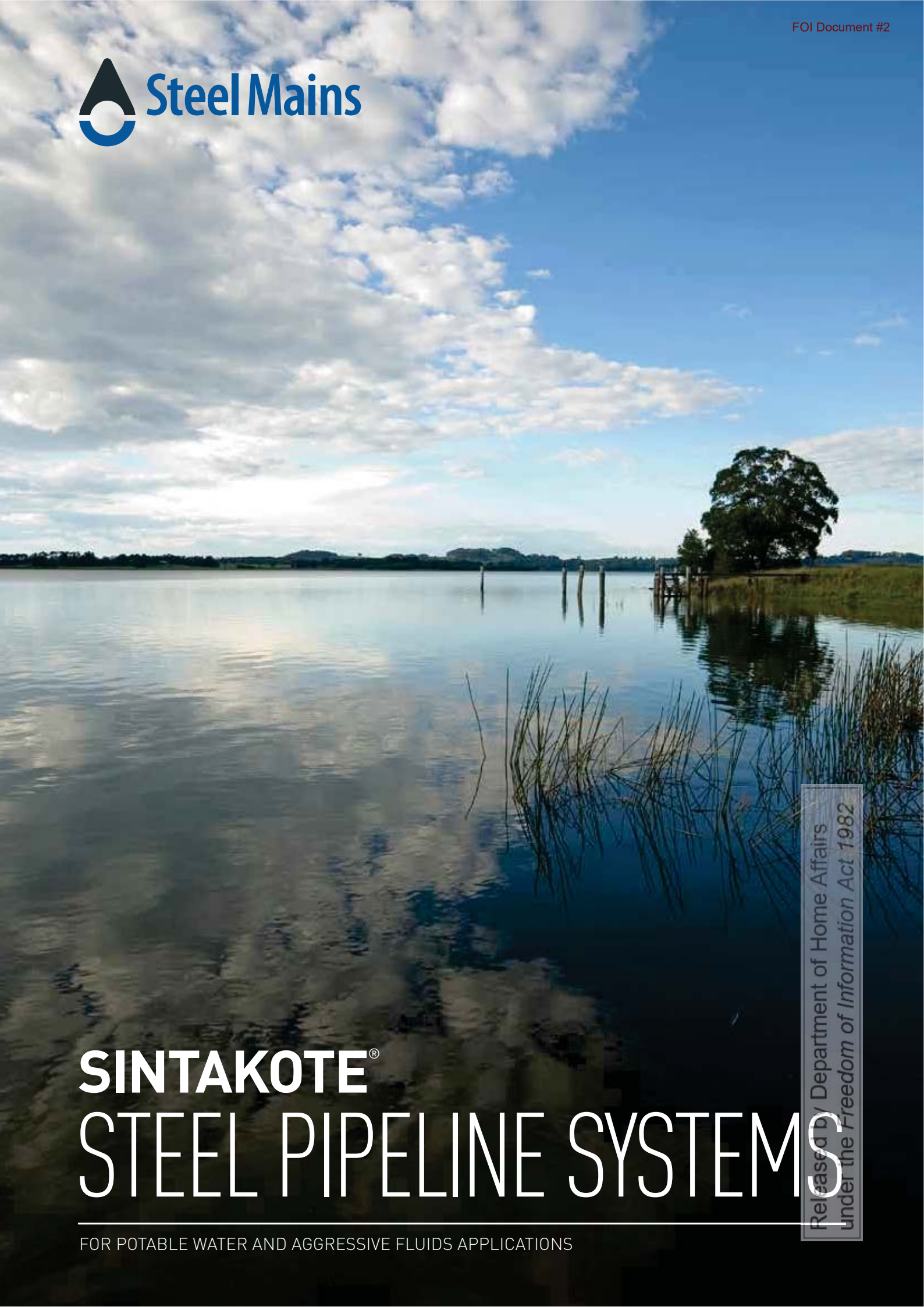
Before lodging your form please ensure that you have attached the following

☑ IDM / samples / photos ☑ Other supporting documents ☑ Invoices / orders / tender documents

WHEN THIS FORM HAS BEEN COMPLETED LODGE IT WITH THE COMPTROLLER-GENERAL OF CUSTOMS BY:

- emailing it to **tarcon@homeaffairs.gov.au** *(preferred)*
  or
- posting it by prepaid post to:
  Manager
  Tariff Concessions Administration
  Department of Home Affairs
  PO Box 25
  BELCONNEN ACT 2617

Steel Mains



SINTAKOTE®
STEEL PIPELINE SYSTEMS

FOR POTABLE WATER AND AGGRESSIVE FLUIDS APPLICATIONS

Steel Mains is Australia's leading manufacturer and supplier of complete steel pipeline systems for the transportation of water and wastewater, offering a total solutions approach to its customers.

Throughout Australia and the rest of the world, steel pipelines have long been used in water supply, particularly where high pressures, difficult laying conditions or security of supply, have required the strength and toughness of steel.

Steel Mains and its forerunners have traditionally been at the forefront of developments in the water industry for more than 125 years of manufacturing pipelines in Australia. Over that period steel pipeline design, manufacturing processes and technology have evolved into the SINTAKOTE® steel pipeline system further explained in this brochure.

Today, Steel Mains products and services cover a range of industry needs both within Australia and globally, delivering quality, strength, durability and endurance.

Steel Mains...
Solutions for Life

WWW.STEELMAINS.COM

Steel Mains

We all depend on the continuous supply of clean fresh water to live, produce food and deliver goods and services.

Satisfying this demand for water requires pipeline systems which consistently and reliably deliver quality water, year after year.

This performance must be achieved under a range of operating conditions for pipelines, both buried and exposed, accommodating static and transient pressures, resisting external loads from earth, ground movement and vehicle loading and withstanding exposure to multiple environments without requiring any maintenance over the pipelines life.

To perform as required pipeline systems must be capable of being handled, transported and installed without damage and be resistant to long term loss of strength, damage or effecting water quality through corrosion, ageing and other external effects.

Our communities expect water supply to be delivered in the most economical way, at minimum cost, over the life of the pipeline and without interruption.

The superior strength and ductility of steel, combined with world class pipeline and joint corrosion protection systems, ensure that Steel Mains provide the answer for water supply and many other applications.

SINTAKOTE
STEEL PIPELINE SYSTEM

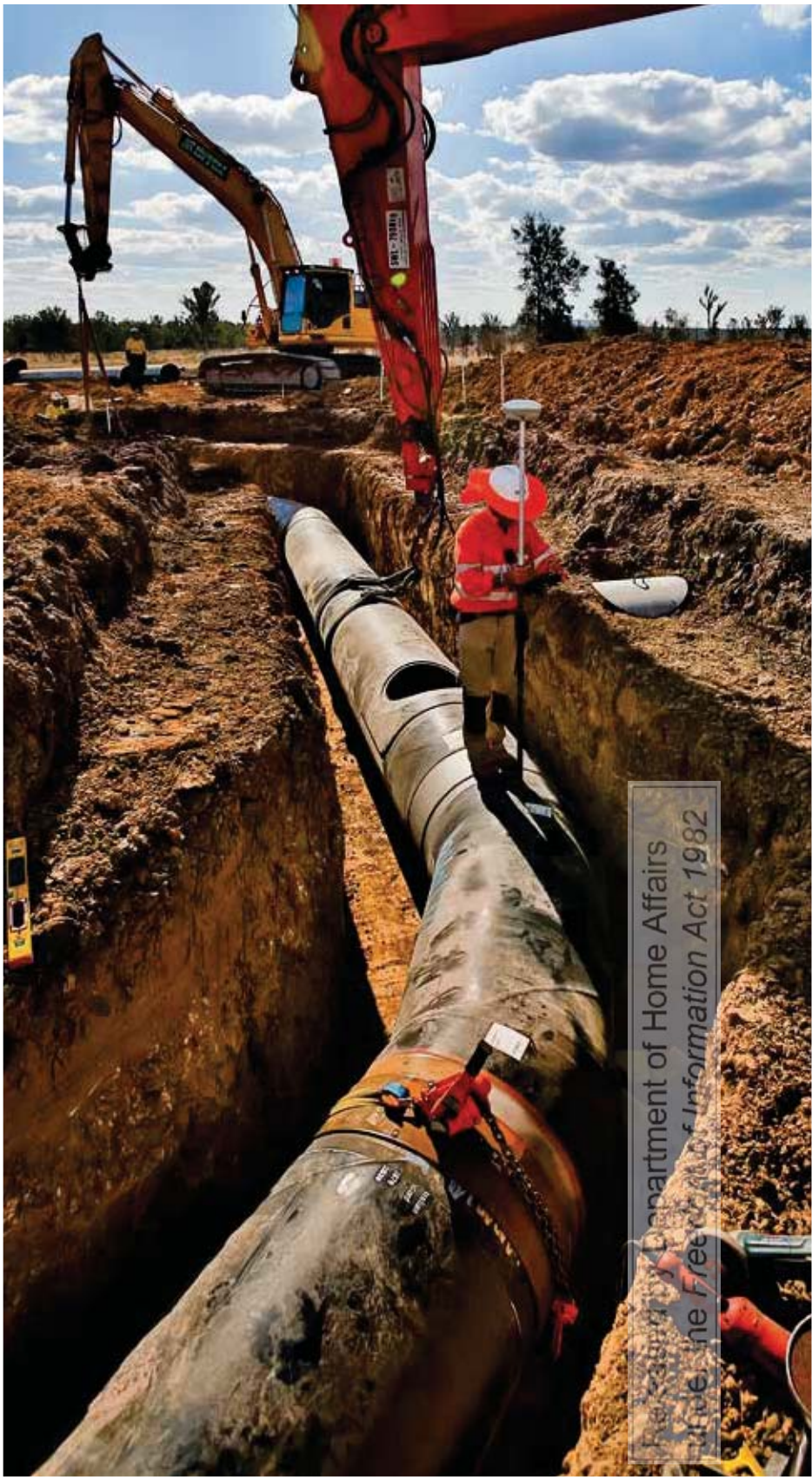
For almost 40 years Steel Mains has been supplying the SINTAKOTE® pipeline system and, for more than 30 years, its SINTAJOINT® push-in socket to the markets in Asia Pacific. This system has demonstrated outstanding performance both above and below ground in thousands of different applications and environments.

The SINTAKOTE technology has been developed into several core pipeline systems which can be tailored to suit specific applications along with the operating environment and consists of coating, lining and a joint system on both pipes and fittings.

Steel Mains manufactures steel pipeline systems in a comprehensive range from 100mm to 2500mm nominal diameter including all ISO and Australian Standard diameters. Pipes can be manufactured in a range of effective laying lengths from 6.0 to 13.4 metres with wall thicknesses ranging from 4.5mm to 20mm.

A full range of fittings from simple bends, tees, reducers, branches to complex fittings such as trifurcates can be supplied separately with SINTAJOINT for pushing together or any of our full range of welded joints for welding on site.

Rated pipe pressures are based on diameter, wall thickness and steel strength. Rated pressures for SINTAJOINT are typically up to 4.25MPa for pipe diameters up to DN 1000 with fully welded joints capable of even higher pressures.



SINTAKOTE

A factory applied external fusion bonded polyethylene coating proven to provide superior external corrosion protection in almost all operating environments.

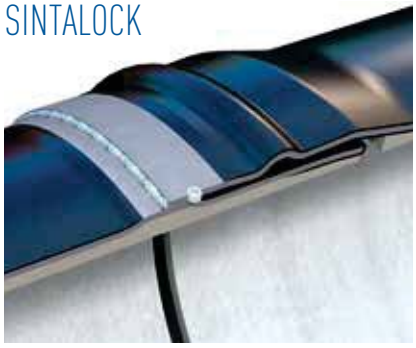
SINTAKOTE is recognised by the water industry as the premium corrosion protection system for steel water pipelines. Also widely specified in marine piling applications and can be installed above or below ground.

SINTAJOINT

A combination of a SINTAKOTE® pipe with an integrated push-in rubber ring joint and cement mortar lining providing complete end to end corrosion protection.

The SINTAJOINT® system is renowned for its total protection of steel pipelines and rapid construction in the field. Unmatched by any other rubber jointed pipeline system.

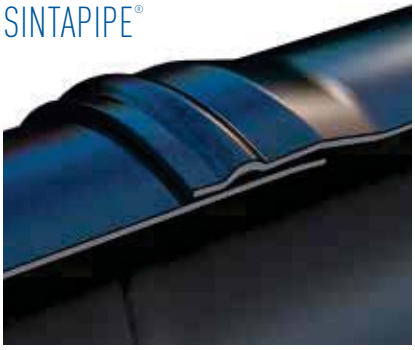
SINTALOCK



SINTALOCK® is a patented external welded rubber ring jointing system with the additional feature of being able to self resist end loads.

SINTALOCK does not require entry to the pipe during construction. No internal coating or lining reinstatement is required to maintain the factory applied end to end corrosion protection system.

SINTAPIPE®



The use of SINTAKOTE externally as a coating and internally as a lining, complete with the SINTAJOINT rubber ring joint system, provides a pipe and fittings system completely encapsulated end to end in fusion bonded polyethylene combined with factory finished pre-configured fittings ready for assembly on site.

The application of SINTAKOTE internally is designed for aggressive media, desalinated water, gravity sewers or drainage applications where cement mortar is not suitable.

ADVANTAGES
SINTAKOTE STEEL PIPELINES

PRESSURE CLASS DESIGN

SINTAKOTE® Steel Pipe is designed for internal pressures and resistance to external loads using Australian standards. Steel pipe's strength and versatility enable customised pressure class or rated designs to meet the performance criteria specified, thereby optimising pipe wall thickness and overall costs.

CORROSION PROTECTION

SINTAKOTE has almost 40 years proven operating experience in providing superior corrosion protection both below ground in a wide variety of soil conditions, from desert sands to aggressive saline soils and above ground, exposed to direct sunlight, without significant deterioration or any requirement for ongoing coating maintenance.

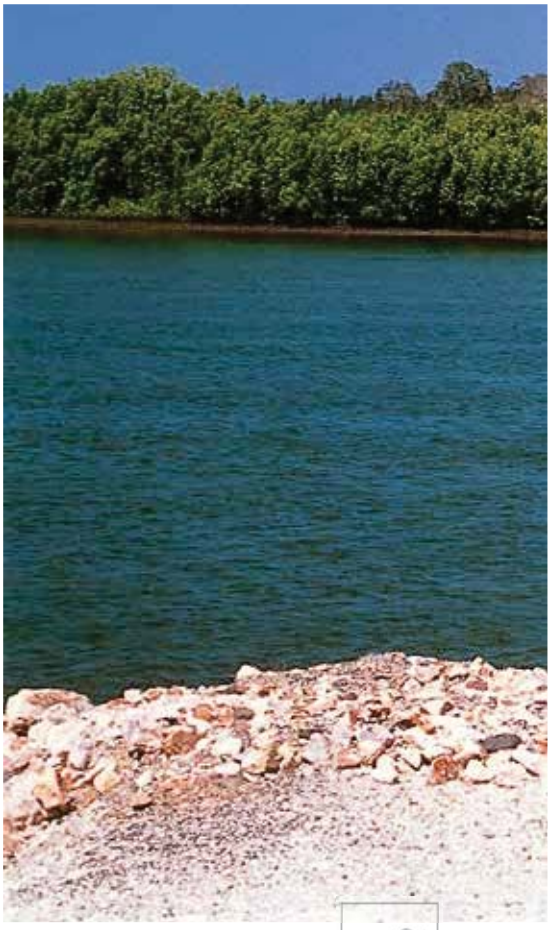
JOINT COATING

Every SINTAJOINT® rubber ring joint pipe is completely coated on the outside, through the socket area including under the rubber ring, ending beneath the cement lining.

No part of the steel pipe is exposed to the media and there is no interface where the coating ends and linings start. The SINTAKOTE system is a complete end to end envelope coating system isolating all ferrous material from the external and internal environments. This dramatically extends pipeline life and improves water quality compared to alternative materials.

LONG TERM PERFORMANCE

Cement mortar lined steel pipe protects SINTAKOTE steel pipe from corrosion and ensures its ability to maintain its high initial flow capacity over the design life of the pipeline.



ECONOMY IN INSTALLATION

SINTAKOTE offers benefits similar to ductile iron - fast laying without welding or joint repair. However with steel pipe lengths up to 13.4 metres long the number of joints that need to be made on site can be reduced by up to 50%. Steel pipelines include a wide range of fittings and custom fabricated components to meet all special requirements. Fittings such as offtakes and bends can be built into straight pipe lengths further increasing installation efficiency on site.

LOWER COSTS THROUGH STRENGTH

Steel offers the greatest strength, in proportion to wall thickness, of any commercial piping material. This enables steel pipe to be tailored to the system operating pressure over the length of the pipeline reducing pipe and installation costs. In above ground installations steel pipe spans can be significantly longer than alternative materials, minimising support and installation costs.

With steel tensile strengths of 300MPa and higher, allowable operating pressures ranging from 1.2MPa to more than 6.8MPa and bursting strength equal to three times design allowable operating pressure, steel pipe offers unequalled safety and light weight.

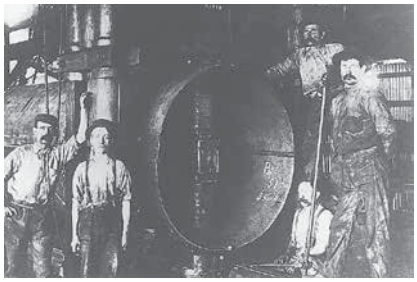
RELIABILITY AND DUCTILITY UNDER STRESS

SINTAKOTE® Steel Pipe delivers an elongation factor of at least 22% and can withstand stress and strains without breaking under shocks from water surge, waterhammer, vibrations, etc.

WELDED AND RUBBER RING JOINTS

Welded joints provide structural integrity and eliminate the need for thrust blocks especially above ground. Rubber ring joints allow simple, fast construction and minor changes in alignment and ground settlement and provide a factory coated joint eliminating on site coating reinstatement quality risks. With SINTALOCK®, pipe designers can combine both these benefits in a single joint, allowing flexibility in pipeline design and construction.

A HISTORY OF MANUFACTURING
YESTERDAY & TODAY

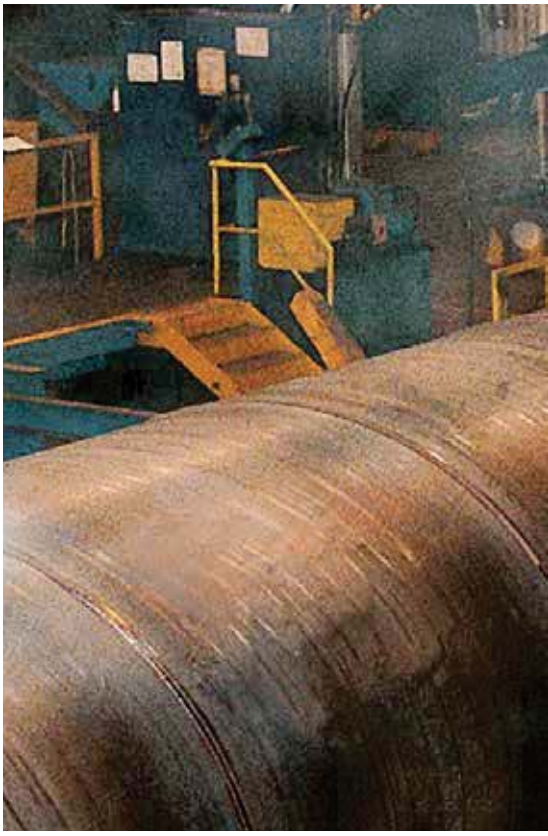


Steel Mains and its forerunners have been manufacturing steel pipelines in Australia for more than 125 years. Starting with Mephan Ferguson, who designed and manufactured the first 'Lock Bar' steel water pipe, in Melbourne Australia in 1896. Since then steel pipeline design, manufacturing processes and technology have evolved into the SINTAKOTE® steel pipeline system found in this brochure.

SERVING THE WATER INDUSTRY

Steel Mains offers a complete steel pipeline system covering all water industry applications including: potable water, industrial water, saline waters, sewage rising mains, slurry pipelines, pipelines with aggressive media and marine structural piling.

Steel Mains experience and expertise in steel pipelines ensures all the answers to pipeline design, installation, operation and service are covered by our highly experienced staff. Steel Mains maintains a dedicated engineering team to assist clients with pipeline designs for specific applications and installations and a comprehensive steel pipeline design manual to assist clients with design calculations.



The manufacture of steel pipe is carried out in several stages:

- pipe forming
- end preparation
- hydrostatic testing
  (not for structural or piling)
- coating
- lining

PIPE FORMING

Steel pipes are manufactured by spiral forming the pipe from steel coil.

The spiral forming process uses hot rolled steel coil as a raw material. The steel is uncoiled, levelled and passed through a forming station that spirals the steel to the required outside diameter.

The spiral seam is welded both internally and externally as part of the forming process. The pipe shell is then cut to the required length as it travels out of the forming and welding machine.

All welding is carried out using the automatic submerged arc welding process.

END PREPARATION

Pipes have their ends prepared depending on the jointing system being used.

HYDROSTATIC TESTING

Pipes for water supply pressure applications are hydrostatically tested to prove the steel and weld strength and that each pipe is water tight.

The strength test is carried out at 90% of the steel minimum yield strength, to a maximum of 8.5MPa, whilst the hydraulic leak test is carried out at the pipes rated pressure, which is equivalent to a stress of 72% of the steel minimum yield strength to a maximum of 6.8MPa.

Pipes for non water supply / structural purposes are not hydrostatically tested unless requested at order placement.

COATINGS
WORLD CLASS

SINTAKOTE® (Fusion Bonded Polyethylene or FBPE) has been applied by Steel Mains, in Australia, since the early 1970's.
Polyethylene has replaced all other coatings for the vast majority of steel water supply pipelines laid in Australia.

SINTAKOTE

SINTAKOTE is a medium density polyethylene which is applied to the pipe by a fusion bonding process. Polyethylene, supplied as a powder, is fusion bonded onto a blasted preheated steel pipe. This process provides a continuous and holiday free coating, with a smooth surface, ideal for above and below ground applications even in aggressive soils and when exposed to direct UV sunlight.

SINTAKOTE was developed by Steel Mains, in conjunction with Australian Water Authorities, to overcome pipeline failures due to inadequate coating systems. A worldwide research project was undertaken by Steel Mains to find the best coating system available. Further developments have maintained SINTAKOTE as a world leading coating and lining system for steel water pipelines.

Above. The bare steel surface of the pipe is cleaned by grit blasting to ensure an excellent bond between the steel and the coating. The pipe is heated and then dipped into a fluidised bed of polyethylene powder that fuses directly onto the heated surface.

LININGS
WORLD CLASS

The function of an internal lining is to provide a smooth bore to maximise flow capacity and minimise internal corrosion over the life of the pipe. In potable water applications, linings should not unduly affect the quality of the water being transported.

SINTAPIPE

SINTAPIPE® has a fusion bonded polyethylene lining applied to the inside of steel pipes. SINTAPIPE is ideal for aggressive water applications such as high CO_2 water, septic sewage, trade wastes and highly saline water. It can operate at temperatures up to 50°C.

SINTAPIPE makes use of the SINTAJOINT® rubber ring jointing system to provide an unbroken, end to end, coating system.

CEMENT MORTAR LININGS

Cement mortar linings provide the required standards of corrosion protection performance, at low cost, over long periods of service in potable water applications. The lining actively prevents corrosion by passivating the steel and can be expected to achieve a service life well in excess of 100 years.

Cement mortar linings are also used for wastewaters and saline waters. In these cases Steel Mains can assist designers with specifications for special cement lining and treatment to suit water chemistry and required design life. High alumina cements are often required for aggressive sewerage.

Cement lining is applied by spinning the pipe in a centrifugal process that results in a dense lining with a smooth surface. The lining is cured for a minimum of four days before the pipe is transported for installation. The dense lining produced offers good chemical resistance to potable water, saline and wastewater applications.

Cement mortar linings using General Purpose (GP), General Blend (GB), Sulfate Resistant (SR) and Calcium Aluminate (CA) are available.

Reinstatement of internal field joints when the pipe is welded is a simple task, requiring minimal skill, to achieve an integrated lining.

JOINTING
SINTAKOTE STEEL PIPELINES

SINTAKOTE® steel pipeline systems can be connected via a wide variety of jointing systems. To accommodate project specific needs a wide variety of joints are available from Steel Mains. Joints for water pipelines will depend upon the specific requirements of the construction and performance of the pipeline.

RUBBER RING JOINTS

SINTAJOINT® is a rubber ring joint specifically designed to eliminate the need for any on site field reinstatement after assembly on site. It provides a factory applied coating system, that is continuous within the joint, with it's interface under the cement lining ensuring a complete envelope coating end to end.

SINTALOCK® provides all the benefits of SINTAJOINT and when combined with external welding, 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. SINTALOCK is also much faster to install as only external welding is required.

SINTAJOINT is available in pipe sizes from DN 300 to DN 1800. Each joint provides angular deflection up to 3° dependent on diameter. In some special situations where ground strains are expected to be high, e.g., in a mine subsidence area, deep entry SINTAJOINT can be provided to accommodate the greater axial displacements expected.

SINTAJOINT

SINTAPIPE®

SINTALOCK - WELD

WELDED & MECHANICAL JOINTS

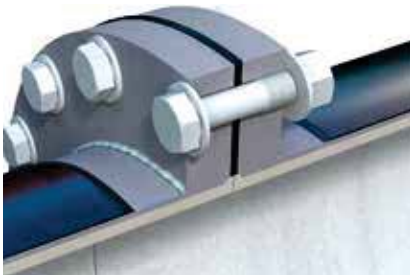
For welded joints and SINTALOCK® joints post weld reinstatement is achieved using a heatshrink sleeve applied to the joint overlapping and sealing onto the SINTAKOTE®. Once applied this sleeve maintains a continuous external coating system minimising risks of poor quality on site joint reinstatement.

CATHODIC PROTECTION

SINTAJOINT® pipe provides a 100% insulated joint. Unlike other ferrous pipe joints, each SINTAJOINT pipe is electrically isolated, regardless of joint deflection or entry depth, making it resistant in areas where stray currents occur. Where owners elect to install cathodic protection each pipe end is supplied with factory fitted cathodic protection (CP) lugs to ensure easy and effective electrical continuity between pipes.

BALL & SOCKET JOINT - WELD

FLANGED JOINT



SPHERICAL SLIP IN JOINT

BUTT JOINT WITH COLLAR - WELD

PLAIN END BUTT JOINT - WELD

SINTALOCK - WELD

FITTINGS
FOR ANY APPLICATION

Steel Mains has the capability of supplying a full range of fittings, including fittings fabricated from pipe and/or cylinders rolled and welded from plate steel up to a thickness of 40mm.

Steel Mains Steel Pipeline System Fittings are often manufactured to suit the specific needs of customers and a wide range of steel fabricated fittings can be supplied in addition to the standard range. For example expansion joints, purpose designed dismantling joints for high pressure applications and complex fittings such as bifurcates and trifurcates. Fittings are typically coated in SINTAKOTE® and cement mortar lined with welded, flanged or SINTALOCK® joints.

Each fitting is designed for the application with appropriate reinforcement. Where required, Steel Mains staff work with pipeline designers to maximise the efficiency of the system in the design phase, and Steel Mains supply the complete pipe and fittings solution to allow for efficient time saving installation.

SINTALOCK FITTINGS

Steel Mains range of SINTALOCK external welded restraint, rubber ring joint steel pipeline fittings components brings new economies to fittings manufacture and field construction.

SINTALOCK fittings allow construction of a complete rubber ring jointed pipeline system. Bends are incorporated with a SINTALOCK socket which are then welded to the spigot end of a specially prepared pipe with a standard SINTAJOINT® socket end and SINTALOCK spigot end. Tees and valve and scour offtakes are available as standard system components.

This eliminates the requirement for cement mortar lining reinstatement at the bend while taking full advantage of the benefits of SINTAJOINT and SINTALOCK. Tapers, reducers and bends can be incorporated with SINTALOCK joints.

Hockey Stick SINTALOCK® and SINTAJOINT® pipes feature a rubber ring jointed socket at angles up to 15 degrees. Coupled with the available angular deflection in the joint, (up to 3 degrees), significant changes in direction can be accommodated using several 'Hockey Sticks' in series.

Pipeline bends can be supplied to any angle from 1° to 90°.

Tee branches can be supplied in any standard diameter not larger than the body of the tee. Branches may be flanged or provided with either spigot or socket for rubber ring jointing to suit the demands of your pipeline system.

Reinforcing of tee branches is available as required.

SINTAKOTE
STEEL PIPELINE SYSTEM

MATERIALS RESEARCH

Steel Mains–Technologies is an independently accredited test facility specialising in the development of materials specifically for water industry applications. The facility provides a wide range of research in the areas of pipeline materials, welding technology, metallurgy, pipeline performance and protective coatings.

Steel Mains–Technologies is dedicated to the continual improvement of pipeline systems. Highly qualified staff with expertise in materials science and engineering keep abreast of, and in some cases, lead world technology in steel pipe design manufacture and performance.

The current SINTAKOTE® material and SINTALOCK® pipe joint are among the many products developed by this facility. The services of Steel Mains–Technologies are available to help solve your particular pipeline problems.

RECOGNISED INSTALLATION TRAINING

It is widely recognised that by following proper installation procedures, steel pipeline systems can readily achieve operational lifetimes of over 100 years.

For more than 20 years, Steel Mains has promoted quality pipeline installation through our formally accredited training program for steel pipes. Most Australian water authorities insist on accreditation to the program as mandatory competency requirements for contractors installing steel pipe.

The program provides hands on training for the installation and commissioning of SINTAKOTE pipe and fittings, in local languages, directed at supervisors and installers.

PIPELINE PERFORMANCE IS ASSURED

All Steel Mains design and manufacturing facilities operate under accredited Quality Assurance systems, producing premium pipeline systems to Australian or other specified Standards. Many of our manufacturing sites have been Quality Accredited for more than 20 years. These accreditations assure that our products are fit for purpose.

Our accredited training courses in pipeline installation go further to provide added insurance that the installed product will continue to perform for its design life and beyond.

STANDARDS

Manufacturing systems are accredited to AS/NZS ISO 9001 – Quality management, ISO14001 - Environmental management and AS/NZS 4801 - Occupational health and safety management.

Quality System™ Quality Endorsed Company ISO 9001 Lic 1034 AS 3901 NZS 9001

SINTAKOTE Steel Pipe and Fittings are accredited with product StandardsMark Licence to AS1579 - Arc welded steel pipe and fittings for water and wastewater.

STEEL MAINS

Steel Mains has an extensive history in Australia's major water pipeline infrastructure projects. This involvement has not been limited to manufacture and supply. In some instances the design, project management and construction have been Steel Mains responsibility. Think of any recent major water pipeline project and Steel Mains was involved. Either in design, supply, construction or commissioning, and with some projects, all of these functions. For all your water industry pipeline needs Steel Mains has the solutions.

VICTORIAN DESALINATION TRANSFER PIPELINE

Persistent severe drought conditions in Victoria, Australia lead to the construction of a state of the art desalination plant and DN 1900, 84km long, welded ball and socket joint, SINTAKOTE® pipeline transporting water from Wonthaggi Desalination Plant to Cardinia Reservoir

WIMMERA-MALLEE

Supply of a new pressurised pipeline water supply system to replace the existing channel delivery system. 64km of DN 1000 SINTAJOINT® RRJ and welded steel pipe and 30km of DN 700 SINTAJOINT RRJ and welded steel pipe

WOLEEBEE CREEK TO GLEBE WEIR

Steel Mains manufactured and supplied 120 kilometres of large 914-1404mm diameter steel pipe and fittings for SunWater's Woleebee Creek to Glebe Weir Pipeline project. The pipeline will deliver up to 36,500ML of treated CSG water annually to irrigation and industrial customers. A total of 10,000 pipes and 3,500 fittings were delivered on time and on budget

STEEL MAINS
MAJOR PROJECT EXPERTISE

NEWATER

As Singapore developed New Water to become a world leader in reuse water management, the Public Utilities Board required a pipeline that could handle aggressive desalinated water. In 2003 and 2004 Steel Mains provided over 30km of DN 800 and DN 900 SINTAPIPE®, complete with SINTAJOINT® pipe and fittings, for 7 different projects. Pipe was supplied in pre configured lengths with pipe and fittings coloured lilac (SINTAKOTE®) representing non potable water

BURDEKIN TO MORANBAH

Water supply pipeline from Burdekin to Moranbah. 172km of DN 800 SINTAJOINT RRJ and spherical slip-In welded joint steel pipe

SOUTH EAST QUEENSLAND WATER GRID

The South East Queensland Water Grid consists of the Northern Interconnector Pipeline, the Southern Regional Water Pipeline, the Eastern Interconnector Pipeline and the Western Corridor Recycled Water Scheme. Steel Mains supplied 334km of SINTAKOTE steel pipe and fittings in sizes ranging from DN 800 to DN 1400.

BALLARAT LINK OF THE GOLDFIELDS SUPERPIPE

Supply of a pressure pipeline from Sandhurst Reservoir to the White Swan Reservoir. 47km of DN 800 SINTAJOINT RRJ steel pipe

SUGARLOAF INTERCONNECTOR

Supply of a pressure pipeline from Eildon Reservoir to Sugarloaf Reservoir. 50km of DN 1750 and 20km of DN 1400 SINTAKOTE® ball and socket joint welded pipe

NEW ZEALAND & PACIFIC ISLANDS

Over 25km of various sizes SINTAKOTE and SINTAJOINT® pipes on five different projects in the region

UNITED ARAB EMIRATES

In the last 10 years Steel Mains has supplied over 168km of SINTAJOINT pipe in sizes from DN 800 to DN 1600 to the UAE for various water pipelines

Steel Mains

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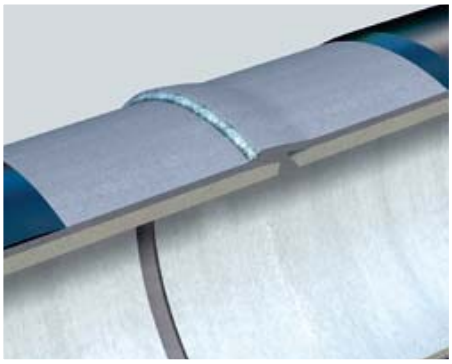
Steel Mains

SINTAKOTE®
WELDED CONNECTIONS

Welded joints provide 100% structural integrity. Where an internal and external weld is used, this can permit a pneumatic test of the field weld prior to backfilling. Steel Mains offers a variety of welded connections to suit various applications and can be combined with rubber ring joint pipes using 'changeover' pipes to achieve optimal outcomes both in terms of design and construction of water pipelines.

Steel Mains
SOLUTIONS FOR LIFE

SPHERICAL SLIP-IN JOINT (SSJ)
FOR SMALL–MEDIUM DIAMETERS



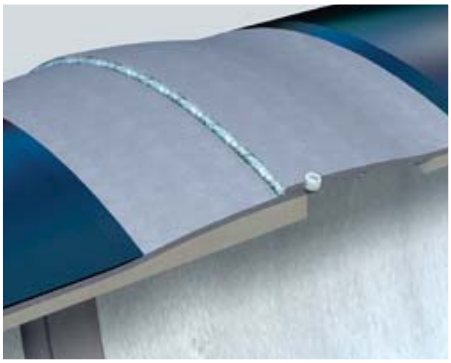
Sizes: 168mm to 1422mm OD
Joint deflection: Up to 3°
Pressure rating: Full pipe pressure
Wall thickness: Up to 11mm

ADVANTAGES

- Permits internal & external fillet weld for larger than 762mm
- Enables pneumatic field testing of joint—if welded internally
- Full axial restraint—reducing requirement for concrete thrust restraint
- Minimises bends using joint deflection
- Compatible with SSJ fittings

BEST FOR: Welded restraint in smaller to medium diameter pipelines

BALL & SOCKET JOINT (BSJ)
FOR MEDIUM–LARGE DIAMETERS



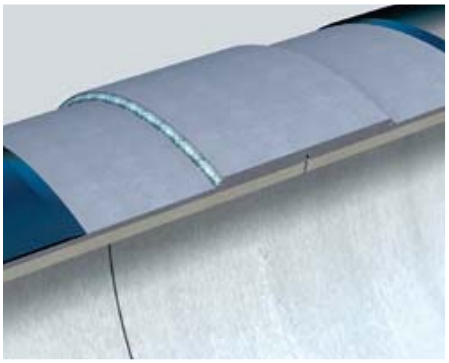
Sizes: 914mm to 1981mm OD
Joint deflection: 3° all sizes
Pressure rating: Full pipe pressure
Wall thickness: Up to 20mm

ADVANTAGES

- Permits internal & external fillet weld for all sizes
- Enables pneumatic field testing of joint
- Full axial restraint—reducing requirement for concrete thrust restraint
- Minimises bends using joint deflection
- Compatible with BSJ fittings
- Increased ring stiffness of joint for easy assembly

BEST FOR: Welded restraint in medium to large diameter pipelines; Minimising bends using joint deflection, reducing requirement for concrete thrust restraint

WELD COLLAR (WC)
FOR MAKE-UP PIECES



Sizes: All diameters
Joint deflection: 0°
Pressure rating: Full pipe pressure
Wall thickness: As required

ADVANTAGES

- External and internal fillet weld —where entry permits
- Enables pneumatic field testing of joint—if internally welded
- Full axial restraint—reducing requirement for concrete thrust restraint
- Can be prepared in the field

BEST FOR: Field make-up pieces to cut pipe to required length

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Steel Mains

SINTAJOINT® & SINTALOCK®
RUBBER RING JOINTS

Rubber ring joints provide several advantages over welded joints including faster laying rates, less maintenance and speedy backfilling. Steel Mains Sintajoint and Sintalock rubber ring joint technology allows for pipes to be laid as fast as one pipe every 3 minutes.

Steel Mains
SOLUTIONS FOR LIFE

SINTAJOINT®
RUBBER RING JOINT (RRJ)

Sizes: 324mm to1829mm OD
Joint deflection: Up to 3°
Pressure rating: Up to PN 42.5

Wall Thickness: Up to 12mm

ADVANTAGES
- Extremely fast installation speeds
- Fastest pipe lay rates
- No additional joint corrosion protection required
- Electrically insulated joint
- Fully protected joint internally for aggressive fluids

BEST FOR: Straight runs—where high installation rates can be achieved

SINTALOCK®–TYPE I
RUBBER RING JOINT + WELD

Sizes: 324mm to 1422mm OD
Joint deflection: 1.1°
Pressure rating: Dependant on diameter and wall thickness
Wall thickness: Up to 10mm

ADVANTAGES
- External fillet weld only
- Full axial restraint
- No internal reinstatement
- Enables pneumatic field testing of joint
- Fully protected joint internally for aggressive fluids

BEST FOR: Combining the speed and efficiency of Sintajoint RRJ with the full restraint of a welded connection—laying can continue ahead of weld completion

SINTALOCK–TYPE II
RUBBER RING JOINT + WELD

Sizes: 502mm to 1829mm OD
Joint deflection: 1.1°
Pressure rating: Up to PN 42

Wall thickness: Up to 12mm

ADVANTAGES
- External fillet weld only
- High strength full axial restrained rubber ring joint
- No internal reinstatement
- Enables pneumatic field testing of joint
- Fully protected joint internally for aggressive fluids

BEST FOR: Combining the speed and efficiency of Sintajoint RRJ with the full restraint of a welded connection in high pressure pipelines

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