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# Complete Solutions.

Tunnel Boring and Mining Applications

With 40 years of experience **Shurjoint** is recognized as a world leader in the design and manufacture of mechanical piping components for the mining and tunnel boring industry.

Shurjoint currently offers over 3,000 individual piping components in sizes from ½" (12.5 mm) to 96" (2400 mm) in diameter to meet your specific service requirements including;

#### Applications

Water
Chemical

- Air
- Process Piping
- Tailings & Backfill
- Fuel
- Fire Protection
- Oil / Oil in Water
- Drainage
- Dewatering
- Heating & Cooling
- Reclamation

**Shurjoint** offers some of the most advanced piping components available today for the mining and tunnel boring industry featuring the following benefits:

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**Faster and easier** – Install 4 to 10 times faster than traditional pipe joining methods saving you time and money while increasing productivity and performance.



A union at every joint – The mechanical joining method provides for a union at every joint for ease of maintenance, system changes and expansion.



Safety - No flame, fumes or joint compounds required.



**Versatility** – Provides versatility and flexibility in design and application while offering controlled expansion, contraction, deflection and angular movement.



Reliability - Proven, rugged and time tested.

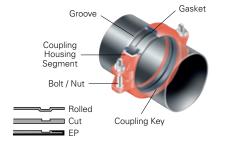


## **Mining & Tunnel Boring Pipe Joining Methods**

**Shurjoint** offers a variety of grooved, hole-cut, ring joint, shoulder, plain-end and flange adapter components for use with a variety of piping material and service applications.

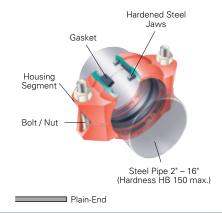
#### Grooved

Grooved joints are the most popular and widely used mechanical joining system in the mining industry. A coupling can be installed 3-4 times faster than a comparable welded or brazed joint and there is no need for a flame or welding torch on the job site. Depending on the application you can choose from roll grooved, standard cut grooved or EP cut grooved joints for high pressure applications.



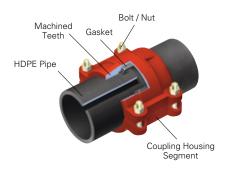
## **Plain-End (Steel)**

Designed to mechanically join plain or beveled end carbon steel pipe plain-end, couplings feature a case hardened jaw to effectively grip the pipe and provide a strong secure joint. No welding or special pipe end preparation is required.



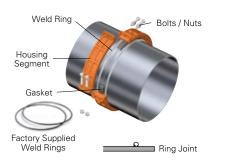
#### Plain-End (HDPE)

This mechanical plain-end joining system is simply the fastest and easiest way to join HDPE pipe. The machined teeth within the coupling effectively grip the HDPE pipe providing a strong secure joint, eliminating the need for costly heat fusion equipment and additional skilled labor.



### **Ring Joint**

An excellent alternative to a grooved or traditional shoulder joint, the **Shurjoint** ring joint system provides a stronger and more secure joint at an economical cost. The ring joint system maintains the full wall thickness of the pipe making it an excellent choice for slurry, tailings and a variety of other applications.



## Flange Adapters

**Shurjoint** offers a variety of adapters for making transitions from flanged piping systems to grooved, plain-end or ring joint piping systems.

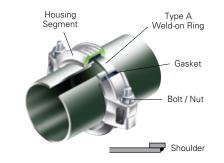
### Shoulder

Hinae

Gasket

Cavity

A classic joining system, the shoulder joint utilizes type A rings to maintain the full thickness of the pipe making it a good choice for abrasive applications. Shoulder couplings are also used to join light wall spiral pipe for low pressure water and air applications.



Coupling

Housing

Seament

Closure Tab

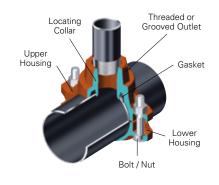
Key

actory Supplied

Bolt / Nut

### **Hole-Cut**

**Shurjoint** hole-cut products provide a fast and easy mid-point branch outlet for steel or HDPE pipe without the need for welding, heat fusion equipment or the use of multiple fittings.



For more information, including the complete offering of Shurjoint products and technical data, please visit our website at www.shurjoint.com.



## **Grooved Piping System**

## Shurjoint Grooved Couplings

Shurjoint manufactures a range of couplings from 3/4" to 42" (20 mm to 1050 mm) in diameter with pressure ratings up to 2500 psi (175 bar) for a variety of mining and tunnel boring applications.

Most couplings are supplied in ductile iron conforming to ASTM A536 Gr. 65-45-12 and or ASTM A395 Gr. 65-45-15.

Couplings are supplied standard painted or with an electrodeposition coating. Additional options include hot dip galvanized or epoxy coated.

Gasket options include: EPDM, Nitrile, Silicone, Neoprene, Fluorocarbon, Epichloro-Hydrin, Halogenated Butyl and more in accordance with ASTM D2000.



Shaft Piping, Portland East Side CSO Tunnel, USA



Lithium Mine, Canada

## Shurjoint Grooved Flange Adapters

**Shurjoint** offers a wide selection of flange adapters for mating to a variety of flange configurations including ANSI Class 125/150/300, PN10/16, JIS 10K and BS 10-E.



HVAC, Emergency Operations Center, Taipei, Taiwan



HVAC, Emergency Operations Center, Taipei, Taiwan



## **Shurjoint Grooved Fitting Series**



Most Shurjoint fittings are supplied in ductile iron conforming to ASTM A536 Gr. 65-45-12 and or ASTM A395 Gr. 65-45-15. Fittings are supplied painted or as an option can be supplied hot dip galvanized or epoxy coated.

Shurjoint fittings are also available with rubber lining for abrasive service applications. The rubber lining can be wrapped over the fitting end for applications where both abrasive and corrosive conditions exist.



Shurjoint offers 3D, 5D & 6D long radius elbows up to 24". The elbows can be rubber lined for abrasive and corrosive services such as slurry and pulp. The fittings can be relined as the rubber wears to extend the life of your piping system.



Fire Protection, Evergreen Aviation Hangar 2, Taoyuan, Taiwan

## **Shurjoint Hole-Cut Mechanical Tees**

Shurjoint mechanical tees provide a fast and easy mid-point branch outlet, eliminating the need for welding or the use of multiple fittings.

Mechanical tees feature both grooved and female thread outlets. Mechanical tees are UL listed and FM approved.



## **Shurjoint Flow Control Series**

**Shurjoint** offers a full line of valves and flow control components to meet the varied requirements of the mining and tunnel boring industry.

The Model SJ-200 Low Profile Butterfly Valve features a fully rubber lined body, stainless steel (316) disc and tamper resistant locking device.

The **Shurjoint** offering includes the SJ-500 ball valve and SJ-930 horizontal check valve for your high pressure piping requirements.

In addition **Shurjoint** offers a variety of strainers and diffusers to protect and optimize your piping system.





HVAC, IGS Building, Taipei, Taiwan



HVAC plant room, King Khaled University, Abha, Kingdom of Saudi Arabia



## **Shurjoint Ring Joint Series**



72" R-88 couplings used in F. J. Horgan Treatment Plant, Ontario Canada



Model R-88 Couplings with stainless steel rings used on stainless steel hydro electric pipe line, BC, Canada.



Model RX-3000 Couplings used in conjunction with Sch. 80 pipe line, Cerro Lindo Mine, Peru.

The **Shurjoint** ring joint system provides an excellent alternative to grooving or when grooving is not the preferred joining method. Ring joint couplings provide a more secure and stronger joint than that of a comparable grooved joint, offering 2 to 3 times the shearing force and maintaining the full thickness of the pipe. Available in sizes 2" to 104" (2600 mm) with some models rated up to 3,770 psi (260 bar) the ring joint coupling can be installed 3 to 5 times faster than a comparable welded or flanged joint making it a favorite of the mining and tunnel boring industry.

Shurjoint also offers a full range of ring joint fittings for use with the R-88 couplings. Weld rings can also be provided for use with some butt welding fittings to connect with ring joint couplings and components.

Shurjoint ring joint couplings can also be used on stainless steel pipe and are available with optional stainless steel rings. For additional information please request a copy of the Shurjoint Ring Joint Brochure or contact Shurjoint.



## **Shurjoint Shoulder Couplings**

The **Shurjoint** shoulder piping system is a proven and versatile pipe joining method in the mining industry. This system utilizes type A rings / shoulders and maintains the full wall thickness of the pipe while providing controlled expansion, contraction as well as some linear and angular movement.



## **Shurjoint HDPE Series**

The **Shurjoint** HDPE series feature couplings, adapters and hole-cut components for use with high density polyethylene (HDPE) pipe. This mechanical plain-end joining system is simply the fastest and easiest method for joining HDPE pipe while eliminating the need for costly heat fusion equipment and labor.

**Shurjoint** HDPE components are available for connecting both IPS and ISO size pipe and the components are rated to the same pressure as the pipe being connected.

HDPE couplings and adapters result in a union at every joint for unmatched system flexibility allowing you to move, modify and rotate pipe providing excellent solutions for a variety of mining and tunneling service applications. Available in sizes up to 20" (500 mm) for IPS sizes and 900 mm for ISO sizes.



## **Shurjoint Plain-End Coupling for Steel Pipe**

The **Shurjoint** Model 79 Wildcat coupling is designed to mechanically join plain or beveled end carbon steel pipe.

This coupling is available in sizes from 2" (50 mm) to 16" (400 mm) and features case hardened jaws to effectively

grip the pipe and provide a secure leak tight joint.

The Wildcat requires no welding or special end preparation, making it the right coupling for a variety of mining and tunnel applications.





## **Shurjoint Stainless Steel Series**



Shurjoint offers a full line of stainless steel, couplings, fittings and flow control components in a variety of material grades including; CF8 (304), CF8M (316), CK3MCuN (254SMO\*), CD3MN (2205 Duplex) and CE3MN (2507 Super Duplex).

\* 254SMO is a registered trademark of AvestaPolarit AB.

Shurjoint stainless steel components are the ideal choice for a variety of mining service applications including process piping and a variety of water applications including RO and potable drinking water.



Water Supply, Chi Mei Medical Center, Liouying Branch, Tainan, Taiwan



HVAC, Chi Mei Medical Center, Liouying Branch, Tainan, Taiwan



HVAC, Taichung City Government Office, Taichung, Taiwan



## **Shurjoint Fire Protection Series**

Shurjoint features a full line of UL listed and FM approved couplings, fittings and flow control components to meet your above and below ground fire protection needs.



Merck Chemical Kuanyin Factory, Taiwan



Evergreen Aviation Hangar 2 , Tainan, Taiwan

## **Shurjoint Ductile Iron Class 300 Threaded Fitting Series**

**Shurjoint** ductile iron threaded fittings are UL listed and FM approved for fire protection applications. In addition these class 300 fittings are rated from 1500 psi (105 bar) to 2000 psi (140 bar) at ambient temperature depending on size per ANSI B16.3. Class 300 threaded fittings can be used in steam service applications for services up to 300 psi (20 bar). **Shurjoint** threaded fittings series are the right choice for your mining and tunneling service applications.





Fire Protection, 101 Building, Taipei, Taiwan



# **Specifications, Standards, Codes and Organizations**

Shurjoint production facilities are certified to ISO 9001. Products are designed to conform and meet or exceed all applicable domestic and international standards and are listed, approved and or certified by various approval bodies and registration authorities. Shurjoint is also active in industry and environmental organizations.



ANSI American National Standards Institute



#### ANSI/AWWA

American Water Works Association C606 (latest edition)

#### ASME

American Society of Mechanical Engineers Power Piping, B31.1 Building Services Piping, B31.9



#### ASTM

American Society of Testing and Materials F 1476-01 Couplings F 1548-01 Fittings F 1155 Shipbuilding



**CNBOP-PIB** Scientific and Research Centre for Fire Protection - National Research Institute



CSA Canadian Standards Association B-242



DLEG State of Michigan Board of Mechanical Rules

FM ARCRIMEN

FM

Factory Mutual Research Corp. - Approved for Fire Protection Services



FESC Japan Fire Equipment Safety Center



IAPMO R&T

IAPMO Research and Testing, Inc.



LLOYD Lloyd's Register Quality Assurance ISO 9001:2008



LPCB

Loss Prevention Certification Board LPS-1219



#### NFPA

National Fire Protection Association NFPA 13



#### NSF

NSF/ANSI 61 Drinking Water System Components - Health Effects NSF/ANSI 372 Drinking Water System Components - Lead Content

#### BUILDINGS

NYC MEA New York City Department of Buildings, Material & Equipment Acceptance



NYPA New York Power Authority



Underwriter's Laboratories, Inc. - UL213



ULC Underwriter's Laboratories of Canada



TSUS Technický a Skúýobný Ústav Stavebný, n. o.



VdS VdS Schadenverhütung

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