










A large offshore oil rig is shown at sunset, with the sun low on the horizon over the ocean. The rig's complex structure of steel beams, pipes, and platforms is silhouetted against the bright sky. Several tall, cylindrical smokestacks are visible in the background. A crane is positioned on the right side of the rig. The overall scene is bathed in the warm, golden light of the setting sun.

**meteor**  
Supply and Services

# CATALOG 2020

[www.meteoraz.com](http://www.meteoraz.com)

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## About Us



Meteor Supply and Service is a supply company with international brands, offering installation and supply services to projects in the energy, industry, oil and gas sectors.

Based on years of experience and knowledge, we offer innovative construction materials and engineering solutions with the principle of providing added value and cost advantage to our customers. We also provide contracting services according to customer demands.

Meteor Supply and Service is growing and developing rapidly with its customer oriented and engineering based approach. We continue to offer innovative services in the sectors we work with, especially in the Azerbaijan market, with a solution oriented business model and a constantly diversified product portfolio.

As Meteor Supply and Service, our goal is to be one of the best and innovative companies in the sector with our expert staff and with our accurate, reliable, ethical and solution oriented services.





Products tools have been integral to the construction of buildings, from the earliest use of timber, bone, antler, stone and so on for cutting, scraping, chopping, hammering and moving, to the development of modern power tools enabling construction activities to be performed.

A wide range of construction equipment for sale:

- Measuring
- Fasteners
- Work Wear
- Work Lights
- Drilling & Milling Bits
- Hand Tools
- Hydraulic Tools
- Power Tools
- Garage
- Paint & Body repair
- Welding & Soldering
- Automativa Tools
- Air Tools
- Outdoor Tools
- General Construction Materials



Brands



## *INKA at a Glance*

INKA was established in 1986. In 1990, İNKKA began to manufacture fixing systems to meet technologically advanced product quality and variety requirements of construction sector. In 1994, in order to respond to increasing market competition and to sell its products to international markets, İNKKA restructured its company organization.

In 1995, İNKKA obtained Turkish Standards Institute quality certificate and began to export its goods. Exporting goods was the most important step for İNKKA to put product quality and meeting customer demand concepts even further and İNKKA received ISO 9001:2000 by embracing these concepts İNKKA is selling most of her production to world markets and has organized herself in a way that the export markets demand, namely quality products and service with competitive prices.

Our quality understanding has been accredited with ISO 9001/2000, OHSAS, ISO 14001, GOST, TSEK, FM Approvals and UL.

We have a well deserved and respected name in the world market with our 12.000 sqm closed area premises, production strength achieved through inhouse technology, organization in lieu of international standards, warehouse capable of 6.000 europalets, quality and diversity of goods instock and products developed in İNKKA. Today, İNKKA export the %70 of their goods. Also İNKKA carry out 70% of her export to Western Europa and other %30 of her export to Russia, Republics of Turks and middle east countries.

In a market and customer oriented approach, İNKKA is able and willing to work together with her customers to meet their special demands and design tailor made solutions for specific requirements. Most specifically, İNKKA works closely with prime contractors, project designers, MEP and HVAC installation subcontractors as well as facade system and insulation contractors and wholesalers.

Her product range are: pipe clamps, industrial type clamping systems (MSS Products), support channels, steel anchors, chemical anchors, plastic-metal anchors ventilation equipments, couplings, insulation and sismic blocks and all related accessories.

Building bonds that last is the most valorized value here at İNKKA because from it onset İNKKA has made it her governing philosophy that the most important link is the one created with her customers.



*Pipe Clamps*



St Pipe Clamp With Rubber Profile



St Pipe Clamp Without Rubber Profile



St Pipe Clamp With Rubber Profile & Combi Nut (M8-M10) Side Screw (M5-M6)



St Pipe Clamp Without Rubber Profile & Combi Nut (M8-M10) Side Screw (M5-M6)



St Pipe Clamp With Rubber Profile (Welded Wood Screw)



St Pipe Clamp Without Rubber Profile (Welded Wood Screw)



Silent Clamp



Heavy Duty Pipe Clamp With Rubber Profile & Nut



Heavy Duty Pipe Clamp Without Rubber Profile & Nut



Heavy Duty Pipe Clamp With Rubber Profile (Without Nut)



Heavy Duty Pipe Clamp Without Rubber Profile (Without Nut)



Heavy Duty Pipe Clamp (Bracket Type) With Rubber Profile



Heavy Duty Pipe Clamp (Bracket Type) Without Rubber Profile



Pipe Clamp For Sprinkler Installation



Pipe Clamp For Sprinkler Installation With Nut



Standard Clevis Hanger



U-Bolt



PVC Clamp



Stainless Steel St Pipe Clamp With Rubber Profile



Stainless Steel St Pipe Clamp Without Rubber Profile

*Hanging & Fixing Systems*



G Channel



U Channel



L Channel



C Channel



Power C Channel



C Channel Endcap



C Channel Console



U Channel Console



L Channel Console



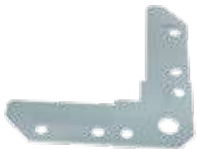
Corner Brack



Ventilation Clamp



Ventilation Flange



Ventilation Duct Angle Piece



VT Hanging Parts



VR Hanging Parts



L Hanging Parts



Z Hanging Parts



Height Adjusters



Suspension Strap With Perforations



Slide Guide



Heavy Duty Slide Guide



Medium Duty Quick Sliding Support



Heavy Duty Quick Sliding Support



Light Duty Sliding Shoe



*Hanging & Fixing Systems*



Assembly Bracket



Base Plate With Nut



Base Plate With Sleeve



Pressure Plate With Square Bolt



Beam Clamp



U Console



90° Connecting Plate



Threaded Rod



Hammerhead Bolt



C Channel Nut



G Channel Nut



Extension Nut



Spring Nut



Screw Adapter



Profile Washer



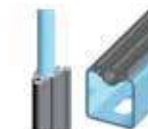
Plain Washers Grade A - DIN 125



Hex Bolt - DIN 933



EPDM Rubber



C Channel Rubber



Polyurethane Insulation Blocks



Calcium Silicate Insulation Blocks



Corner Brack

Anchors



Sleeve Anchor



Draw - in Anchor



Drop - in Anchor



Monoclip Anchor



Hook Suspension Anchor



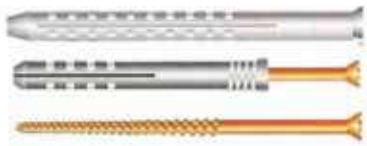
Butterfly Plug



Nylon Plug For Aereated Concrete



Standart Nylon Plug



Set for Hollow Bricket



Mega Cavity Plug



Turbo Let

*Couplings*



Flexible Coupling



Light-duty Flexible Coupling



Reducing Flexible Coupling



Rigid Coupling



Light-duty Rigid Coupling



90 degree Elbow



Light-duty 90 degree Elbow



45 Degree Elbow



Tee



Light-duty Tee



Reducing Tee



Cross



Light-duty Mechanical Tee Grooved Outlet



Light-duty Mechanical Tee Threaded Outlet



U-Bolt Mechanical Tee



Grooved Concentric Reducer



Cap



Grooved Flange

## ***Cast Iron Drainage Systems***

Comprehensive range of pipes, fittings and couplings for waste water and rainwater drainage within buildings.



*PAM-GLOBAL – Soil and Drain*



PAM-GLOBAL® Cast Iron Pipe Systems Located in Cologne - Germany,- SAINT-GOBAIN HES operates within SAINT-GOBAIN Construction Products Activity. Part of SAINT-GOBAIN PAM - one of the world largest cast iron drainage systems manufacturers - SAINT-GOBAIN HES is the branch in Germany pipe systems which promotes and supplies PAM-GLOBAL cast iron pipe to customers in Germany and abroad. SAINT-GOBAIN HES and SAINT-GOBAIN PAM closely work to promote the quality of the PAM cast iron products worldwide. The teams in Germany and France are ready to support your building projects everywhere and supply you with the relevant information.

*Benefits of PAM-GLOBAL*



New lining for pipes for optimised properties HPS 2000



Corrosion protection of fittings through KTL cataphoresis coating (inside and outside)



Strictly compatible fitting systems in the very highest quality



High durability far beyond the requirements specified in EN 877



High abrasion resistance with a smooth surface for excellent flow properties



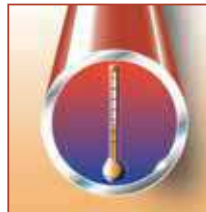
Robust, dimension stable and shock resistant



High acoustic performance, progressive sound dampening according to DIN 4109 (and VDI 4100)



Preventative fire protection. PAM-GLOBAL® pipes and fittings are noncombustible in keeping with DIN 4102.



Insensitive to heat and cold, very low thermal expansion (0.0105 mm/m K), similar to that of concrete so that their relative movement will not cause any problem.



Primer coated in the works, permanent adhesion and attractive appearance due to special external finishing coats by the works (e.g. with bridge structures)



100% recyclable to eliminate all waste disposal problems



Resources are not wasted as 95% of the material used to produce PAM-GLOBAL®S pipes consists of scrap metal

**PAM-GLOBAL® cast iron drainage spigot systems specification**

- The pipes are manufactured in a plant complying with ISO 9001 quality management and using the De Lavaud spinning process.

- The material of the system is made of cast iron according to EN 1561.

- The tensile strength on samples is 300 MPa, ring crush strength in average on DN 100 pipe is 450 MPa and Brinnell surface hardness is 220 HB degrees in average, which altogether indicate greater resistance to impacts, easier machining and cutting onsite.

- The spigot pipes and fittings, their couplings and accessories comply with EN 877 standard and RAL-GZ 698 special quality mark with specific testing requirements. The rubber gaskets of the coupling comply with EN 681-1.

- Marking: The brand logo, the reference to the standard and to the quality marks, the diameter in DN, and the manufacturing date are marked on the products as required in EN 877.

- The inner coating of the pipes is made of epoxy-resin 130µm and the external coating is a primer acrylic paint 40µm. According to the standard requirement, the internal coatings can withstand hot water at 95°C for 24 hours and withstand fluids between pH 2-12 for 30 days, without losing their properties.

- The fittings are mostly coated through a cataphoresis (KTL) process.

- The drainage system belongs to the A1 Class for Building Material according to DIN 4102 in Germany and is non combustible. It is CE marked on EN 877, and after tests in a third party accredited laboratory, is ranking "A2-s1, d0", for the complete system.

- The thermal expansion coefficient of cast iron is only 0.0105 mm/m.°K and similar to that of steel and concrete; there is no need for expansion joints.

- The noise insulation properties are complying with DIN 4109.

- Cast iron is 100% recyclable and environment friendly.

The manufacturing plant is certified ISO 14001.

**PAM-GLOBAL – S Pipes - Coating**

New epoxy-resin inner coat with optimised properties (130 µm)  
Cast iron De Lavaud process  
Outer coat (acrylic primer 40 µm)

The coatings principle is to offer consistent performance for pipes, fittings and accessories without any weak points. So that you can be sure of the products you specify and to fit important changes recently noticed on fluids carried – disinfectants, hygiene products... - SAINT-GOBAIN PAM regularly makes assessments on coatings. They are continuously upgraded to provide high protection level against corrosion, and long-lasting properties to protect the pipe work lifespan.

The inner coating of the PAM-GLOBAL® S pipes has been designed to withstand most chemical stress and resist abrasion. Made of an epoxy-resin regularly assessed, this coating benefits from continuous improvement to meet waste water drainage increasing constraints. Its smooth surface enhances flow capacity and prevents incrustations and deposits. The inner coatings of pipes and fittings have been paired for PAM-GLOBAL® S system consistency, to withstand equivalent stress and to ensure no weak link could affect the pipe work durability.

**PAM-GLOBAL® S Products and couplings with EPDM gaskets**

To provide clearer guidance on the chemical resistance of S range in domestic applications, SAINT-GOBAIN PAM has carried out 20 additional tests to the EN 877 Standard requirements on detergent products and special products of common use. The tests were carried out on samples, under the temperature of use recommended by the manufacturers and where it was relevant, up to 70°C since hot water is normally supplied in dwellings around 50 - 60°C. After stopping the test, the pipes and fittings shall be washed immediately to eliminate any stains and the coatings shall be examined with regard to blistering and rusting both according to ISO 4628-2 and 3. (Accepted levels according EN 877) The duration of the test would potentially be equivalent to the extrapolation of a real chemical stress undergone during 7 or 10 years (a 10 to 15 min stress per day). This test method however simulates a more severe stress since the samples lie in direct contact with the solution, the temperature being maintained and the test includes no rinsing over its duration.

		Dilution	pH	23°	50°	65°	70°	Test duration
SALT WATER	Same as sea water	30g/l						
DETERGENTS								28j
Laundry detergents	Phosphate free wash	2ml/l	7,7					28j
	Softener	2ml/l	7,6					28j
Dish washer detergents	Washing tablet	3g/l	9,3					28j
	Washing gel	3g/l	9,8					28j
	Washing up liquid	2ml/l	7,65			not applicabl		28j
Stain remover	Type "ACE GENTLE"		7,7					28j
COMBINATION	Wash + stain remover	2ml/l+ 3ml/l	7,7					28j
	Wash + Softener	2 ml + 3ml/l	7,7					28j
CLEANING PRODUCTS	Floor cleaning product	8ml/l	8,2				not applicabl	28j
	Bleach	8ml/l	8,25			not applicable		28j
WC CLEANERS	Toilet bowl cleaner (gel)	20ml/l	5,45					28j
	Drain cleaner gel	0,33 m/l	13			not applicable		4j
	Liquid descaler	80ml/l	2,07					28j

## FireStop Systems



The Protecta® range of Passive Fire Protection products is one of the most comprehensive in the industry today. To ensure our products are of the highest standards, we continue an on-going development and test programme in co-operation with major laboratories including UL, EXOVA, SP and BRE. All our products and their comprehensive range of applications are CE marked and our core products each have ETAs (European Technical Assessment). Protecta, providing quality systems which meet the harshest requirements of today's building and construction projects.

Protecta's range of firestopping products are manufactured by Polyseam Ltd, an organisation with offices in the United Kingdom, Norway and Sweden as well as a host of approved distribution agents in countries across the globe. The factory and head office is located in Huddersfield, UK, where research and development, production, distribution and international customer support services are based. The offices in Norway and Sweden deal with sales, technical support and distribution of products to our clients locally. The group employs building engineers, fire engineers and chemists that all work in co-operation for joint goals.





*Fire Protection Products*



**What is Passive Fire Protection?**

Passive fire protection (PFP) is a form of fire safety provision that remains dormant, or inert, during normal conditions but becomes active in a fire situation. It is an integral component of structural fire protection in a building, which is designed to contain fires or slow their spread. The purpose of passive fire protection is to contain the spread of fire for sufficient time to permit 1) the safe evacuation of all occupants of the premises and 2) the arrival of the fire services. The person responsible for fire safety also has a duty of care towards any members of the emergency services, e.g. fire fighters, who may have to enter the premises during the course of a fire; in slowing the spread of flames, smoke and hot gases, passive fire protection also serves to ensure the building remains as safe as possible for entry in this situation.

Passive fire protection provision is required in all buildings, whether domestic or non-domestic, with the purpose of containing and retarding the spread of fire. There are several methods and products available that will achieve the required standard of fire resistance in existing buildings, some of which may be more appropriate than others



## FR Acrylic

Protecta FR Acrylic is a fire rate product designed to prevent the spread of fire and smoke through joints and openings in fire rated walls and floors including openings formed around building service penetrations. This firestopping mastic will also maintain the acoustic design performance in walls and floors and has a working life of up to 30 years.



## FR Graphite

Protecta FR Graphite is a high specification formulation designed to prevent the spread of fire, smoke and gases through openings in fire rated walls and floors. Protecta FR Graphite is designed to fire seal difficult services which traditional fire rated mastics do not achieve such as large plastic pipes.



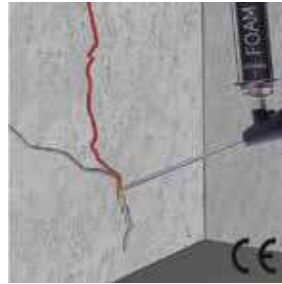
## FR IPT

FR IPT is a high performance fire rated sealant, professional quality, one part ready to use sealant and adhesive. Based on an innovative new Inert Polymer Technology it is suitable for a wide variety of building trade applications, Fire Protection, Decorating, Flooring, Glazing, Joinery, Plumbing, Roofing and Tiling and out-performs conventional silicone, MSP, butyl and acrylic based products as a sealant and adhesive.



## FR Foam

Protecta FR Foam is a fire classified construction foam that has particularly good acoustic properties. The foam satisfies the fire resistance requirement of 240 minutes at a depth of 20 cm, and is suited for quick and inexpensive sealing between concrete elements, Leca and similar where top finish is not required.



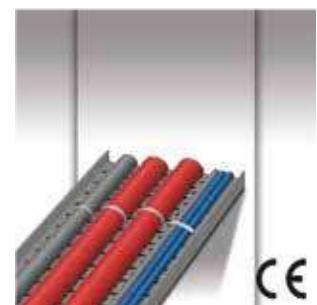
## Mineral Fibre BIO

Protecta Mineral Fiber Bio is made from special alkaline silicate (AES) fibers that are uniquely designed to provide benefits in high temperature insulation applications. These wool products are lightweight, have low thermal conductivity, low heat storage capacity and excellent heat resistance. It is also suitable for a wide range of high temperature applications such as furnace lining and blast furnace operation. It can also be used in fire protection as an easy-to-install, thermal backing material for fire protection seals.



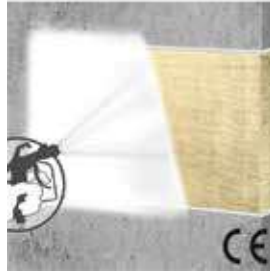
## FB Board

The Protecta FR Board consists of a high-density rock wool board which is coated with fire retardant paint on one or two sides, depending on where the fire sealing is to be carried out.



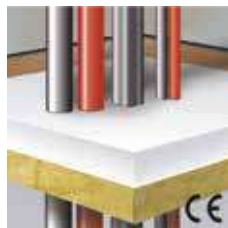
## FR Coating

Protecta FR Coating spray grade, is an ablative sealant coating designed to enhance, seal and fire protect mineral fibres. It is based on a durable polymer system with inert fillers, non-halogenated fire retardants and a preservative to resist microbial attack.



## EX Mortar

Protecta EX Mortar is a dry white powder which consists of inorganic components and perlite. When water is added, a hardened thermal fire sealing compound for sealing through-penetrations that penetrate fire classified walls and floors.



## FR Pipe Wrap

Protecta Pipe Wrap consists of a plastic wrapped graphite based swelling material that reacts with heat that fills the cavities resulting from the melting plastic through-penetration in case of a fire.



### *FR Collar – White*

Protecta FR Collar consists of a split white coated, circular steel casing designed to fit around plastic pipes. The collars have a secure and simple locking device. The steel frame contains a graphite based swelling material that reacts to heat and fills the opening from the melting plastic through-penetration in case of a fire. It may be fitted both on the outside of a wall or a floor.



### *FR Collar – Red*

Protecta FR Collar consists of a split red coated, circular steel casing designed to fit around plastic pipes. The collars have a secure and simple locking device. The steel frame contains a graphite based swelling material that reacts to heat and fills the opening from the melting plastic through-penetration in case of a fire. It may be fitted both on the outside of a wall or a floor.



### *Service Transit*

Protecta Service Transit has been designed to maintain the fire resistance of walls and floors when these are breached by continuous cables and plastic pipes. It is made up of a circular high temperature plastic tube containing a graphite based intumescent lining material which expands upon heating to seal spaces or voids around cables and pipes, thus preventing the passage of flames, smoke and gases.



*Anchor & Chemical Fixing Systems*



G & B Fissaggi Srl born in Turin at the end of the 70s with the production of a line of nylon fastening systems for the hardware sector. The strong initial specialization and the experience gained in the sector, have allowed the company to rapidly expand its penetration up to being present on the entire national and European market, offering high quality products and certified performances.

Today G&B Fissaggi is a manufacturer of nylon, steel and chemical anchoring systems, silicones, sealants and polyurethane foams for the hardware, tools, construction and industry, electrical, thermo-hydraulic and DIY sectors.

In our catalogue, you will find a wide range of technical sprays GEBOTEC Professional, a line for firing fasteners, a wide range of rivets and inserts, a complete line of special fasteners and products for the building industry, our line GEBFOR of drill bits and accessories for power tools, the IDROFIS and SANIFIS lines of fasteners for the thermo-hydraulic and electrical sector.

On the national territory our Customers can count on the Sales Network composed of about 50 G&B Agents divided by region, as well as obviously on the Central Management.

**SITA RANGE**

**SITA CE 1 TTSKS**  
Approved for fixing  
in seismic area Cat C1, C2



**SITA CE 7 GBK**  
Extra long-threading



**SITA TTS**  
also stainless steel  
A2 AISI 304





Blister & Easy-Pack



Drill Bits And Accessories  
for Electrics Tools



Rivets & Blind Nuts



PAT program



GebFix Solar - fixings  
for photovoltaic panels



Fixings for Hydraulic-  
Thermal and Electrics



Products for Building site



Special Fixings for  
Building



GEBOTEC Professional  
technical spray



GEBOFOAM  
poliurethane foams



GEBOSIL silicones,  
sealants, adhesives



Bonded Anchors



Heavy Duty Fixings



Medium Heavy Duty  
Fixings



Hollow Walls Fixings

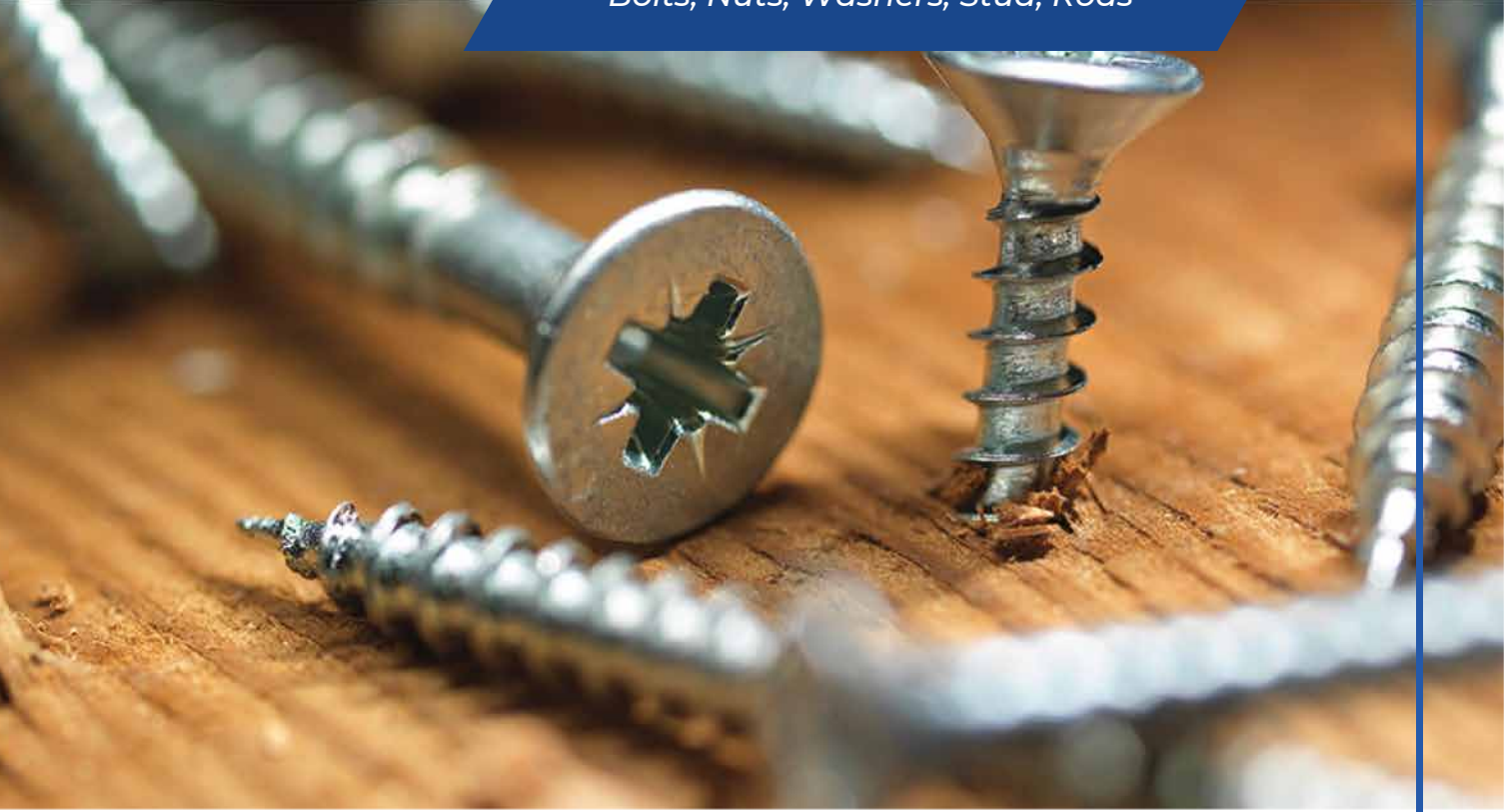


General Fixing



Nylon Frame Fixings

## *Bolts, Nuts, Washers, Stud, Rods*

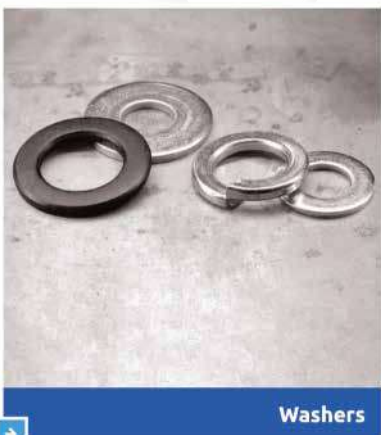
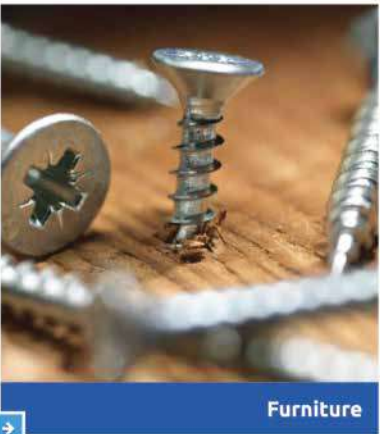
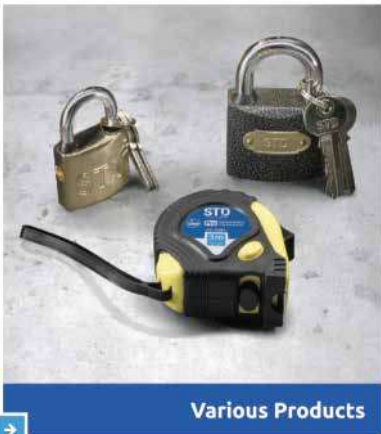
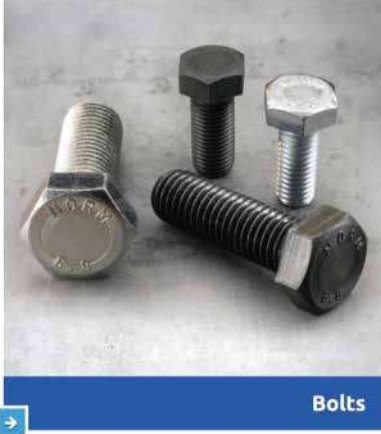


Standart Cıvata Tic. Ve San. A.Ş has taken the top places in the sector since its establishment, has been the pioneer for technological changes with the innovations it has created and has become the determiner of the sector. Standart Cıvata, established by Nedim Uysal, our Honorary President, in 1982 within the body of Norm Group has domestic and overseas experience with the sense of high quality product and service. Today, Standart Cıvata has become a preference of leading industrial institutions and brands and subsidiary industries of the country with the latest quality control systems it has established by the support of Norm Group Companies and is progressing safely in the way of being the logistics and Kanban company of these companies.

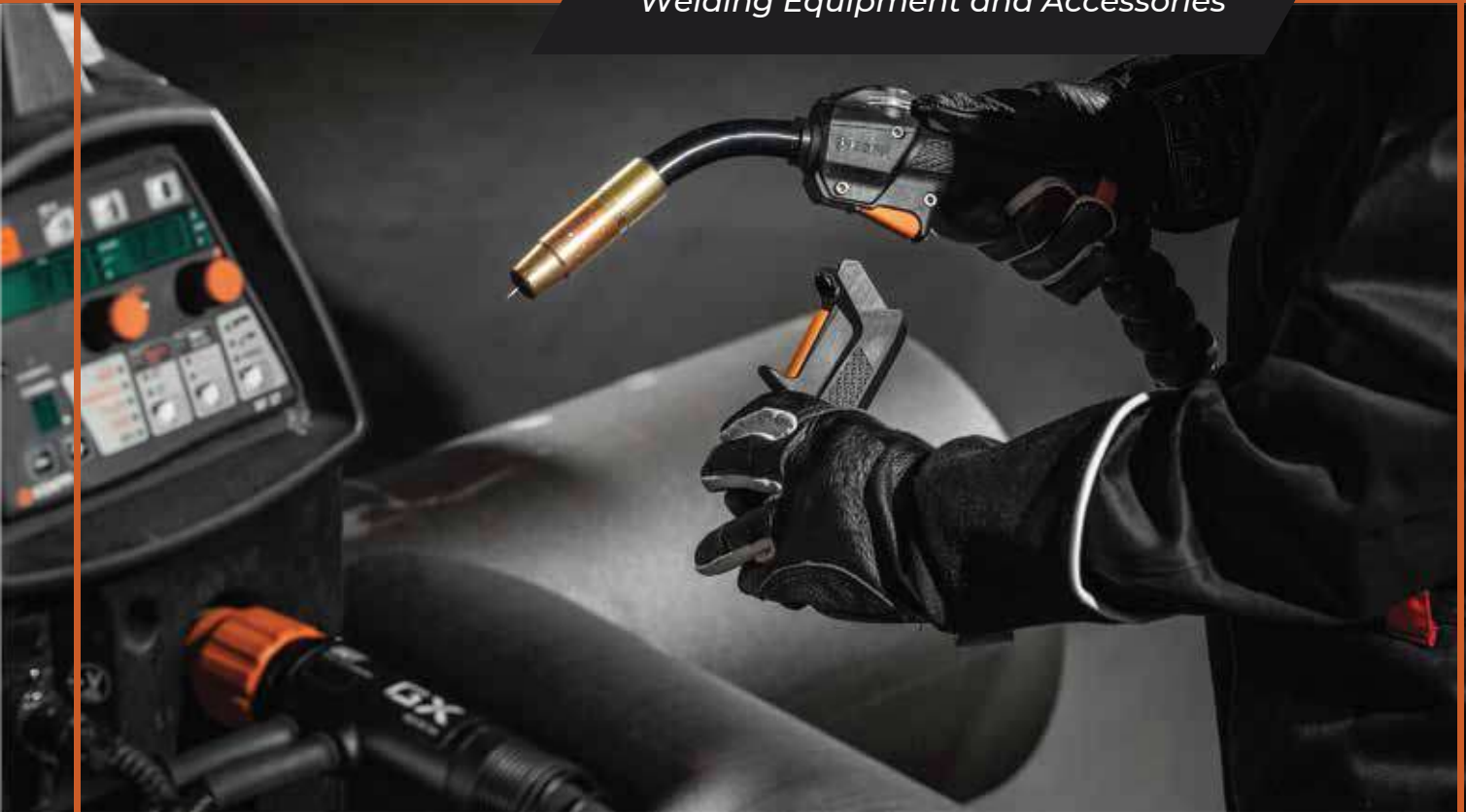
While performing with the principle of offering the best service possible with the most reasonable prices without compromising on quality for 38 years, Standart Cıvata has proven its quality once again with TSE EN ISO 9001 certificates it has obtained.







*Welding Equipment and Accessories*



Kemppi is the pioneering company within the welding industry. It is our role to develop solutions that make you win business. Headquartered in Lahti, Finland, Kemppi employs over 800 welding industry experts in 17 countries and has a revenue of more than 150 MEUR. Our offering includes welding solutions - intelligent equipment, welding management software and expert services - for both demanding industrial applications and ready-to-weld needs. Local expertise is available via our global partner network covering over 60 countries.





Designed for the welders with an eye for quality, Kemppi MIG/MAG equipment keeps the technology on the inside, and simple, intuitive control and performance on the outside.



A3 MIG Rail System 2500



A7 MIG Welder



FastMig X



Kempact RA



MasterTig ACDC



Minarc Evo



X3 MIG Welder



X8 MIG Welder

## Power Tools, Hand Tools, Wrenches Tools

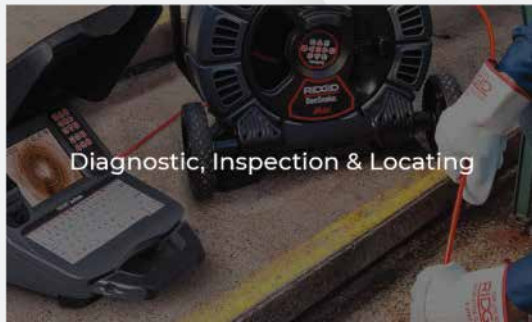


Since the day we invented the modern pipe wrench, we've made it our mission to build for the world's expert tradespeople – those who know the limits of the job and how to exceed them.

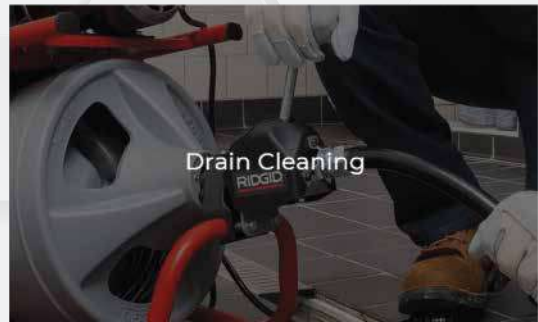
These tools operate in extremes of heat and cold, withstand dirt and mud, and perform reliably day in and day out. RIDGID tools are known the world over as industry-leading products that allow professionals like you to complete jobs more quickly and reliably.

Some of our customers tell us stories of the things they built, while others tell the stories of the men and women who came before them. Our tools are handed down from Father to Son and from Grandfathers to Granddaughters. We love that, and we honor the strength and spirit of those past, present and future who proudly choose RIDGID.





Diagnostic, Inspection & Locating



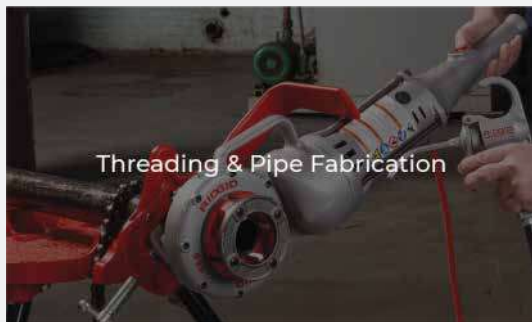
Drain Cleaning



Utility & Electricians Tools



General Purpose & Hand Tools



Threading & Pipe Fabrication



Power Tools



Pressing



Wet / Dry Vacs



Wrenches & Tubing Tools

## Cutting, Beveling, Squaring Machining



The PROTEM Group is composed of two autonomous entities and a highly complementary brand which enables it to offer a wide range of machine-tools and services for all machining and welding preparation work for tubular components, boiler and heat exchanger tubes, for the replacement of steam generators, for the machining of flanges and valves, for the dismantling of the internals of nuclear reactors and nuclear vessels.

The first entity, PROTEM, is a company which specializes in the study, conception and manufacturing of portable machines for construction, maintenance, repair, and dismantling of tubes and pipes. PROTEM machining applications are varied from orbital cutting, severing, beveling, squaring, counterboring, facing, surfacing, drilling and boring to cutting heat exchanger tubes to various lengths, removal of weld joints, replacement of steam generators, etc.



The second entity, SERCO, is also a company which specializes in the study, conception and manufacturing of mobile machining units. SERCO's distinction comes from its capacity to design and manufacture equipment whose components enable the machine operator to obtain a perfect rigidity when the machine is fixed onto flanges and valves. This allows very high precision machining, up to an accuracy of 0.001 mm. SERCO is widely regarded as the only worldwide manufacturer to offer machines with an independent adjustment of concentricity and flatness. Moreover, the SERCO mobile machining units are specially designed to be used in tight spaces and demanding environments.

The PROTEM Group created the ULTIMASTER brand in order to offer a complete range of orbital cutting and tube squaring machines dedicated to tubes with thin wall thickness.



## *Beveling Machines*

OD and ID mount.

Machining diameters from 8 mm (.315") to 5000 mm (196.85").

Machining wall thicknesses :

0.5 mm (.020") to over 100 mm (3.934").

For all types of metals, alloys and steel.

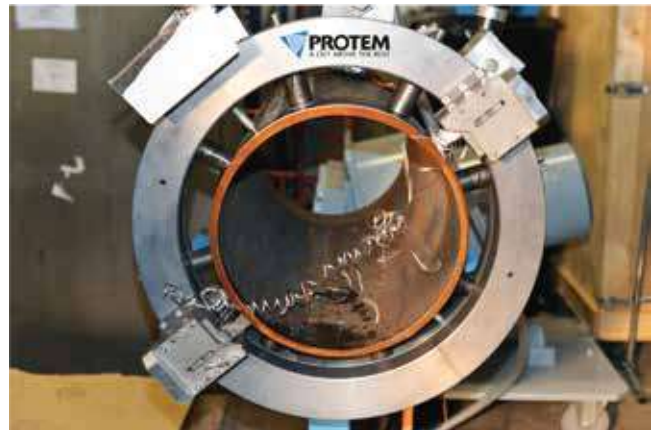


## *Orbital Cutting and Beveling Machines*

OD clamping for diameters ranging from 0.5" to 168"

Machining wall thicknesses:

0.5 mm (.020") to over 100 mm (3.937").



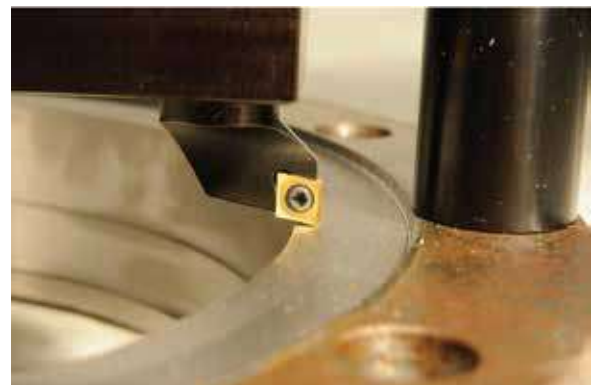
## *Flange and Valve Facing Machines*

OD or ID mount.

Machining diameters from 25 mm (.984") to 5000 mm (197") (larger diameters are available upon request).

Machining wall thicknesses :

2 to 350 mm (.079" to 13.779") and over.





## Speciality Machines

### Nuclear Equipment

PROTEM designs equipment for the construction, maintenance and dismantling of nuclear installations and components.



### Oil & Gas Industry

PROTEM offers a complete range of equipment dedicated to applications in the oil & gas industry.

For applications onshore, offshore, on spoolbases, under water and under the most severe conditions.

These machines perform welding preparations by high speed cutting, beveling and/or counterboring operations on tubes and pipes with diameters up to 168".



## Sealing Products & Services

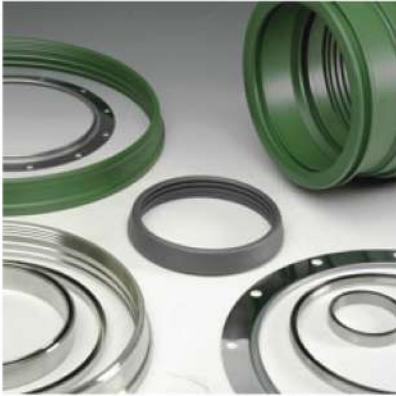
James Walker

James Walker is a dynamic global manufacturer and distributor that supplies a vast range of standard and specialised products and services to virtually every industrial sector. Our world-leading expertise and capability in high performance fluid sealing and bolting technology, led by design and materials technology, embraces the complete industrial cycle from research, development and manufacture, to product application, installation and maintenance. These activities help keep global industry running safely, efficiently and with improved environmental performance, year-in and year-out. We serve customers in over 100 countries through our extensive production, engineering, distribution, technical support and customer support facilities – backed by

IT networks, e-commerce systems and logistics operations.

- Elastomer engineering
- Elastomeric sealing products
- Gaskets & jointings
- Bolted joint integrity
- Gland packings & cartridge seals
- Expansion joints & vibration attenuation
- Engineering & technical support
- Custom products in plastics or metal





**James Walker**

*Pipe supports – pipe grips*

The TICO® industrial pipe support family of products consists of pipe grips, clip strips, clamp blocks and Bond Slip systems. TICO pipe support products perform a number of varied functions, which include:

- Supporting and positively locating pipework over long spans
- Isolating the pipe from the mounting bolts and clamps to prevent fretting and corrosion
- Isolating dissimilar metals (e.g. between a pipe and a clamp) to prevent electrolytic corrosion
- Cater for movements in the pipe due to, for example, thermal expansion and contraction which might otherwise result in a build-up of stress in the pipe and potential rupture
- Maintaining pipe spacing of multiple pipe runs over long spans

**TICO® Pipe Grips (isolated U-bolts)****Product description**

TICO® Pipe Grips have been specifically designed to minimise vibration transmission between pipework and hanger, and also to prevent corrosion between dissimilar metals.

**There are two designs of pipe supports:**

- Guide Type with PTFE linings on inside surface to allow movement of the pipework
- Grip Types, which securely holds the pipe in place to restrict movement

**Key features**

- Designed so that the pipe is fully isolated from its support to prevent electrolytic corrosion
- Lining prevents clamping damage to the pipes during installation and wear due to fretting
- Reduction in the transmission of noise and vibration



## TICO® Pipe Grips – grip type

### Grip types:

Configuration enables the pipe to be gripped and supported while accommodating small axial and torsional movements of the pipe.

Two size ranges based on different types of thin walled pipe:

### JW 152 Series

- Sizes based on stainless steel pipe outer diameters to BS3974 Part 1 1974. (Note; This specification has now been withdrawn and, although no direct replacement exists, BS EN 13480 pt 3 is now often referenced in its place).
- Rubber sleeve and pad colour coded Black

### JW 153 Series

- Sizes based on Cu-Ni pipe outer diameters to BS2871 Part 2 (Now replaced by BS EN 12449:1999)
  - Rubber sleeve and pad colour coded Red
- The JW reference number uniquely identifies each size of bolt. The suffix on the JW number is equal to the X dimension of the Pipe Grip (pipe OD).

## TICO® Pipe Grips – guide types

### Product description

The configuration of PTFE lined rubber components enables the accommodation of larger axial and torsional pipe movements.

Two size ranges, based on different types of thin walled pipe:

### JW 172 Series

- Sizes based on stainless steel pipe outer diameters to BS3974 Part 1 1974. (Note; This specification has now been withdrawn and, although no direct replacement exists, BS EN 13480 pt 3 is now often referenced in its place).
- Rubber sleeve and pad colour coded Black

### JW 173 Series

- Sizes based on Cu-Ni pipe outer diameters to BS2871 Part 2 (Now replaced by BS EN 12449:1999).
- Rubber sleeve and pad colour coded Red The JW reference number uniquely identifies each size of bolt.

The suffix on the JW number is equal to the X dimension of the Pipe Grip (pipe OD)

*Reference Projects*

ACE (Central East Azeri) oil production drilling rig for the platform



AGT (Azerbaijan, Georgia, Turkey) Region  
Providing Manufacturing and Construction  
Services for Production, installation,  
construction, provision of control and meas-  
uring devices and repair of electrical equip-  
ment

Azerbaijan, Sangachal Terminal Project -  
Mechanical Works, Electrical Equipment  
and Installation of Control-Measuring  
Devices





Oil Refinery named after Heydar Aliyev Reconstruction and Modernization (Call-off #1- Bitumen Oxidation Facility Construction Project)

SD1 Extension and Transmission Line Dimensional inspection, production and installation services for the existing Onshore\_ Offshore Renewable Facility for DBXO during the implementation phase of the Construction Project



Reconstruction project of Socar Azerkimya EP-300 (Ethylene - Polyethylene plant)

## Services

### Blasting and Painting

Blasting is the operation of forcibly propelling a stream of abrasive material against a surface under high pressure to smooth a rough surface, roughen a smooth surface, shape a surface, or remove surface contaminants. A pressurized fluid, typically compressed air, or a centrifugal wheel is used to propel the blasting material (often called the media).

There are several variants of the process, using various media; some are highly abrasive, whereas others are milder. The most abrasive are shot blasting (with metal shot) and sandblasting (with sand). Moderately abrasive variants include glass bead blasting (with glass beads) and media blasting with ground-up plastic stock or walnut shells and corncobs. A mild version is soda-blasting (with baking soda). In addition, there are alternatives that are barely abrasive or nonabrasive, such as ice blasting and dry-ice blasting.

We offer one of the East Coast's largest state-of-the-art blasting and painting facilities. It is specially designed to handle large equipment and components perfect for customer needs.

Blast and paint units, each one 25ft. wide by 20ft. high by 60ft. long

Dual-media blasting, steel grit or crushed glass, to SSPC standards. Other blast media could be used upon request

Customer specified coatings including primer, enamel, epoxy and high-temperature paints applied  
Cross-draft, heated spray booth, offering applications for high quality industrial coatings  
SSPC Trained and Certified Paint Specialist

Paint inspection includes blast profile and a dry film thickness measurements in accordance with SSPC standards







## *Pipe & Equipment Isolation*

In metallic pipelines, corrosion is nature's constant progression to reduce pipelines to their original oxide state.

It is an electrochemical reaction that has four parts: anode, cathode, metallic path and electrolyte. Flange isolation and joint isolation are a means of preventing electrochemical reactions from occurring between two dissimilar metals by breaking the metallic path, or preventing the current in a cathodic protection (CP) from travelling beyond the area intended to be protected by the CP system.

Cathodic protection systems (whether impressed current or passive) are designed to protect primary assets as electrical protection is limited in range. A CP system prevents corrosion by converting all of the anodic (active) sites on the metal surface of a pipeline to cathodic (passive) sites by supplying electrical current (or free electrons) from an alternate source to equalise the potential on the surface of the metal structure.

*Clients*



**TEKFEN İNŞAAT**



**Üstay**



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Supply and Services

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