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The trade magazine for tube and pipe products

May 2016



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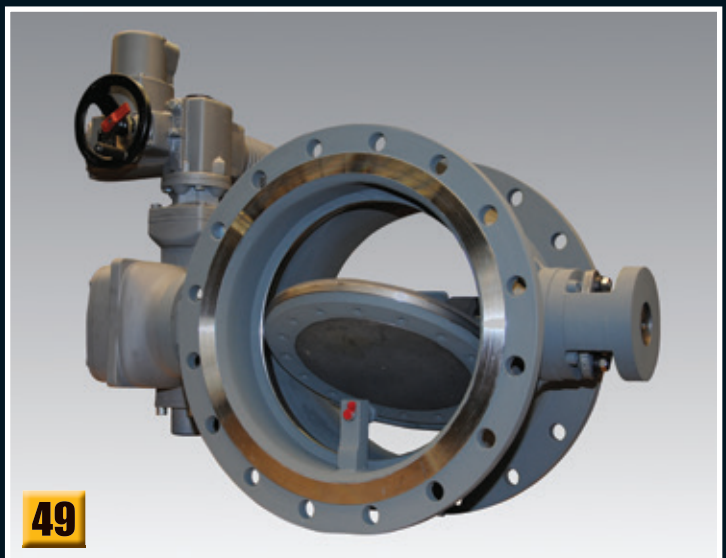
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Tube Products

INTERNATIONAL

The trade magazine for tube and pipe products



The May issue

Welcome to the latest Tube Products INTERNATIONAL. This issue we have features on Tube Russia 2016; valves, fittings and flanges; and water, drainage and underground tubes.

We also have a technical article from Alexander Comley that looks at flanges for heat exchangers.

The entire team is about to depart for Tube Düsseldorf as I write, but the event will be just a distant memory by the time you read this, so I hope that the show was a success for you and that all of our readers are safely back in your office after making some useful new connections in the industry. My next trip follows hot on its heels so I will see you at Lamiera in Bologna from 11 to 14 May if you are also attending. I am very much looking forward to returning to Italy and to visiting this show for the first time.

While it is currently a tough time in the UK for the steel and oil and gas industries, other areas such as construction seem to be bouncing back at last, which is good news for some tube producers at least. Recent tax breaks in oil and gas have also been warmly welcomed so let's hope for even more positive news as 2016 progresses.

The editorial deadline for the July issue of the magazine is 25 April and we have features on Tube China 2016, aerospace tubes, pipe welding, pipe stands and clamps, and tube polishing and cleaning. If you would like to advertise in the issue the deadline is 6 May. You can find the contact details of our marketing team on page 2.

I hope that you enjoy the magazine. Contact me at ror@intras.co.uk

Rory McBride
Editor



events calendar

2016



11-14 May
Lamiera (*Bologna, Italy*)
International Exhibition
www.lamiera.net



6-9 June
Tube Russia (*Moscow, Russia*)
International Exhibition
www.metallurgy-tube-russia.com



26-29 September
Tube China (*Shanghai, China*)
International Exhibition
www.tubechina.net



5-7 October
Tube India (*Mumbai, India*)
International Exhibition
www.tube-india.com



25-27 October
Indometal (*Jakarta, Indonesia*)
International Exhibition
www.indometal.net



25-29 October
EuroBlech (*Hanover, Germany*)
International Exhibition
www.euroblech.com



16-18 November
FABTECH (*Las Vegas, USA*)
International Exhibition
www.fabtechexpo.com



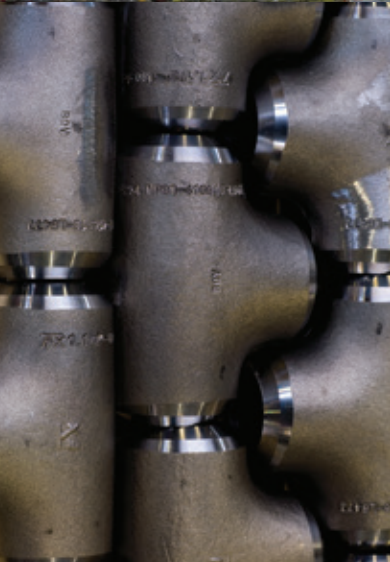
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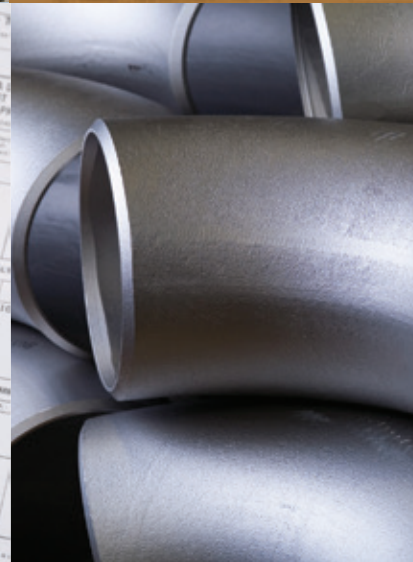
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business & market news

Siberia, Russia where the gas pipeline will be constructed

Linde selected by Gazprom for major gas processing project

Technology company The Linde Group has been selected by Gazprom, Gazprom Pererabotka Blagoveshchensk and its general contractor NIPIgas as the licensor for cryogenic gas separation technology at the Amur Gas Processing Plant (Amur GPP), located in the far east of Russia. Linde will engineer and supply units for ethane and natural gas liquids (NGL) extraction and nitrogen rejection, as well as for helium purification, liquefaction and storage.

The plant is part of Gazprom's project for the supply of Russian gas to China via the Power of Siberia pipeline from eastern Siberian gas fields, and will be built in five phases ending in 2024. In December 2015, Linde and NIPIgas entered into a binding engineering and

supply contract in respect of the above-mentioned units for all five construction phases of the Amur GPP. Phase one will consist of two ethane and NGL (propane, butane, pentane, hexane) extraction and nitrogen rejection units, as well as one helium production unit. Related engineering works are in progress.

When completed, the Amur GPP will be one of the largest gas processing plants in the world, with a capacity of up to 49bn cubic metres of natural gas per year.

Alexey Miller, chairman of the management committee of Gazprom, and Dr Wolfgang Büchele, chief executive officer of Linde AG, also

signed a strategic cooperation agreement stipulating the intention to cooperate and jointly carry out existing and future projects related to the natural gas value chain.

The cooperation agreement covers process technologies, engineering and services related to the treatment and liquefaction of natural gas, as well as localisation of the respective equipment production in Russia. The agreement also addresses the field of helium production, including the investment in, and production and operation of helium plants.

Linde AG – Germany
info@de.linde-gas.com
www.linde.de

Fine Tubes and Superior Tube awarded Airbus contracts

UK-based Fine Tubes and US-based Superior Tube, manufacturers and global suppliers of precision tubes for critical applications, have both been awarded contracts by airframe manufacturer Airbus, France.

For Fine Tubes, the award represents not just an extension of its long-standing relationship with Airbus, but also a greater share of the aircraft manufacturer's total tubing requirements, particularly hydraulic tubing.

In addition to supplying both stainless steel and titanium tubing for the A320, A330, A350 XWB and A380 commercial aircraft models, Fine Tubes will produce tubes for Airbus Defence and Space as well as Airbus Helicopters, formerly Eurocopter.

Over the course of the contract, Fine Tubes' Plymouth facility will manufacture the tubing and ship it to Airbus sub-contractors worldwide.

Wade Burchell, aerospace product manager, commented, "This is excellent news for Fine Tubes and reflects the reputation we have built up with Airbus as a reliable, quality partner, responsive to its total needs."

For Superior Tube, a long-term supplier to other major manufacturers in the aerospace industry, the contract is its first opportunity to supply Airbus with tubes manufactured at the company's plant in Collegeville, Pennsylvania. Brian Mercer, director, sales and

marketing for both Fine Tubes and Superior Tube, added, "We're delighted that Airbus has not only made the decision to extend the scope of its previous contract with Fine Tubes but also to award tubing business to Superior Tube for the first time. This confirms the fact that the partnership between Fine Tubes and Superior Tube can deliver real synergistic benefits to our customers."

With headquarters and production facilities in the UK, sales offices in Germany, France, India and the USA, and several agents around the world, Fine Tubes manufactures both seamless and welded tubes in a wide range of stainless steel, nickel, titanium

and zirconium alloys, for critical applications in the oil, gas, nuclear and power, aerospace, chemicals and medical equipment industries.

Superior Tube's products are used in a range of industries, from aerospace to power stations, and oil and gas extraction to medicine. Its manufacturing capabilities include seamless and welded tubes, straight lengths or coils, in stainless steel, nickel, titanium and zirconium.

Fine Tubes – UK
www.finetubes.com

Superior Tube – USA
www.superiortube.com

Airbus has awarded contracts to both Fine Tubes and Superior Tube



Doosan Babcock includes Centravis in list

Centravis, a global supplier of solutions in the seamless stainless steel tube and pipe segment, has been included in the list of suppliers for Doosan Babcock UK.

As part of the international Doosan Group, Doosan Babcock UK specialises in engineering services, after-sales service, and systems modernisation in the industries of thermal energy, nuclear, oil and gas and petrochemical.

"Centravis and its position in the global market as a whole and in the UK in particular is greatly strengthened thanks to its cooperation with Doosan Babcock UK," said Alexander Ryabenkyy, Centravis head of sales in Western Europe. "Having worked with Doosan E & C since 2014, we have long since proved ourselves as a reliable supplier and continue to develop our relationship with the international company."

Having passed all necessary certifications, Centravis is in continued cooperation with key oil companies ADCO and ZADCO in the United Arab Emirates; America's KBR, LyondellBasell, CB & I, and Koch Heat Transfer; Ztrong Partner AS in Norway; and Valmet in Finland.

Centravis – Ukraine
www.centravis.com

Trelleborg enhances customer support in Europe

Trelleborg's pipe seals operation has appointed Carsten Hindersmann as sales manager. Operating from Germany, Mr Hindersmann will be responsible for the operation's growth in the German, Austrian and Swiss markets for new pipe seal solutions, to meet growing customer demand. Working closely with customers on individual projects, he will assist in delivering customised solutions that provide performance and a long product lifecycle.

Jos Smudde, commercial manager for Trelleborg's pipe seals operation, commented, "With over 12 years' experience within the concrete pipe, manhole and plastic pipe industries, Carsten has an extensive knowledge and understanding of the new seals

market. His previous track record will benefit and support our activities across the region, with a particular focus on enhancing our presence in the highly competitive German market."

Mr Hindersmann added, "To join the company represents a fantastic opportunity and given my previous experience in this industry, I believe I am well placed to assist in Trelleborg's expansion plans for Europe."

Trelleborg's pipe seals operation supplies new and rehabilitation sealing solutions for concrete, plastic pipes and manhole pipes used for water, sewerage and drainage. It offers a wide range of technology designed to provide long-term structural



Trelleborg's new sales manager, Carsten Hindersmann

renovation of pipelines, and specialises in the sealing of pipes to prevent infiltration and exfiltration.

Trelleborg – Sweden
www.trelleborg.com

Advanced Insulation Korea moves to larger facility

UK-based Advanced Insulation – a manufacturer of technical coatings, specialised passive fire protection systems and thermal insulation materials for the upstream oil and gas industry – has moved its Korea-based manufacturing operation to a larger facility in Sinpyeong-dong.

Commenting for Advanced Insulation Korea, general manager Andrew Court said, "Following significant growth and expected demand from both Korean shipyards and local EPC contracts for

our ContraFlex® range of flexible passive fire insulation jackets, it was apparent that the existing facility in Hwajeon-dong was no longer suitable for the increased manufacturing requirements in Korea."

Advanced Insulation's ContraFlex range is designed to provide thermal insulation and passive fire protection from jet or hydrocarbon fire to equipment that requires frequent maintenance access, such as valves, actuators, welding nodes, manways, junction

boxes, process vessels, hot equipment exhausts and localised protection.

Mr Court added that Advanced Insulation Korea's expansion to a 2,000m² facility highlights the growth the company is currently experiencing. "The increased space improves production efficiencies and warehousing to ensure that we continue to exceed our customers' expectations. Recent growth and the expansion have allowed us to double the employment of local staff and build better business in Korea."

Since it was formed in 2007, Advanced Insulation has become a single-source provider for insulation and passive fire protection systems. The company's products are now qualified and used worldwide by major oil and gas companies including Total, ConocoPhillips, Chevron, Samsung, BP, Statoil, ONGC, ENI Woodside, Talisman and ExxonMobil, and their engineering and fabrication contractors.

Advanced Insulation Ltd – UK
info@aisplc.com
www.aisplc.com



Advanced Insulation has moved its Korea-based manufacturing operation to a larger facility

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Removing hydrofluoric acid from the pickling process

Started in 2014 and part-funded by EU, through the LIFE programme, the three-year project HFreelifepickling aims to eliminate the use of hydrofluoric acid in the pickling process used to make corrosion-resistant large tubes for building pipes for the oil and gas sector.

The companies that have promoted and developed the project are Rivit, an Italian manufacturer of pipes and fittings in stainless steel and special alloys, and Henkel, a German chemical multinational, together with a public body – the Province of Vicenza – whose main task is verifying performance with respect to environmental impact and health of workers.

The first phase has particularly involved the Italian laboratories of Henkel in the province of Milan. For around a year, the chemical company has researched a new electrolytic solution that would allow effective pickling without the use of hydrofluoric acid – a component almost always present in the treatment

system of this class of materials. A problem that presented itself initially was linked to an early ageing of the solution, with the consequent increase of waste for the replacement of the tank and the production of sludge for disposal. The quantity of sludge, following the improvement of the procedure, became comparable to that obtained using the traditional process. Thanks to these initial studies, the use of hydrofluoric acid in the pickling process has been eliminated, and on a laboratory scale, the process also recorded a decrease in working time of 70 per cent.

Following a successful test phase, the project continued with the pilot phase. In October 2015 Rivit proceeded with the construction of a mini-plant for testing, in order to verify the new process and the electrolytic solution on non-flat samples, taking into account the geometric factor, which could cause problems of electrical fields tangential to the surface, and their response on different families of alloys. The small



The mini-plant for testing the new pickling process without the use of hydrofluoric acid

plant has allowed a more accurate estimate of the effectiveness of the treatment on the tubular geometry and the powers in play. As a result of these tests, the partners obtained the fundamental measurements in order to minimise the energy consumption and to study the best design for maximising the production capacity of the pilot plant that will be built by the end of 2016.

HFreelifepickling will end in mid-2017. The main innovation of the project will favour a lower environmental impact on a large scale. It will ensure greater safety for operators employed in pickling departments, and a reduction in working time of 70 per cent.

HFreelifepickling – Italy
www.hfreelifepickling.eu

Rivit SpA – Italy
info@rivit.com
www.rivit.com

Henkel AG & Co KGaA – Germany
www.henkel.com



Henkel, Rivit, Province of Vicenza and European Union representatives at the Henkel headquarters in Milan, in October 2015

Weld Revolution director

Weld Revolution has announced the appointment of Bryan George as director, business development, reporting to Eric Christofferson, president.

As a member of the executive team at Weld Revolution, Mr George will be responsible for identifying and leading strategic business development, in addition to implementing commercial

strategies and strategic alliance opportunities for Weld Revolution in the USA, Canada and Mexico.

He has more than thirty years' experience in the welding industry.

Weld Revolution LLC – USA
info@weldrevolution.com
www.weldrevolution.com



CSM products to the US market

CSM has started business in the USA, through the incorporation of CSM Tube USA Inc. The company will serve as a US-market distributor of CSM stainless steel pipes. CSM Tube Srl, headquartered in Treviso, Italy, is a subsidiary of CSM Group, and specialises in the manufacture of steel pipes of small diameter and thickness, with plants in Italy and Brazil.

CSM Tube was founded in 1983. With a production capacity exceeding 160mn feet, the company now operates in a global market, selling pipes in more than 60 countries. The company is a key supplier for applications in electrical resistors, heat exchangers, automotive, heating, dispensers, press-fittings, and other users of tubes of small diameters and thicknesses, in the main AISI stainless steels of the austenitic, ferritic and areas of high nickel content alloys 800/825/600/601.

The company has received certification according to international standards ISO 9001/2008 in the production process, ISO 14001 for the respect of

Indowater 2016 trade show

Indowater 2016, the 12th international water, wastewater and recycling technology expo and forum, will take place from 20 to 22 July. Merebo Messe Marketing is organising the 'Europe, America & Australia Pavilion'.

The event, which is Indonesia's largest international water and wastewater trade show, will be held at Grand City Convex in Surabaya, East Java. The trade show will be held in conjunction with Indorenergy/Indowaste.

The last Indowater, in Jakarta in 2015, attracted 458 exhibitors from 32 countries, and 9,800 trade visitors.

Merebo Messe Marketing – Germany
contact@merebo.com
www.merebo.com

the environment, and OHSAS 18001 for the protection, safety and health of its employees.

CSM Tube USA Inc is headquartered in Chicago, in premises that it currently shares with Oakley Industrial Machinery Inc – a company that joined CSM Group in July 2014. The group plans a gradual but consistent approach in the US

market. The stock level will be kept at around 3mn feet of stainless steel tubes of various sizes and alloys. The start-up of a manufacturing site in the USA, fully dedicated to the US market, is planned in the next few years.

CSM Tube USA Inc – USA
info@csmtube.com
www.csmtube.com

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Tubacex appoints European sales director

Ulf Quadflieg has been appointed Tubacex Group European sales director. With his experience in the technical and commercial aspects of stainless steel long products, he will take a leading role in driving the European marketing and sales operations for all Tubacex business units.

Based in the company's Düsseldorf office, Mr Quadflieg will report directly to the Tubacex Group commercial corporate director, Antón Azlor, becoming a member of the Tubacex Group marketing and sales management committee.

"As European leader in seamless stainless steel tubes and fittings, Mr Quadflieg will improve Tubacex Group's approach to the clients and will assure

that all our sales channels become even stronger in providing tubular solutions and value to our clients," said Jesús Esmoris, CEO of Tubacex Group.

Mr Quadflieg holds a bachelor's degree in engineering from Aachen University, Germany, and has a broad experience in stainless steel long products, in both technical and commercial aspects.

Tubacex is a multinational group, with its headquarters in Alava, Spain; production plants in Spain, Austria, China, Italy, USA and India; service centres in Brazil, France and USA; and subsidiaries and sales offices in fourteen countries.

The main sectors demanding the tubes manufactured by Tubacex are the oil



Ulf Quadflieg

and gas, petrochemical and power generation industries, which account for more than 90 per cent of the group's sales.

Tubacex SA – Spain
www.tubacex.com

Xuyi Titan to complete delivery of major titanium alloy tubes order

Following orders of 300 tons in 2011 and 450 tons in 2013, Xuyi Titan and Material Co has won a new 200-ton seamless titanium alloy tubes order of Gr 12 and Gr 16 from the overseas market.

The end-user initially intended to use titanium welded tube from the USA and Europe for the project. However, the

performance with zero quality issues for previous large orders made the engineering company recommend the use of titanium seamless tube made by the Chinese manufacturer.

The team from the end-user, engineering company and fabricator visited Xuyi Titan to audit the management, material storage, and traceability from melting,

extruding, rolling and heat treatment to NDT. Xuyi Titan was approved to be the qualified supplier. Xuyi Titan products strictly conform to international standards, and the company states that it applies quality control to every detail.

Xuyi Titan & Material Co, Ltd – China
sunshine@xuyititan.com
www.xuyititan.com

Contract for South Santa Cruz and Barataria

Technip has been awarded a lump sum contract by Deep Gulf Energy III, LLC (DGE) for the development of the South Santa Cruz and Barataria fields. These ultra-deepwater fields are located in Mississippi Canyon, offshore New Orleans, in the Gulf of Mexico, in approximately 2,000m of water depth.

The contract consists of project management and engineering services; fabrication and installation of approximately 23km of pipe-in-pipe flowline; design, fabrication and installation of flowline end terminations;


fabrication and installation of jumpers; and pre-commissioning for the flowline. Covering all aspects of the field development from engineering to design, manufacturing and installation, the new award highlights Technip's vertical integration in the subsea business environment.

The company's operating centre in Houston, Texas, USA, will manage the overall project. The flowline system will be fabricated at the group's spoolbase in Mobile, Alabama, USA. Offshore installation is expected to be performed

in the second half of 2016 by the group's flagship vessel for deepwater pipelay.

Deanna Goodwin, president of Technip in North America, commented, "I am pleased that this award comes in conjunction with the successful completion of the Kodiak project and with the recent award of the Odd Job project. This will allow us the opportunity to further strengthen the relationship with our client into 2016."

Technip USA, Inc – USA
www.technip.com



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Global steel pipe producer to tackle fakes

Interpipe, a steel pipe producer based in Ukraine, has registered its trademark with the Ministry of Economy in the United Arab Emirates for the first time. Interpipe's registration represents a first

step in the fight against the emergence of a counterfeit steel pipe industry in the UAE, and reinforces the company's commitment to delivering high quality certified steel.

a whole, because uncertified steel cannot be guaranteed for its integrity, strength or durability.

"As a global business, we understand and uphold the importance of a high quality, certified product and remain committed to delivering steel that the industry and our clients can trust.

"Interpipe products are well known and established in the UAE, and this move to officially register our trademark is a positive step towards introducing an additional – and necessary – line of defence against the counterfeit industry."

Interpipe – Ukraine
www.interpipe.biz

Interpipe ME FZE – UAE
info@ae.interpipe.biz
www.interpipe.biz



Andrey Burtsev

The company has supplied steel to the UAE market for more than ten years. It states that its products are widely used in construction and infrastructure projects and can be found in approximately every third building in the UAE. The region accounts for more than 16 per cent of the company's global sales.

"The depth of the counterfeit steel industry in the UAE remains unquantified," said Andrey Burtsev, vice-president of pipe sales in the Middle East and North Africa. "However, its existence presents a significant challenge, not only to the steel industry but to the construction business as

Additional capabilities with new Canada facility and machinery

Tube bending and end forming technology specialist Addition Manufacturing Technologies has expanded with a new, larger facility in Brantford, Ontario, Canada. With a total of 22,500ft², the new location is nearly double the size of the company's previous Canada location. The

additional space will facilitate growth in manufacturing, engineering and research and development.

In addition to expanding square footage, the company has expanded its manufacturing capabilities with the purchase of a large-capacity boring mill,

which will be used for production of larger machine components for both Addition customers and for Addition's other North American locations.

"The new facility allows for the production of larger muffler projects than in the past and significantly increases in-house manufacturing," said Doug DeVoige, general manager of Addition Canada. "With the expansion into this state-of-the-art building, Addition has been able to increase efficiency of our silencer making product line, and recently landed orders from various companies worldwide which were made possible thanks to the extra capacity available."

The expansion will eventually increase the company's workforce in Canada. Addition also has facilities in the USA, Canada, Mexico, UK, France and China. It serves the automotive, aerospace and ship building market segments.

Addition Manufacturing Technologies – USA
www.additionmt.com



Addition's new Canada facility

Gupta family recruits Jay Hambro to board

The Gupta family, which controls commodities, energy and industrial interests worldwide, has appointed Jay Hambro as a senior member of its group management team.

Mr Hambro, who has been executive chairman of commodities producer IRC since 2010, joins the Guptas' group strategic board as group chief investment officer and chief executive officer of SIMEC energy and mining divisions, spearheading the global development plans of the business.

The Gupta family, which owns the international commodity and industrial groups SIMEC and Liberty House, has been undertaking major investments, including the purchase of Uskmouth Power Station and reactivation of the Liberty Steel rolling mill, both in South Wales, and the acquisition of most of the former Caparo steel and engineering businesses in the UK's West Midlands.

Mr Hambro's primary role will focus on the worldwide development of SIMEC (shipping, industrials, mining, energy and commodities), which currently includes a power generating arm and a global portfolio of trading operations focused on the resources sector.

One of his immediate roles will be to lead the completion of the purchase of the Tungsten Bank, which Gupta family interests recently entered into an agreement to acquire, as part of its broader strategy to invest in finance for the commodities industry. This is subject to the approval of the Prudential Regulation Authority.

PK Gupta, chairman of the SIMEC Group, commented, "Jay has a proven successful track record in buying, building, operating and financing commodity businesses. He is well respected in the sector and I am delighted that he is joining our team."



Jay Hambro

Mr Hambro said, "I am honoured to be joining this highly successful team. What the group has achieved in creating a dynamic and entrepreneurial business unit is to be commended. I began working with the team some months ago on another project and am well aware of their capabilities and expansion plans."

SIMEC – UK
info@simec.com
www.simec.com



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Industrial Cadets: from conversation to National Skills Initiative in five years

Five years ago, a conversation between HRH The Prince of Wales and Jon Bolton, at the time director, Tata Steel Long Products, started an initiative in improving the workplace experiences of young people, helping inspire and inform them about their local industries.

Industrial Cadets has since developed into a national accreditation for work experiences, emphasising skills development and knowledge of career opportunities. Industrial Cadets is growing rapidly, with support from government, and leadership drawn from many of the UK's manufacturing and engineering companies.

Industrial Cadets started in 2011 as a workplace experience programme run by Tata Steel in the northeast of England, and developed from this so that in 2013 HRH The Prince of Wales was able to announce the national launch of the programme as an employer-led initiative, under the management of education charity EDT (the Engineering Development Trust).

In 2014 the Department for Business, Innovation and Skills announced funding for the further development of Industrial Cadets. There are now more than 3,500 Industrial Cadets, drawn from over 1,000 schools. More than 200 companies have run Industrial Cadet accredited programmes, and over



HRH The Prince of Wales meeting Industrial Cadets

400 employees have been trained as mentors.

More than 95 per cent of cadets identify an improvement in their work-relevant skills such as teamwork, critical thinking, communication and organisation and planning. Importantly for the vision of Industrial Cadets, 70 per cent of the cadets taking part feel they are more likely to go into industry as a result of being an Industrial Cadet – a key objective.

“It is a privilege to have been part of the development of an initiative which

is so important for the future of UK industry,” said Mr Bolton. “Industrial Cadets allows young people to see the industries in their local area, understand the careers that they offer, and it takes the first steps in providing employability skills which will equip them for those careers. From that first conversation with HRH The Prince of Wales five years ago, an organisation of substance and great value has emerged. Industrial Cadets is growing quickly to make an important contribution to UK skills.”

Industrial Cadets – UK
www.industrialcadets.org.uk

EPDA distributor forum declared a success

An inaugural forum on improving efficiency in the plastics industry, staged by the European Plastics Distributors Association (EPDA) at Gehr GmbH's plant in Mannheim, Germany, was declared an outstanding success.

Gehr, a manufacturer of thermoplastic semi-finished products, plates, rods and tubes, was chosen to host the first Distributors Forum organised by the EPDA, which included a tour of the company's facilities during the two-day event.

Helmut Gehr gave the opening address, followed by EPDA president David Ladyman and Gehr sales and marketing director Thorsten Fuessinger. The first seminar – How the 4th Industrial Revolution Could Improve Efficiency in the Plastics Industry – was presented by Eva Bognor MSC, a research associate at the Institute for Factory Automation and Production Systems.

The following day, Mr Ladyman led a discussion group before a presentation by Thilo Bischoff, head of product management at BASF

SE, on Developments and Trends in Engineering Plastics. There were also opportunities on each day of the event for members to network over dinner or lunch.

EPDA, formed in 1973, represents companies involved in a cross section of distribution activities encompassing plastic sheet, blocks, rods, profiles, tubes, pipe, valves, fittings and numerous related activities.

EPDA – UK
www.epda.com

Your reliable partner for European pipes and tubes

Since its establishment in 2007, ArcelorMittal Tubular Europe has evolved into one of the top tube producers in Europe. Through its focus on continuous improvement and investment, the business is set to grow further as it masters the challenges ahead.

ArcelorMittal Tubular Europe produces a wide range of tubes and pipes at nine production sites across four European countries. It produces seamless and welded pipes and tubes including electric resistance welded (ERW), high frequency induction (HFI), precision, cold-drawn, and both spiral and longitudinal submerged arc welded (HSAW and LSAW).

In 2015, ArcelorMittal Tubular Europe delivered pipes and tubes to sectors including energy, construction, engineering and automotive. An increasing share of its output is value-added products, which it has developed in cooperation with its customers.

As a company it distinguishes itself from its competition because it always puts the customer first. "We appreciate our long-standing customer relationships," explained Jeyachandran Rajasekaran, CEO of ArcelorMittal Tubular Europe. "These relationships endure because of our focus on continuous improvement and our extensive range of products which serve every market segment. Our steady growth, even in extremely difficult market conditions, gives us confidence that we can master very challenging orders and customer demands in the future."

Wide range of seamless pipes

ArcelorMittal Tubular Europe offers seamless pipes with an outside diameter ranging between 21.3 and 508mm and wall thicknesses up to 50mm. Access to high-quality steels allows it to create pipe and tube solutions for the most challenging applications. Its mills in Romania and the Czech Republic have supplied many complex orders including structural tubes for the Azerbaijan Olympic Stadium, piping systems for the UK Navy's flagship aircraft carriers and oil and gas projects across the world.

Flexible large diameter welded facilities

Its highly flexible operations enable it to meet the demands of both large and small projects. It has the capability to produce individual pipes, making it the ideal supplier for small projects with many components.

Recent investments have enabled it to extend the outside diameter of its HSAW products up to 1,016mm. A wide range of grades are available in strengths up to X70. It offers additional services including end preparation for sockets, cut-to-length pipes and an in-house coating facility.

Extensive small welded offer

Small, welded cold-formed and hot-finished tubes are produced at its mills in Karviná (Czech Republic), Krakow (Poland) and Iasi (Romania). These products are typically used in construction, and in the transportation of fluids and gases. Its offer is constantly developing to meet customer requirements for high value-added products.

Over the past two years, ArcelorMittal Tubular Europe has made important investments to increase its production of galvanised and colour-coated tubes, and hot-finished hollow-sections. These investments have enabled it to increase the variety of grades on offer and improve its logistics systems.

Leading automotive partner

ArcelorMittal Tubular Europe has rapidly increased its presence in the European automotive sector. Four of its production sites (Hautmont, Chevillon, and Vitry in France and Karviná in the Czech Republic) supply tailor-made solutions to its automotive customers. These include welded and cold-drawn welded tubes as well as components based on global quality standards such as ISO TS 9001 and ISO TS 16949.

Its pipes and tubes are utilised in a range of automotive applications including the chassis, body-in-white, crash components, seating, IP beams and fluid handling. With its highly skilled team of engineers, ArcelorMittal Tubular Europe is able to offer innovative designs and act as a development partner. This provides genuine added-value to customers and leads to significant cost and weight savings in their vehicles.



Products with lubricant-free coating

TMK, a producer of tubular products for the oil and gas industry, has shipped premium pipe products with GreenWell lubricant-free coating for Lukoil-Nizhnevolzhskneft. The supply included 32 tonnes of 177.8mm P110-grade casing pipes and pipe nipples with TMK UP PF ET premium connection.

The pipes were manufactured at Taganrog Metallurgical Works, and the pipe nipples at Orsk Machine-Building Plant. The receiving inspection was performed involving specialists of the oilfield service company TMK NGS. TMK has already supplied premium

products for Lukoil-Nizhnevolzhskneft, but this was the first time that pipes with lubricant-free coating had been shipped. TMK's pipe products will be used at Y Korchagin oil and gas condensate field in the Caspian Sea.

The company introduced the GreenWell lubricant-free coating technology in 2013. Polymer coating is an alternative to standard lubricants for threaded connections. TMK has supplied pipe products with GreenWell coating for Rosneft, Gazprom Neft, Bashneft, Lukoil and Novatek. The GreenWell lubricant-free technology used for offshore

wells helps speed up the process of assembling pipe strings by reducing preparation time and minimising damage to the environment, as it eliminates the ingress of lubricant into the water.

TMK manufactures and supplies steel pipes for the the oil and gas industry, and operates more than 30 production sites in the USA, Russia, Canada, Romania, Oman, UAE and Kazakhstan, as well as two R&D centres in Russia and the USA.

TMK – Russia
tmk@tmk-group.com
www.tmk-group.com

Trelleborg lands coating contract

Trelleborg's offshore operation has been awarded its largest single order for thermal insulation and corrosion coating services for phase II of the prestigious BP project Shah Deniz, contracting directly to BOS Shelf LLC.

The contract represents the most significant order that Trelleborg's offshore operation has received for thermal insulation solutions in the last decade. It is expected to run until approximately 2022. In addition to product supply, Trelleborg is supporting BOS Shelf LLC on the ground at a purpose-built coating facility set up to withstand the potentially extreme conditions of the area.

Trelleborg will supply in excess of 1,000 tonnes of its Vikotherm™ P7 high-temperature insulation material, to be applied to the flowline structures of the

project, over a period of five years. To facilitate the order, Trelleborg will support BOS Shelf in establishing a purpose-built custom coating facility as well as installing two polyurethane dispensing machines and a site-specific laboratory at BOS Shelf's facility in Baku, Azerbaijan.

Paul Spikins, senior coating engineer for BOS Shelf, commented, "The Shah Deniz project is extremely high profile and charts new territory, both in its innovation and its geography. Given the sheer size of the project and the distance the pipe has to travel, it is imperative that all products used are of the highest standard and will last the project's lifetime."

Trelleborg will insulate a selection of products using Vikotherm P7, including

2.5km of jumper spool, ten double subsea isolation valves, seven single subsea isolation valves, five flowline end terminations, and field joint coatings post metrology.

Jonathan Blackburn, project manager for Trelleborg's offshore operation, said, "Our insulation experts will work in the new purpose-built insulation facility, which is designed to cope with the varying climate conditions in Baku.

"In addition, they will also work on the dockside in custom-built habitats that are designed to protect the team, the equipment and the product, in order to deliver the highest level of quality, no matter what the conditions."

Trelleborg – Sweden
www.trelleborg.com

Val-Matic VP to retire

Val-Matic has announced the retirement of vice-president of sales and marketing Carl W Smith. After a 32-year career with Val-Matic Valve and Manufacturing Corp, Mr Smith retired on 31 March.

Over his tenure Mr Smith opened new markets for Val-Matic across the globe in international sales and later became national sales manager. As vice president of sales and marketing he helped launch

several new valve products and built a successful representative network in the water and wastewater industry. He also represented Val-Matic for many years as a member and board member of several industry organisations, including Water and Sewer Distributors of America (WASDA), Water and Wastewater Equipment Manufacturers Association (WWEMA) and the American Water Works Association (AWWA).

President and CEO Ted Makowan said, "Throughout his career, Carl Smith has demonstrated an enduring commitment to our company and its mission to provide quality products and service to our customers. His service has been important to the success of Val-Matic."

Val-Matic Valve & Manufacturing Corp – USA
www.valmatic.com



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Our delivery program ■■■■

Seamless steel tubes

acc. to DIN, EN, ASTM and API standards from 10,2 to 660 mm

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- Inspection certificate EN 10204 / 3.1. b

Welded steel tubes

acc. to DIN, EN, ASTM and API standards from 17,2 to 1620 mm

- Longitudinal seal-welded or spiral-welded, Material: S355J2H, S235JRH
- Inspection certificate 10204 / 3.1. b

Structural hollow sections

Hot-produced acc. to EN 10210 and cold-produced acc. to EN 10219

40 x 40 - 400 x 400 mm
50 x 30 - 500 x 300 mm

- materials S355J2H, S235JRH, S235J2H
- Inspection certificate EN 10204 / 3.1. b

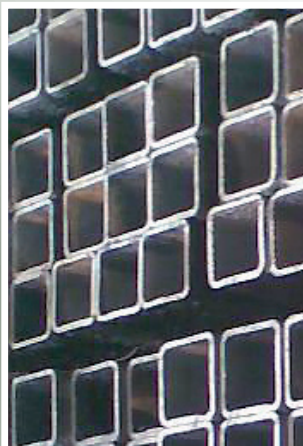
Precision steel tubes

acc. to DIN, EN, ASTM and API standards from 5,0 to 200 mm

Processed tubes available on request

- as customer – specific cuts
- with PE coating
- blasted and primed

A list of all deliverable dimensions/weights is available on request.





products & developments

A clean sweep for water consumers

The designed-in versatility of Weholite products, along with step-by-step support from Asset International's expert engineering team, played a pivotal role in a £3mn project to ensure that each day millions of gallons of clean and safe water reach the population of Bristol, UK.

Asset made and supplied hundreds of metres of lightweight, durable Weholite pipework and fabrications for a new UV treatment facility at Bristol Water's Barrow Gurney works, and backed this up with comprehensive design, technical support and advice services, to ensure smooth and successful installation. These services included the deployment of a skilled welding team to help main

contractor BAM Nuttall conduct on-site extrusion jointing, using Asset's latest specialist equipment. The company provided BAM Nuttall with an extensive array of inter-process pipework – measuring 1,000 to 1,400mm diameter – as well as complex fabrications for the Barrow Gurney works, which treats water from three reservoirs serving the city.

The new UV treatment facility at Barrow Gurney accommodates both the process units themselves and the pipework and services supplying them. Weholite pipework now links these units to the rest of the treatment equipment at the site.

In addition, Weholite fabrications, modelled through FE analysis by Asset's engineering design team, were used to connect inter-process pipelines to ductile iron valves, flow meters and static mixers. The product's versatility enables it to interface with almost any existing design. All

Weholite components were designed, manufactured and prefabricated at Asset's South Wales factory, only 30 minutes' drive from the site, ensuring rapid delivery and valuable time-saving for the main contractor.

Asset's involvement in the project lasted from October to the end of December 2015. Rhys Williams, technical sales engineer at Asset described how the team delivered the project: "During the planning process – and every subsequent stage of the project – we provided a full and detailed design service, technical support and advice to ensure everything ran smoothly.

"We also supplied a site services team to assist BAM Nuttall, to conduct extrusion jointing, using our latest specialist equipment. Following successful installation we passed the project on to mechanical and electrical contractors."

Asset International Ltd – UK
sales@weholite.co.uk
www.weholite.co.uk



Showcase for South Africa oil and gas sector at Cape Industries Showcase

The South Africa government's planned investment of R9.2bn to develop Saldanha Bay into a world-class hub for southern African offshore oil and gas drilling will create opportunities for companies operating in the sector. The Oil & Gas Africa (OGAF) 2016 expo forms a services showcase and business networking platform for this industry.

OGAF is one of five exhibitions that comprise the Cape Industries Showcase (CIS), an industrial expo that attracts operators, stakeholders, suppliers and service providers exploring new opportunities. OGAF will take place at CIS from 13 to 15 July 2016 at the Cape Town International Convention Centre.

The Saldanha Bay Industrial Development Zone (SBIDZ) is the first major step in the government's Operation Phakisa initiative to expand and develop South Africa's ocean economy potential. This is South Africa's first dedicated facility aimed at providing support services for upstream exploration and production (E&P) developments in South, West and East African coastal oil and gas fields.

"Its main functions will focus on ship and rig repairs and maintenance, exploration, production and logistics support, and marine/sub-sea engineering and fabrication," said OGAF organiser John Thomson. "The SBIDZ is creating a rapidly growing number of business opportunities for the broad marine and maritime sectors

as South Africa accelerates its own offshore oil and gas exploration. In the past four years, almost all offshore exploration blocks are under licence or under application for exploration by independent companies."

The Cape Industries Showcase combines the Maritime & Offshore Marine Africa Expo, the Oil & Gas Africa Expo, the Cape Logistics Expo, the Temperature Controlled Storage and Distribution Expo and the Empowertec Cape SME Expo in one co-located event.

Exhibition Management Services – South Africa
sales5@exhibitionsafrica.com
www.exhibitionsafrica.com

Water-soluble film for steel and titanium pipe and tube purging

When tubes and pipes of certain materials, such as stainless steel, titanium, copper-nickel and zirconium, are welded together it is desirable to purge the oxygen out of the inside of the weld zone to prevent it from reacting with the hot metal and causing oxidation, porosity, discolouration and loss of corrosion resistance.

Products for purging the insides of pipes include inflatable tube and pipe purging systems, such as PurgElite®, QuickPurge® and HotPurge®. However, it is not always practical to use such systems for one-off work on just a few joints of one particular size, for closing welds, for 'T' piece joints or for a number of other branch type joints.

To overcome this difficulty, Huntingdon Fusion Techniques (HFT) provides Argweld® Weld Purge Film™ kits, with water-soluble materials that can be used for open assemblies and closing welds.

The film produces an impenetrable purge barrier that can easily be washed away when hydrostatically testing the pipe or just by flushing out.

To obtain a quality purge it has been customary to fill pipes with expensive argon gas and keep the gas running at what is thought to be a suitable flow rate for an estimated period of time. In today's climate of ever-improving quality control and increasing demands on procedures with traceability, it is inappropriate to use such methods to ensure a satisfactory purge. It is not desirable to simply pour gas into a pipe assembly in the hope that a good purge and, ultimately, a good weld will be achieved. This technique often does not work and is unnecessarily expensive.

Luke Keane, distributor support for HFT, said, "It is so easy to cut a circle of water-soluble film and place it a short distance away from the root gap before welding, pasting in place with the Argweld Water-Soluble Super Adhesive™ to ensure a tough, leak-tight barrier, keeping the purging volume to the barest minimum."

Argweld Weld Purge Film may save operators costs by minimising gas usage and reducing the time taken to make a purge, while achieving a desirably low oxygen level.

After welding, the water-soluble film is simply washed away during the standard hydrotest cycle or by simply flushing the pipe interior. The film is dissolved down to molecular level, leaving no trace.

Huntingdon Fusion Techniques – UK
hft@huntingdonfusion.com
www.huntingdonfusion.com

HFT's Argweld water-soluble film and adhesive



Bending production with BendingStudio 3.0

AICON 3D Systems has launched a new version of the software platform BendingStudio, offering new features to facilitate daily work in bending production, and with a new control concept.

In BendingStudio 3.0, user-friendliness has been totally revised, with the aim of a clearer structure and easier handling. The set-up of inspection plans is now separate from the measurements, so the user sees only the information that is relevant, and comparative measurements become easier.

The set-up of new parts (eg creating bending elements from CAD files) is completely integrated into the application 'part editor'. This new

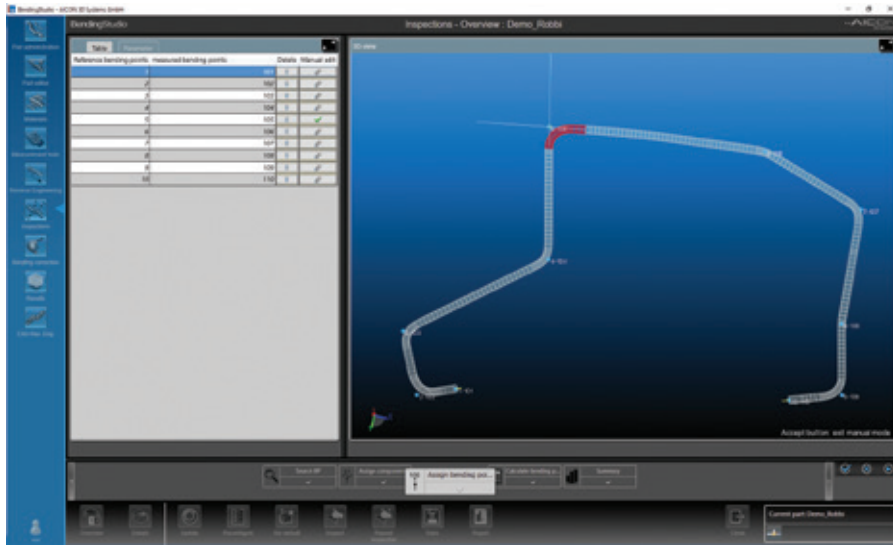
arrangement optimises the process of measurement and analysis. The menu structure of the different applications has also been regrouped, so the user will find all relevant process steps neatly arranged.

BendingStudio 3.0 also offers extended measurement options. Any connected measuring device, such as AICON's TubelInspect or MoveInspect, only provides the measured centre line. A special wizard guides the user through the steps of the bending point model, and the user can intervene when needed. The analysis is usually automated, but manual interference is now more transparent and graphically supported. In Reverse Engineering, different bending radii can easily be taken account of.

In the new software, it is possible to repeat analyses of a measurement afterwards, making multiple measurements easier. The user can either delete measurements or change the parameters of the analysis. This is especially useful in partial measurements, ie if the part cannot be measured in a single step. Larger components are measured by overlapping repositioning section by section, and the partial measurements are then combined.

If the overall measurement is not successful, new single measurements are added, defective measurements deleted or single measurements re-evaluated with changed parameters. This allows for a more effective workflow, as the part does not have to be completely re-measured in case of errors.

The new BendingStudio 3.0 helps the user make fast fault detections



The first version of BendingStudio had its world premiere at Tube 2012 in Düsseldorf, Germany. Since then, it has been continuously optimised. BendingStudio connects all data and processes around production of bent parts, from production and process planning to manufacturing and quality control.

Holders of appropriate licences and a valid software maintenance contract will receive the new BendingStudio version 3.0 with the next software update.

AICON 3D Systems GmbH – Germany
info@aicon.de
www.aicon3d.de

IIL launches large diameter steel pipe mill

International Industries Limited (IIL) inaugurated its large diameter steel pipe mill in January. The expansion helps IIL to double its production capacity to 500,000 tons per year. Following the expansion, IIL is now able to offer MS pipes ranging from 0.5" to 12", API line pipe up to 12¾" and square and rectangular structural hollow sections. The company also manufactures cold rolled precision steel tubes, galvanised iron pipe, stainless steel tubes, and polyethylene and PPRC pipes.

The large diameter steel pipe manufacturing facility will not only allow IIL to produce hollow structural steel sections for the construction and engineering industry, but will also allow it to cater to the increasing demand for API line pipes in the region.

International Industries Ltd
– Pakistan
inquiries@iil.com.pk
www.iil.com.pk



Competitive edge through total cost analysis

Voss Fluid GmbH is a provider of hydraulic coupling technology. Its product range includes tube couplings for stationary and mobile hydraulics, including cutting ring couplings, tube forming systems, and flange couplings.

When selecting new system suppliers it is important to take varying influencing factors into consideration and to calculate the realistic total costs for a solution on this basis. Voss Fluid compiled the decisive factors on the market for hydraulic connection technology and deduced that assembly errors cause additional costs of up to 9 per cent of the original procurement volume. According to the company's calculation, these could be reduced by at least 3 per cent by taking the right measures.

The pure procurement costs are not congruent with the total operating costs of a system since, from assembly to maintenance, many additional factors enter into the economic appraisal. A sample calculation by Voss Fluid demonstrates that it pays to calculate all cost points for the C-parts of the hydraulic connection technology. Based on a general observation of the market, the company assumes an average reliability of assembly of 97 per cent. If three of 100 assemblies are faulty, at an assumed procurement volume of €500,000 for 100,000 connection points, that already adds up to 3,000 leaking points that represent a cost and safety risk.

The model calculation by Voss Fluid comes to the conclusion that the faulty assemblies cause additional costs of around €45,000. That corresponds to 9 per cent of the original procurement volume. When ascertaining this key factor, the company takes into account that half of all leaks are rectified during the assembly phase; 35 per cent are noticed in the test area before commissioning; and 15 per cent only after delivery to the final customer. In the various phases, rework generates costs of varying degrees that result from the individual expenditures and the skills of the personnel.

In Voss Fluid's view, by selecting the right system partner, additional costs for rework can be reduced from 9 per cent to 3 per cent of the original procurement volume. That simultaneously optimises a significant factor of the total operating costs for hydraulic connection technology. As additional influencing factors, the company identifies assembly time, process reliability, procurement costs, ease of maintaining the system, consulting and training level, along with long-term corrosion protection. At Voss Fluid, the product standard starts with the selection of the unfinished material, which is obtained solely from audited partners. From unfinished material, production and surface coating up to the logistics, quality and customer benefit are the focal point.

Voss Fluid GmbH – Germany
www.voss-fluid.de

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Düsseldorf

Pipe clamps and clips

Rohrbefestigungen Hammerschmid specialises in the industrial production of pipe clamps in small and large series, including further processing, coating, pre-assembly and packing.

Its products are used in domestic plumbing applications, industrial building, wastewater treatment plants, chemical industry, paper and steel industries, as well as in waste incineration plants and power plant construction.

The company can produce pipe clamps, round and flat steel clips, pipe carriages with accessories, pipe suspensions, special constructions of

any kind, and secondary supports. Products are manufactured according to customer specifications, drawings or samples, while taking into account various working standards.

Hammerschmid regularly includes new product groups in its delivery programme, in order to offer a broad range of goods.

By enlarging and automating production the company is able to produce pipe supports in every material and with any surface coating required. The company has been certified according to ISO 9001 for 20 years, and according to EN 1090 class 2 since 2012.



Rohrbefestigungen Hammerschmid GmbH – Austria
office@hammerschmid.at
www.hammerschmid.at

Welded steel tubes and hollow sections

MTC Boru Profil supplies both domestic and international markets by manufacturing welded steel tubes and hollow sections (ERW) according to TS EN 10219 standards and its equivalents. The company serves the industries of general construction, fencing, machine, furniture, shelf, playground equipment, shading structures and automotive.

Its production facility located in Gebze,

Turkey, has an annual production capacity of 30,000 tons. Square and rectangular profile production standards include DIN 2395-1/2, TS 6475, EN 10219-1/2, TS EN 10305-5, DC01 (DIN EN 10130), S185, S235JR/J0/J2, S275JR/J0/J2 and S355JR/J0/J2 (DIN EN 10025).

The company exports square, rectangular and round tubes (hollow sections), both hot rolled and galvanised,

and flat steel products in coils, sheets and slitted. Dimensions of the structural steel tubes are between 20x20mm and 60x60mm for square tubes, and 20x30mm and 80x40mm for rectangular tubes. The production range for pipes is from 19 to 76mm diameter.

MTC Boru Profil & Tubes – Turkey
info@mtcboru.com
www.mtcboru.com

Full range of pipe in nickel alloy C276 from stock in Europe from Hart bv



A full range of seamless and welded pipe in alloy C276 will be available from stock in the Netherlands the first half of 2016. Hart bv is extending its stock in both seamless and welded pipe in nickel alloy C276, with sizes ranging from ½" to 6" in wall thickness sch10s, 40s and 80s. The different applications call for both seamless and welded execution, and therefore Hart will be stocking both qualities.

Alloy C276 has excellent resistance to corrosion and is used in many chemical process environments. Typical applications are mixed acid chemicals, pulp and paper production, waste treatment, pollution control, very high chloride environments and recovery of 'sour' natural gas. The seamless and welded pipe in C276 has been added to the range of Alloys 200/201, 400, 600, 625 and 825. The first batch of C276 stock is expected to arrive in May 2016.

Hart bv – Netherlands
sales@hartbv.nl
www.hartbv.nl

Dimensionally accurate processing solutions



Tube section with cut outs

The Nuremberg, Germany, sales office of Pures-tubes is aiming to offer more services from one source for component suppliers in the fields of automotive, engineering and energy.

“In the last five years, we received a lot of enquiries for tubes made of various materials (eg 22MnB5, P235GH, P265GH, 16Mo3 and 13CroMo4-5) and accompanying (tube) components,” said Holger Villnow, owner of Pures-tubes.

“Since 2012, we have components in the programme, but to a lesser extent. We also had an increasing number of requests for processing operations with challenging levels of difficulty and high quality requirements.”

The company has been encouraged to further expand these segments (components as well as dimensionally accurate processing solutions), and

to enter into cooperations throughout Europe with high-quality working suppliers.

Mr Villnow added, “Because we belong to the smaller companies in our sector, we can and must very flexibly respond to customer requirements. Often larger companies do not allow the fixed processes as well as the pre-defined area of responsibility of key accounts to follow special ways in the procurement. The manufacturers also pre-suppose large volumes for order acceptance. Flexible response to small quantities of customer needs is therefore particularly important, because developers/engineers need minor amounts for their prototypes or material, so they can go into pilot production.”

Pures-tubes – Germany
info@pures-tubes.com
www.pures-tubes.com



PIPE EQUIPMENT SPECIALISTS LTD



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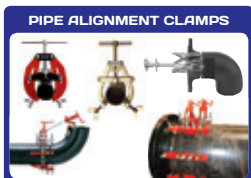
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EZFAB12CB	6—12"
EZFAB16CB	10—16"
EZFAB20CB	14—20"
EZFAB24CB	18—24"



Email: sales@tag-pipe.com

www.TAG-PIPE.COM

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Cutting and machining expertise

Seeberger's core competence is cutting, burr removal and machining of tubes and pipes in various materials, such as steel, stainless steel, aluminium, copper or brass.

Since the company was founded, in 1983, its priority has been to supply customers with client-specific products. This includes meeting individual product requirements referring to dimension (with the ability to process diameters from 2 to 100mm), as well as special finishing. The medium-sized company is very flexible concerning its customers' needs, and states that it is constantly improving its equipment to provide state-of-the-art machinery, so that orders can be processed reliably and fast.

The company's main task is the machining of tubes, but it also regularly machines profiles and solid bars.

In addition, it applies special-purpose machinery for additional process steps and a cost-effective batch sawing technique, to offer economical solutions for every kind of application.

For a perfect burr removal, Seeberger uses a grinding method that combines mechanical and chemical processes for maximum surface conditions.

In strict compliance with the requirements of the specific field of use or the specifications of the final product, the company offers a wide range of processes for the further treatment of

tube products, surface refinements and test procedures, such as widening, mitring, notching, bordering, perforating and burring.

Seeberger's goal is to support the customer in every step and aspect of the order. This can include short delivery periods and just-in-time supply.

The company says that customers in a variety of branches – such as automotive, building, furniture making, and engineering industries – appreciate its flexible approach towards every project.

Seeberger GmbH & Co KG – Germany
info@seeberger.net
www.seeberger.net

Sandvik adds alloy 625 to corrosion-resistant material grades

Adding to its material grade programme, Sandvik has introduced Sanicro 60 (commonly known as alloy 625) in hydraulic and instrumentation (H&I) tubing and heat exchanger form, offering operational benefits particularly for customers installing equipment in harsh environments.

The high strength austenitic nickel-chromium alloy Sanicro 60 (UNS N06625), exhibits good resistance to pitting corrosion and intergranular corrosion, and is virtually immune to stress corrosion cracking (SCC) in chloride-containing environments.

Suitable for use in chemical processing, power generation and high temperature aerospace applications, the material is available in seamless pipe and also as H&I tubing, heat exchanger tubes and

high temperature tubes. It has good corrosion resistance in severe oxidising and non-oxidising acids including hydrochloric, nitric and phosphoric, as well as in high temperature applications.

Sanicro 60 has a wide operating temperature range, from -196°C to 815°C (-321°F to 1,500°F).

The grade's low carbon content combined with high nickel, chromium, molybdenum and nitrogen levels provides it with resistance to corrosion in chloride-containing environments, including seawater and hot geothermal fluids. This is reflected by the high pitting resistance equivalent number of PRE>48, which is a measure of the relative pitting corrosion resistance of the material in chloride-containing environments.

Sanicro 60 seamless nickel-chromium alloy tube is supplied bright annealed in the outside diameter range 6 to 42mm (0.25" to 1.625"), and wall thickness from 0.89 to 5mm (0.035" to 0.197").

H&I tubing is available in straight lengths and coils, supplied annealed (Grade 1) and solution annealed (Grade 2). Stock will be available for most common sizes.

The material grade can be welded using standard austenitic stainless steel welding processes. Post-weld treatment is not necessary, as it is resistant to intergranular corrosion even after welding.

Sandvik has also announced the development of another grade to be added to the nickel family: alloy C276, a nickel and molybdenum-chromium alloy designed for excellent resistance to pitting, stress corrosion cracking, oxidising atmospheres and seawater. The material is currently undergoing manufacturing trials.

Sandvik Materials Technology – Sweden
www.smt.sandvik.com



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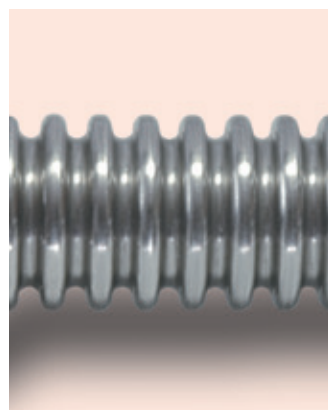
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Stainless steel press fitting pipe: raw or annealed?

For stainless steel press-fitting systems, the choice is between raw or annealed pipes. Are there applications where spending more for annealed pipes is advised? According to Eurotubi, for most approvals there is no difference.

In most plumbing systems where AISI 316L stainless steel press-fittings can be applied, raw pipes can be selected. DVGW certification is valid for both types of pipe.

The choice of one type over another mainly applies to the customs in the reference markets. Generally, annealed pipes are required more in regions with stricter standards, such as Scandinavia

and Australia. However, even in these regions the demand for annealed pipes is decreasing. An increasing number of users are realising that the possible technical and qualitative differences that may make the annealed pipe seem better are actually very marginal.

There are a few situations in which an annealed press-fitting pipe is more suitable than a raw one. An example is the possibility that annealed pipes have of being curved better.

Eurotubi recommends creating curves for plumbing systems using the various figures available in its catalogue, avoiding as much as possible the

need to perform curving operations on the pipes. Excess deformation may even cause leaks. The annealed pipe for press-fittings is subjected to an annealing heat treatment. This process mainly acts on the welded areas of the pipe, creating a precipitation of elements that tend to normalise the material in that area.

In the current market, Eurotubi states that more than 80 per cent of stainless steel press-fitting pipe sales are in the raw state.

Eurotubi Europa Srl – Italy
info@eurotubieuropa.it
www.eurotubieuropa.it

New stockholding catalogue

Eltherington, UK, has issued a newly updated aluminium stockholding catalogue. With 28 fully illustrated pages, the catalogue contains essential sheet, profile and plate products. Along with an improved layout, the brochure features a number of new products, which build on the company's commitment to be a one-stop-shop for stockholding items.

Eltherington has more than 50 years' experience in stockholding and fabrication of architectural aluminium, stainless steel and other metals. It is also a major producer of coated

aluminium cladding. The in-house design assistance and development team provides products, service and support to the architectural, modular building, leisure home, stockholding and other specialist sectors.

Leading the new product entries are two full pages devoted to $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ wallboard sections, including assembly instructions. These extruded sections can be used in conjunction with laminate faced panels for internal wall applications. The range includes internal and external corners, H joint, end cap and quad end. The

updated stockholding brochure also showcases a dedicated section on Eltherington's bespoke cutting and fabrication services. An increasing number of customers are choosing this service, for improved efficiency in manufacturing operations.

The updated aluminium stockholding brochure can be viewed online, at www.eltherington.co.uk/stockholding/index.html

Eltherington Group Ltd – UK
info@eltherington.co.uk
www.eltherington.co.uk

Stainless steel export specialist

Sadinox is a new export business from Sadel Stainless Steel NV, an independent stainless steel stockist based in Belgium.

Sadinox has been established to provide a reliable partner for stainless steel needs, as a supplier to fill stock gaps or to support in finding missing pieces for customers' projects.

The company has 20,000m of covered warehouse area, and a permanent availability of 5,000 tons of stainless steel products.

Welded pipes are available from $\frac{1}{4}$ " to 24", in grades 1.4307 and 1.4404 / 304L and 316L. Seamless pipes range from $\frac{3}{8}$ " to 8", in the same grades. Fittings in grades 304L and 316L range from $\frac{1}{4}$ "



to 24" (welded) or $\frac{3}{8}$ " to 8" (seamless). Flanges from $\frac{3}{8}$ " to 16" are available in grades 1.4307 and 1.4404 / 304L and 316L.

Sadinox – Belgium
info@sadinox.be
www.sadinox.be

Pipes for Johan Sverdrup oilfield

Norway is currently developing a huge oilfield in the North Sea, and hoping that this will secure its position on the oil market for the next 30 years. Butting was granted the order to produce and deliver longitudinally welded, corrosion-resistant pipes for this project.

The oil price is at its lowest level for more than 13 years. Norway, a country where the oil and gas industry contributes around 20 per cent to the annual GDP, is struggling with these low oil prices. Nevertheless, Norway decided in 2015 to develop a new oilfield. The field was named after the Norwegian prime minister Johan Sverdrup, who was in office between 1884 and 1889.

The Johan Sverdrup oilfield was discovered in 2010 and is in the Utsira High region of the North Sea, 140km from the coast at Stavanger. The oil deposit is 120m below the surface of the water, and is 1,900m deep. The first phase



The first phase includes erecting four platforms

in the oilfield development includes erecting four platforms: a processing platform, a riser platform, a drilling platform and a living quarters platform.

After the expected start of production at the end of 2019, Norway plans to extract oil from the field until 2050.

A pipeline is intended to transport around 550,000 barrels of oil a day to the Mongstad terminal in Hordaland. It is estimated that between 1.8 and 2.9

billion barrels will be extracted in this way.

Norwegian trading companies granted Butting the order to produce and deliver longitudinally welded, corrosion-resistant pipes for the Johan Sverdrup oilfield. Statoil and Lundin Norway are the operators of the oilfield.

Christian Schenk from the CRA pipes department commented, "The order volume up to now already comprises almost 1,000 tons of duplex, super-duplex and 6 moly materials. The dimensions range from 6" to 30", with wall thicknesses between 3 and 40mm. In all our activities we endeavour to achieve top performance and in this major project too we will put in every effort to deliver the materials to the construction yards on schedule."

H Butting GmbH & Co KG – Germany
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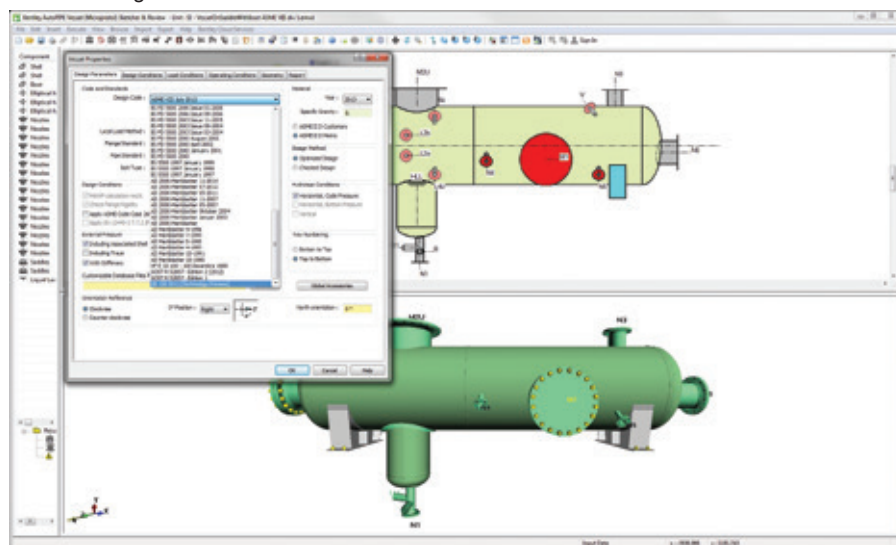
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Bentley to advance piping and vessel design

Bentley Systems has announced additional design code updates for the Connect Edition applications of AutoPIPE and AutoPIPE Vessel. These design code updates will reduce the cost and time to produce compliant piping and vessel designs for any plant project. AutoPIPE and AutoPIPE Vessel provide comprehensive design code coverage, ensuring project compliance anywhere in the world.

Updates to the design codes include ASME B31 J, a draft standard method to calculate stress intensification factors (i-factors) and flexibility

Global design codes in AutoPIPE Vessel allow users to quickly produce safer, more-cost effective designs



factors (k-factors) for metallic piping components used in B31 piping analysis; GB 150 pressure vessel design code that uses calculations for material thicknesses with safety factors, hydrotest pressure, and weld joint efficiency; and 2015 update for the ASME Boiler and Pressure Vessel code.

The addition of ASME B31 J to the Connect Edition of AutoPIPE will provide comprehensive design code coverage for users in the oil and gas industry, including those designing offshore structures. The updates to the Connect Edition of AutoPIPE Vessel will

enable users to stay current with the latest global code updates and address requirements in the Chinese market.

“AutoPIPE brand products continue to broaden their reach with new design standards and codes for pipe and vessel design, but significantly, with the Connect Edition,” said Raoul Karp, Bentley vice president, structural and bridge analysis. “The Connect Editions of both AutoPIPE and AutoPIPE Vessel offer users a new way to collaborate, produce better designs, and gain insight into their project performance. By signing in and creating connected projects, users can now take advantage of many Connect Edition cloud services, including project performance reporting capabilities through the Project Portal and learning and sharing on the Personal Portal.”

AutoPIPE allows users to save time and reduce errors when performing pipe stress analysis by offering a comprehensive set of design codes that EPCs have been relying on for more than 20 years. AutoPIPE Vessel offers comprehensive software for optimised pressure vessels, heat exchangers, air coolers or tank design, allowing engineers to deliver safer, faster, more cost-effective vessel designs.

Bentley Systems – USA
www.bentley.com

Benchtop socket fusing of polypropylene pipe and fittings

McElroy has launched the SmartFab™ 125 benchtop machine for socket fusing pipe and fittings for polypropylene pipe used in plumbing and mechanical systems. The machine is portable and can be positioned on any flat surface for precise prefabrication on large assemblies.

Advanced features of the SmartFab 125 include inserts that have the ability to reduce ovality in pipe and fittings. It also has the added convenience of a pivoting heater so that it can easily accommodate fittings located on either side of the machine. This saves time

since it eliminates having to reposition the entire machine. The drive handle is positioned so that the unit can also operate on the floor, making it suitable for use in the field or the shop.

“The SmartFab 125 not only expands our polypropylene pipe fusion line, it offers superior design features that will make it easier to operate to produce precise prefabrications every time,” said McElroy president Chip McElroy.

“With projects increasingly specifying polypropylene, it’s rewarding to be able to offer a niche product that will help the

plumbing and mechanical industries do their jobs more efficiently.”

The SmartFab 125 has four jaws that adjust to any desired spacing, and each jaw clamps individually, allowing for a greater combination of pipe and fitting sizes. This flexibility is especially beneficial when fusing large assemblies. The machine offers plenty of clearance and its rack and pinion drive provides smooth and steady fusion force.

McElroy – USA
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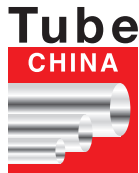
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Nylon weld purge plugs



The range of nylon plugs from HFT

For industries such as oil and gas, nuclear, food and beverage, and pharmaceutical, it is vital to ensure that stainless steel tubes and pipes are welded without oxidation, which leads to loss of corrosion resistance. In order to achieve a zero-colour weld, the oxygen level must be purged down to lower than 100ppm before and during welding.

The Pipestoppers® division at Huntingdon Fusion Techniques (HFT) manufactures a range of white Nylon Weld Purge Plugs™ that are clean and suitable for weld purging of tubes and pipes up to 6" diameter. The plugs are made from engineering quality nylon 6 in a range of sizes from 12 to 150mm (0.5" to 6"). They are manufactured with a standard seal made from natural rubber, and for special applications seals made of silicone, nitrile and Viton rubbers are available.

The lightweight plugs serve a wide variety of industrial applications. As 'overnight stoppers' they provide a strong barrier in pipeline activities, to prevent foreign bodies entering the line during downtime. Other applications include leak testing of pipework systems, whether commercial, domestic or industrial, and sealing holes in castings, tanks and other assemblies.

The nylon plugs are available individually or in kits to suit domestic plumbers, automotive radiator repair shops and pool and spa maintenance teams, all of which are available for immediate delivery. The plugs can be supplied with a hollow shaft with an outside 1/2" BSP thread for screwing on a standard hose connection, or solid-shaft versions up to 1.5" diameter for pressure testing.

Huntingdon Fusion Techniques – UK

hft@huntingdonfusion.com

www.huntingdonfusion.com

www.read-tpi.com

Product quality key to success

Ayvaz deals with the development and production of products for the HVAC industry, gas and steam supply applications, power and electricity generation sectors and others.

The company states that its strengths include manufacturing experience in special designed products, and providing technical support and infrastructure for all sized projects.

The company aims to manufacture and supply superior quality products that provide value-added performance to its customers. CEO Serhan Alpagut says the company will keep producing with focused quality control, comprehensive training programmes and innovative technology: "We are dedicated to a professional sales force with technical support and continuous improvement of our people, products and service."

Mr Alpagut stated that Ayvaz was the first flexible metal hose manufacturer in Turkey, and is one of the largest in Europe. "The company started flexible metal hose production in 1984 and has been developing the product range and the types of hoses for all industrial requirements since then."

Ayvaz has its own heat treatment, insulation and laser welding facilities. Its main production is carried out in the Hadimkoy factory, and production abroad is being expanded, with plants in Russia, Bulgaria, China and Poland. The company produces flexible metal hoses in sizes from DN6 to DN300, using modern production techniques and equipment to maintain high quality production.

Mr Alpagut said, "We provide engineering activities from product

specification to project estimation and work on to provide the most specific solution for each case. We constantly work on developing our quality management techniques; we have spectrometers, helium leakage test and 3D dimensional controlling equipment in our TÜV accredited laboratory. We see the product quality is the key factor of our company's success."

The company's flexible metal hoses are claimed to provide better heat transfer capacity than rigid pipe, especially where high thermal efficiency is required, such as in solar thermal water heaters. The corrugated structure allows quick and easy installation for water, gas and steam connections. Ayvaz exports to 94 countries around the world, and has international sales offices located in Italy, Russia, Germany, Ukraine and UAE.



Ayvaz's factory

Ayvaz – Turkey
info@ayvaz.com
www.ayvaz.com

Provider for PE-X and metal plastic multi-layer pipe technique

The product range of Hewing GmbH includes special layer pipe with an inner layer of PE-Xc and an outer stainless steel layer.



PE-X pipes and aluminium multi-layer pipes developed by Hewing are mainly applied in surface temperature regulation, radiator connection and tap water installation.

Hewing products fulfil requirements for these application fields and allow fast installation. In the company's test engineering department they are tested for all kinds of application fields, simulating reality and long-term installation situations.



Hewing GmbH – Germany
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Energy optimisation for building service pipework

Technical insulation materials made of flexible elastomeric foams (FEF) and polyethylene foams (PEF) are among the few industrial products that save more energy during their service life than they require for their manufacture. "As a result, they can help to meet the latest EU energy consumption reduction targets," explained Dominique Malache, technical expert at CEFEP, the European FEF and PEF interest group.

At a local, national and international level, Europe is poised to undertake the largest 'energy transition' in more than a century. With ambitious EU commitments to reduce greenhouse gas emissions by more than 40 per cent by 2030 and achieve a 27 per cent increase in energy saving over the same time frame, insulation will play an increasingly important role, particularly in the construction industry.

Buildings currently consume around 40 per cent of all the energy used within Europe. With space heating and cooling accounting for the majority of this, the countries of the EU have tightened their demands on the primary energy requirements of buildings. Increased levels of structural insulation ensure that

buildings retain heat more reliably, but there has also been a focus on improving the efficiency of heating, cooling and ventilation systems. Insulation materials made of FEF and PEF offer a sustainable way to reduce the energy use of these systems.

Industrially manufactured products require raw materials and energy for their production, but technical insulation materials are a special case as they save energy over the course of their service life. Studies carried out by member companies of the CEFEP Interest Group have demonstrated that FEF pipe insulation materials have a net positive effect.

For example, the insulation manufacturer Armacell carried out an analysis of several products over their complete lifecycle in accordance with EN 15804. The results show that FEF insulation materials not only save energy, but also continue saving energy throughout the life of the mechanical system. The analysis shows that the energy requirements for supplying an average residential building with hot water and heat can be reduced



Insulated pipes cause less energy loss and are more effective at getting heat to where it is needed
Photo credit: CEFEP / shutterstock.com

by up to 25 per cent by installing an optimal thickness of pipe insulation.

Technical insulation materials made of flexible elastomeric and polyethylene foams are highly recommended due to their consistent long-term efficiency and short payback times. Thanks to their closed-cell structure in conjunction with their low thermal conductivity, synthetic insulation materials help to reduce energy consumption in buildings.

When insulating air-conditioning pipes, the temperature on the surface of the material must be above the dew point at all times in order to prevent condensation that could result in corrosion. Although this is the main reason to insulate, there are energy saving benefits too.

CEFEP FEF/PEF Interest Group –
Germany
info@cefep.net
www.cefep.net

High-purity fluoropolymer pipe

Ametek Fluoropolymer Products now offers Fluor-X high-purity fluoropolymer pipe in a wide range of standard and custom lengths and diameters. The Schedule 40 and 80 pipe is available in a choice of fluorinated ethylene propylene (FEP), perfluoroalkoxy alkane (PFA) and ultra-high-purity (UHP) resins.

Fluor-X high-purity pipe is suitable for a range of applications. Manufactured from low-iron-extractable resins, the piping offers corrosion resistance for temperatures ranging from -100° to 400°F.

The low extractable levels and chemically inert nature of fluoropolymer pip-

ing make it suitable for high-purity acid and chemical transport applications, especially in semiconductor wafer fabrication.

The piping is available in standard 10ft lengths and in custom lengths up to 40ft, and in a range of diameters from 2.5" to 3.5" for Schedule 40 size pipe. Metric and custom diameters are available along with laser etching identification for traceability.

Natural in colour, the pipe is capped and wrapped in plastics sleeves prior to shipment. Lead times for delivery are claimed to be from one to three weeks shorter than competitor materials.



Fluor-X high-purity pipe is suitable for ultra-high-purity chemical transport applications

Ametek Fluoropolymer Products –
USA
info.fpp@ametech.com
www.ametekfpp.com

Laser and 3D design software integral to oil and gas offshore facility revamp

Aveva has announced that Fabricom Offshore Services, a provider of engineering, procurement, construction and project management services to the oil and gas industry, is using Aveva software for the brownfield modification of GDF Suez's Cygnus Platform.

Using both LFM Server and Aveva Laser Model Interface, Fabricom can capture the asset's as-built configuration into the Aveva 3D design environment. Aveva's 3D design modelling software will enable Fabricom to more easily create an accurate and complete 3D design, to improve operation and maintenance efficiency for the platform.

"Aveva software is widely used and there is a good skilled workforce in the UK," said Michael Ketley, engineering manager, Fabricom.

"This gives us a great deal of project flexibility and helps us to get up and running quickly. Aveva's 3D design modelling software provides huge cost and time savings as it automates the modelling process and is particularly powerful when integrating with laser scan and point cloud data. It produces an accurate digital version of the asset, greatly reducing the possibility of errors.

"Using Aveva Global our design teams at different locations can now work together as though they were in a single office. We are able to dynamically share evolving designs and high quality deliverables with both Fabricom staff and our clients as the project progresses."

Evgeny Fedotov, senior vice-president, global head of EPC sales, Aveva, commented, "The last couple of years have been challenging for the whole industry, and in a market with reduced capital investment, revamps and upgrades are becoming increasingly prevalent to extend the operating life of existing assets.

"Our 3D laser scanning software efficiently and accurately captures the as-built asset to create a data-driven baseline for revamps, improvement planning and operational compliance. The ability to work expertly with ageing brownfield assets is now essential for both EPCs and their owner operators (OOs)."

All Aveva laser technologies are hardware-neutral, allowing the use of any of the leading scanning systems. The LFM suite also supports use with third-party 3D design systems.

Aveva Group plc – UK
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www.read-tpi.com



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Water, drainage and underground tubes



Any review of water, drainage and underground tubing quickly reveals that there is much information to take in considering it is equipment that we rarely even know is there, hidden as it is deep underground.

These tubes see service across a broad range of sizes, properties and applications and are absolutely fundamental to the way we live around the globe, supplying fresh water to drink directly from the tap and helping to stop former flood planes and even swamps from becoming saturated with water so that we can live safe from flooding in formerly uninhabitable areas.

Automation scheme to improve flood protection

A new Rotork IQ3 intelligent electric actuator will improve flood protection in a vulnerable area of a coastal town in west Wales.

The River Ritec flows towards Tenby, where it discharges via a 780m culvert/outfall system that passes beneath a railway embankment and sand dunes to discharge into the sea below typical low tide level. There is a history of flooding upstream of the culvert, which imposes a restriction on the discharge of flows from the river catchment area during high river flow events. This is particularly true when high river flows coincide with high astronomic tide levels.

The valve installed below ground in a chamber at the beach end of the culvert is designed to close off the rising tide, which can otherwise fill the length of the culvert and prevent 'washing' of the Victorian brick culvert.

Due to its inaccessibility in the chamber, the actuator previously installed on the

valve was locally operated by push-buttons in a nearby top-side enclosure. However, local operation was imprecise, requiring call-outs at any time, day or night, and relying on human judgement for factors including the state of the tide, the rate of rainfall, the weather forecast and the risk of flooding.

In a contract awarded to Rotork Site Services by Natural Resources Wales (NRW – formerly Environment Agency Wales), the old actuator has been replaced with an IQ3 actuator and two ultrasonic level sensors installed in the valve chamber. The new installation is programmed to automatically close off the rising tide to ensure that the length of the culvert is then available to act as a storm tank and receive as much river floodwater as possible.

By automatically opening the valve when the tide begins to recede, drainage capacity is also maximised, enabling any flooding that may have occurred to drain away as quickly as possible. As on

other NRW sites, operation is remotely monitored via a telemetry system and can be overridden from central control rooms and mobile devices.

Operation of the actuator is also supported by a Remote Hand Station installed in the top-side enclosure, which provides an exact duplicate of the actuator's monitoring and control interface. From here the user can not only locally operate the actuator, but also interrogate, configure and download data from it using the Rotork handheld setting tool with a secure wireless Bluetooth link. Retaining all of the actuator's functionality, the Remote Hand Station presents an identical window into the plant, showing diagnostic data including the valve torque and usage profiles and facilitating real time analysis directly at the cabinet to assist with preventative maintenance and asset management.

Rotork plc – UK
information@rotork.com
www.rotork.com

Chem Proline back pressure regulator

Asahi/America, Inc, a specialist in thermoplastic fluid flow technology, has expanded its Chem Proline® advanced PE piping system to include Frank Series V86 back pressure regulators.

Made from an advanced PE resin, Chem Proline Frank pressure regulators possess the same chemical resistance and stress crack resistance as Asahi/America's Chem Proline pipe and moulded fittings.

Frank Series regulating products are engineered to meet tough demands. The mechanical parts are isolated from the system media by an EPDM diaphragm. The Chem Proline V86 regulator is adjustable under working conditions and provides accurate and stable control in pressurised lines.

The Chem Proline Frank V86 regulator can be supplied in both in-line and angled configurations, both of which are available with either butt/IR or socket connections. The regulators are available in sizes ½" to 2", and the angled configuration is available in ½" to 1".

Chem Proline advanced PE products are suitable for use in water treatment and chemical process applications using a variety of chemicals including sodium hydroxide, sodium hypochlorite, caustic soda and low concentration acids.

Asahi/America specialises in providing solutions for fluid handling systems individualised to meet customer requirements. The company manufactures corrosion-resistant thermoplastic fluid handling products including valves, actuators, pipe and fittings. It also main-



Asahi Chem Proline Frank regulator

tains an extensive custom fabrication department, and provides on-site consultation, supervision and training where required.

Asahi/America, Inc – USA
asahi@asahi-america.com
www.asahi-america.com

Protecting Hong Kong from toxic water

No-dig technology installed by Pipe Restoration Services (PRS) of the UK is helping tackle risks of lead in water around the world.

Water authorities in Hong Kong have used ePIPE technology to eliminate the risk of toxic lead leaching into the domestic water supply. Routine tests found that 30,000 public housing units, private houses and schools had excessively dangerous levels of lead in the drinking water when tested at the tap.

Lead levels were 15 to 60 times higher than the limit deemed safe by the government of Hong Kong. As in the UK, Hong Kong has a lead cut-off level of 10 micrograms per litre ($\mu\text{g}/\text{l}$). Initial investigations determined the source of the lead leaching as the improper use of lead solder used on copper water pipes.

Lead is a cumulative poison, and children are particularly vulnerable



The team in Hong Kong

as it affects both their physical and intellectual development. Multiple claims of adverse effects of lead absorption in children were already making their way to the Hong Kong authorities.

An expert team using ePIPE technology worked with the Water Supplies Department of the Government of Hong Kong, Wo Hing Construction and Innopipe to prevent lead leaching into the clean water supply.

Larry Gillanders, director of PRS, said, "Lead is a dangerous toxin and no amount of lead is safe for human

consumption. Hong Kong's Water Supplies Department reached out to their construction contractors for an answer, and they suggested the ePIPE in-place pipe lining technology."

The ePIPE process uses a lining material with a short two-hour cure time. Prior to work commencing, the lead levels were tested at over $500\mu\text{g}/\text{l}$. On completion, lead levels met the $10\mu\text{g}/\text{l}$ safety standard.

Pipe Restoration Services – UK
info@piperestorationservices.co.uk
www.piperestorationservices.co.uk

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Pipes and profiles in Europe

Since beginning as a trading company in 1994, IGM-Trade has developed into one of the largest pipe and profile factories in Southeast Europe. Its premises in Kavadarci, Macedonia, have an area of $400,000\text{m}^2$, with a covered space of $240,000\text{m}^2$.

The production facilities, which consist of 12 production lines, have a combined annual capacity of approximately 250,000 tonnes. IGM-Trade is an export-orientated company, with 90 per cent of total output sold outside Macedonia, in the EU and CEFTA markets.

Production takes place under recognised standards for manufacturing and quality. Square hollow sections

range from $13\times 13\text{mm}$ to $250\times 250\text{mm}$, with thickness up to 10mm, while rectangular hollow sections are available from $30\times 10\text{mm}$ to $300\times 200\text{mm}$, with thickness up to 10mm.

The size range for round structural tubes is from 17.2 to 323.9mm ($\frac{3}{8}$ " to 12") with thickness up to 8mm, and round precision tubes are available from 17.2 to 168.3mm ($\frac{3}{8}$ " to 6") with thickness up to 6mm. The company also produces pressure-tested tubes, oval and semi-oval tubes, and special cross-section profiles – ZP profiles.

IGM-Trade – Macedonia
info@igmtrade.com
www.igmtrade.com

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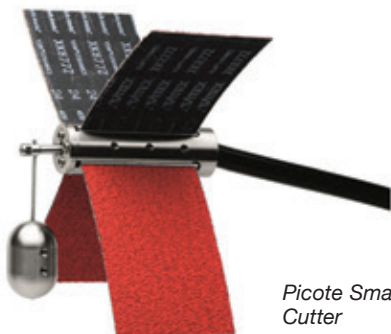


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Formadrain awarded Canada distribution of Picote pipe technology

Formadrain®, the inventor of the steam-cured epoxy sewer liner and an expert in cured-in-place pipe (CIPP) technologies, is now the official Canadian distributor of a line of small diameter lateral cutters from Picote, of Finland.

Picote's Smart Cutter™ system won the ISTT new product award for 2012 at the 30th International ISTT No-Dig Show in Brazil. Picote has used the system in vertical and lateral renovation of over 100 large-scale apartment buildings, as well as numerous patch repairs, and has



Picote Smart Cutter

won contracts worth more than €10mn in recent years.

To meet demand for the new line plus existing enquiries for its products and system, Formadrain has recruited Bruce Stevenson as business development manager. Mr Stevenson has spent the last 25 years working in customer relations and sales, primarily helping business owners in technical and engineering industries. He will be working directly with the company's marketing and engineering departments to ensure customer satisfaction and growth.

Formadrain's technology has been accepted in each city where an approval for lining installation has been requested, including Boston, Toronto, Regina, Ottawa, Montreal and Chicago. The company has also been granted international approval through NSF certification for sewer/drain, and its technology has been used in large chemical companies, refineries, food



Bruce Stevenson, Formadrain's new business development manager

companies, cosmetics manufacturers, paper plants and hospitals, in addition to municipal and residential sewers.

The company ensures strict quality controls within its manufacturing and supply facilities. This ensures high standards in the preparation of raw materials and field installation. Formadrain's plant met the requirements set by Standard ASTM F1216 – a standard specific to underground sewer lining.

Formadrain Inc – Canada
www.formadrain.com

Picote UK Ltd – UK
sales@picotesolutions.com
www.picotesolutions.com

Clearford One operational at mobile park

Clearford Water Systems Inc has announced that the Clearford One™ installation to service Fetherston Mobile Home Park in North Grenville, Ontario, Canada, is now operational, collecting and treating sanitary sewage for 38 permanent residences, with capacity to service 46. The potable water network is also complete.

Both the potable water and wastewater treatment plants include ultraviolet purification using the Hallet® system designed and manufactured by UV Pure Technologies Inc – a subsidiary of Clearford. This is the first installation in Canada of Clearford One, the latest generation of the company's proprietary unified sanitation system.

The \$1mn system is designed, funded, installed and operated by Clearford

Water Utility (Fetherston) Inc under a 30-year service agreement with Fetherston Mobile Home Park Association, which will pay a fixed charge per month per residence, adjusted annually to reflect the change in the Consumer Price Index. The Clearford Pay-For-Performance (P4P™) delivery model is available to municipalities in Ontario and was announced in January 2015.

The Clearford One system is based on distributed treatment at the sewage source in ClearDigest™, collection of liquid outflow from ClearDigest through a small bore flexible pipe network, ClearConvey™, and final treatment in a Membrane BioReactor (MBR) treatment plant, ClearRecover™. For Fetherston, ClearRecover™ incorporates a packaged MBR supplied

to Clearford by Koester Canada. The packaged MBR incorporates new Fibrecast FIBREPlate™ next-generation membrane technology, as well as Hallet ultraviolet purification supplied by UV Pure Technologies Inc. Operation of the Fetherston system has been contracted by Clearford to Koester-Team Aquatic (KTA), an established Ontario operator of wastewater treatment plants. Clearford retains full responsibility for the system with service functions performed by KTA.

Clearford Water Systems Inc – Canada
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www.clearford.com

UV Pure Technologies Inc – Canada
info@uvpure.com
www.uvpure.com

Robot to carry sensors and tools through water and wastewater pipes

The third-generation robotics crawler from Pure Technologies Ltd, Canada, features a rotating head and modular feet, and can quickly navigate through turbid wastewater. It delivers live video and integrity information that can aid in detecting leaks and other anomalies in underground pipes.

“The roll-out of our latest generation robot will deliver additional benefits to our clients by providing detailed, real-time, internal condition data in about half the time as the previous generation,” stated Mark Holley, executive vice president and chief operating officer of the company. “This will reduce our inspection time and correspondingly reduce any facility downtime. In addition, the modular design allows us to customise tools to inspect a broader variety of pipeline sizes and types.”

The PureRobotics™ pipe inspection system is a modular transporter designed to carry sensors and tools through dewatered pipe or while submerged, for water, wastewater, industrial and power applications. The advanced robotic crawler is safer than manned inspections, especially for wastewater and where regulations keep people out of pipelines in favour of unmanned solutions. The crawler can travel a total of 5km from a single point of access.

“We took the PureRobotics system to the next level, designing it for extreme modularity and operational efficiency in a powerful, compact package,” said James Milward, lead developer for Pure’s robotic crawler. “We use a lightweight, ultra-durable fibre optic umbilical and a highly configurable chassis for improved navigation through difficult pipe conditions, allowing clients to better assess their pipelines.”

The standard system features HD digital, pan tilt zoom, closed circuit television for live video streams. The robot can be equipped with a variety of specialised tools, including an inertial measurement unit for XYZ mapping geographic information, 3D LIDAR scanning tools, or pull condition assessment tools such as 2D laser technology that can precisely measure a pipeline’s size, shape and level of corrosion.

With the new generation, the speed is doubled to 85ft/min, which improves efficiency in the field – a benefit during time-critical shutdowns. The robot’s track feet are modular, and can be changed out for different styles depending on the pipeline type. The track chassis can also be expanded for large diameter pipelines. Since its introduction, the robot has delivered data over more than 28,000m of pipe.

Pure Technologies Ltd – Canada
www.puretechltd.com



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A photograph of an industrial facility featuring several large, silver-colored valves with black handwheels. The valves are connected to a network of pipes and are situated on a platform with orange safety railings. The background shows more industrial structures under a bright sky.

Valves, fittings & flanges

In today's ever-widening universe of tube products, connecting devices assume greater importance to designers, engineers and builders all the time. It follows that makers and suppliers of valves, fittings and flanges become steadily more proactive in the partnership with their customers – standing ready to research, recommend and provide solutions, and to maintain an interested presence beyond the sale.

With global markets imposing shorter lead times and demanding more flexible responses, the new emphasis is not solely on the devices but on the total service package. Even a casual review of online catalogues suggests that manufacturers and distributors relish the challenge, and it is a fair bet that their enhanced assistance is very welcome to the buyer.

Valve actuator with optimised stem acceptance and torque output

Rotork has introduced a new model in its IQ range of non-intrusive intelligent electric actuators with an optimised combination of valve stem diameter acceptance and torque output to facilitate economical automation of valves and penstocks typically found in the water and effluent treatment industries.

The new IQ19 actuator combines a stem acceptance of up to 51mm (2") diameter with torque output up to 135Nm (100lb. ft) and output speeds up to 72 rpm at 50Hz (86 rpm at 60Hz). The combination meets the operating requirements of large numbers of penstocks, sluice gates and gate valves.

The actuator incorporates a range of reliability, functionality and asset management features, including data logging capabilities. An information-rich backlit display is the focus of attention for non-intrusive wireless commissioning, communication and multi-functional indication, including user-friendly multi-lingual menus for set-up and configuration.

Local position indication, valve and actuator status, asset management and diagnostic operating information is available to download, or can be viewed directly at the actuator. Diagnostic graphics show the valve torque, usage profiles and service logs, facilitating real-time analysis at the actuator and in the control room. Preventative valve maintenance requirements can be identified, eliminating unplanned interruptions to the plant or over-cautious planned maintenance outages.

Reliability is optimised by the IQ double-sealed IP66/IP68 watertight and temporarily submersible enclosure, which permanently protects internal electrics from the ambient environment, even during site wiring with the terminal housing cover removed.

On the actuator's compact and robust enclosure, local open/close and local/stop/remote selectors are coupled magnetically to internal switches without penetrating the actuator body, enhancing non-intrusive environmental protection. Emergency hand-wheel



Rotork's new IQ valve actuator

operation with motor preference is provided as standard.

Suitable for all industry-standard three-phase power supplies, IQ19 actuators offer network connectivity with Foundation Fieldbus, Profibus, HART and DeviceNet open systems, as well as Rotork's own dedicated Pakscan wired or wireless systems.

Rotork plc – UK
information@rotork.com
www.rotork.com

Multiple measurements with only one pressure gauge

Stauff's SWS-M multi-station gauge isolator valves allow the measuring of the operating pressure in hydraulic systems at up to six different measuring points in the system with only one display device. This is generally an analogue or digital pressure gauge.

The measuring point to be monitored is selected by turning the knob on top of the component.

This allows the machine operator to reduce the procurement costs and possibly also the maintenance and calibration costs for measuring devices in original equipment as well as for retrofitting.

The gauge isolator valves, which are simply installed in the lines between the measuring points and the pressure gauge using connector threads G 1/4 BSP or 7/16-20 UNC (1/4 SAE), were designed for installation in control panels with a maximum wall thickness of 5mm. Operating instructions are printed on the cover panel in several languages.

Gauge isolator valves from Stauff are suitable for use with all common hydraulic media and for a maximum operating pressure of 400 bar. They can be used in temperature ranges from -30°C to +115°C



Pressure gauge selector switches allow multiple measurements of operating pressure with only one pressure gauge

Walter Stauffenberg GmbH & Co KG
 – Germany
sales@stauff.com
www.stauff.com

New integrated pipe seal for irrigated pipes

Trelleborg's pipe seals operation has launched a new generation of integrated pipe seal for irrigation pipes in North America. The new patent-pending PIP-Lock system is said to deliver improved performance, longer life and reduced scrap rates for PVC pipe manufacturers and contractors.

Trelleborg has manufactured the composite seal using two thermoplastic formulations. Forming a blend of ethylene propylene diene monomer (EPDM) and polypropylene, these specially developed materials join as one integrated system to provide resistance against ozone, heat and chemicals, as well as flexibility characteristics. The PIP-Lock seal can also be recycled, reducing waste and cost.

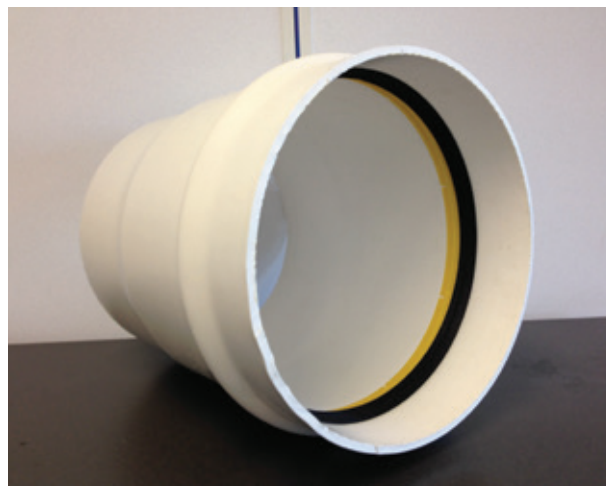
Alan Guzowzki, director of Trelleborg's pipe seals operation, America, said, "We were keen to produce a sustainable and high performance solution which would provide optimum sealing, while remaining intact and in place for the life of the pipe.

"Our proven combination of materials ensures a solution that can be automatically installed within a PVC pipe as an integrated seal. Which,

when compared with some alternative seals, means that productivity is increased and scrap rates during bellling are reduced. Similarly, by incorporating a reinforced thermoplastic material at the front of the seal, our solution provides lower friction which reduces the likelihood of seals being wrongly installed and even lost within the pipe – a common challenge faced by installers when using some competitor products."

The seal features a flexible thermoplastic elastomeric solution which ensures an effective, leak-free seal against the spigot and socket, while the thermoplastic reinforcement element ensures an integrated seal on the bell of the pipe.

Due to its integrated nature, it cannot be displaced during transportation or installation, reducing scrap rates and product failures. Similarly, by removing the metal ring found in some other seal designs, corrosion risks are reduced and replacement of the seal in the field is made much easier.



Trelleborg's new PIP-Lock integrated pipe seal for irrigated pipes in the US

In addition, the new seal can easily be belled by PVC pipe producers using their current manufacturing equipment. During manufacture, the seal becomes part of the socket forming tool used to shape its own seal groove, which reduces irregularities and tolerances in the socket.

The PIP-Lock seal exceeds ASTM F-477 requirements including the optional oil resistance requirement, and the materials used are inherently resistant to UV rays and rainwater. The design optimises seal performance and provides low assembly forces, making pipe jointing easier.

Trelleborg – Sweden
www.trelleborg.com

Safety valves: protecting employees, equipment and the environment

Alfa Laval has introduced the spring-loaded Safety Valve, designed to protect both equipment and people. In a potentially dangerous situation, the valve will open at a pre-determined pressure.

The compressed spring force keeping the valve closed is forced open when pressure builds up at the inlet of the safety valve.

As these forces balance out, the valve will discharge and decrease pressure, ultimately reclosing as the system returns to normal. Key features include dedicated

and reliable protection against accidents; calibration to the desired pressure set point, sealed and delivered with a PED certificate; and a hygienic design that eliminates unsanitary leaks and overflow during and after pressure peaks.

The company also recently introduced a range of Alfa Laval Scandi Brew anti-vacuum and overpressure valves. These safety valves protect against overpressure in tanks and pipelines, eg from overflowing or fermentation processes. They also protect against implosion, for example due to a vacuum caused by cold rinsing after hot cleaning

or blocking of gas supply during emptying.

The Alfa Laval Safety Valve can be combined with the Alfa Laval SB Anti Vacuum House into a combined safety valve, protecting against both vacuum and overpressure in one hygienic valve solution with a single tank connection.

Alfa Laval – Sweden
info@alfalaval.com
www.alfalaval.com



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www.yps-valves.co.uk

Pushing the boundary with new range of push-fit fittings

Conex Bänninger has launched its range of >B< Push fittings on the UK market. >B< Push is a range of easy-to-fit flame-free fittings with an installation time of a few seconds, with a demounting capability that allows them to be re-used up to 20 times on copper tubes.

The one-push fits-all system makes it suitable for most retrofit applications. It is also versatile for use in confined and

awkward spaces. Manufactured with a corrosion-resistant low-lead DZR body that comes with a 25-year warranty, all the fittings are compatible with various tube types, including copper, PE-X and PB. The products' flexibility only requires installers to carry one type of fitting, reducing up-front inventory expenditure. This diversity does not affect the durability of the range. >B< Push fittings are type tested hydrostatically up to 40 bar and pneumatically up to 6 bar.

The use of various tube types means that the >B< Push range can be deployed in a host of different applications, including drinking water, sanitary systems, heating and cold water systems.

The products are all manufactured from recyclable material, supporting industry sustainability.

Bill Barlow, UK business unit director at Conex Bänninger, commented, "Having already witnessed the impact the >B< Push range has made across Europe, the UK market will quickly embrace this industry-changing product group. We forecast >B< Push becoming a staple in every installer's tool kit – driving significant demand for merchants."

Conex Bänninger – UK
salesuk@ibpgroup.com
www.conexbanninger.com



Conex Bänninger's >B< Push range

Hydraulic and electric control panels

Val-Matic's control panels provide efficient, reliable and low-maintenance service to butterfly, plug and ball valves that have cylinder actuators.

The Hydraulic Control Panel permits changes to valve operating times, in order for the valves' surge characteristics to be the same as the piping system. The Electric Control

Panel connects with the Hydraulic Control Panel and pump motor controls to allow for remote monitoring of valve operation and alarm conditions.

Hydraulic and electric panels operate pump control valves with air, oil or water power, and include solenoid and flow control valves for slow open/close and emergency shutdown.



Control Panels from Val-Matic

Val-Matic Valve & Manufacturing Corp – USA
valves@valmatic.com
www.valmatic.com

Instrumentation valves and fittings

Alliance Valves & Piping Supplies Manufacturing (AVPS) is a UK-based, ISO 9001:2008 accredited manufacturer and supplier of instrumentation valves, fittings and associated products. Its range includes needle valves, instrument valve manifolds, instrument ball valves, gauge root valves, compression tube fittings, instrument pipe fittings, CNC machined metal products, air headers

and distribution manifolds, vessels and sample cylinders, syphons and thermowells.

As well as 30 years' experience in the manufacture of instrumentation valves and products, the company is able to supply valve and piping packages including process valves – gate valves, globe valves, butterfly valves, check

valves, pipe, fittings and flanges. AVPS has particular expertise in the supply of exotic alloy materials such as duplex, super duplex, titanium, alloy 400 and alloy C276.

Alliance Valves & Piping Supplies Manufacturing Ltd – UK
sales@alliancevalves.co.uk
www.alliancevalves.co.uk

Below water, yet above standard

Isola di San Pietro is a small island located just southwest of Sardinia. All of the island's sewage and wastewater is transported to a water treatment plant in the town of Carloforte. After processing, the treated water is discharged into the sea via a 2km steel pipeline with an outer diameter of 429mm. The pipes lie at the bottom of the sea at a depth of 15 to 20m. In order to keep the pipes on the seabed, concrete anchors have been used at various locations.

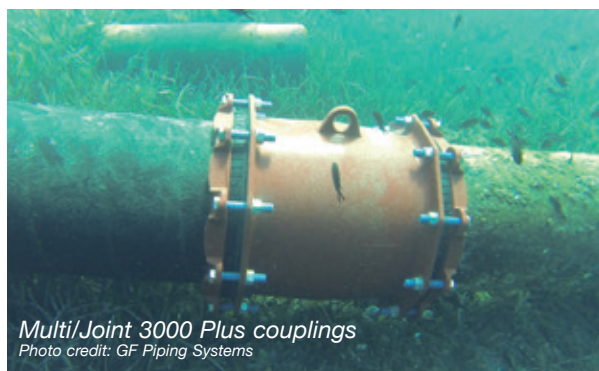
In July 2014, part of the pipeline came loose from the seabed. Problems with the concrete anchors, in combination with air in the pipeline, caused parts of the pipes to break. Water company Abbanoa SpA had clear requirements for the fittings necessary for the seabed repair of the damaged pipeline.

The fittings had to compensate for the difference in the alignment of the pipes. An end load restraint fitting with a highly corrosion-resistant coating was needed

to withstand the harsh seawater. The fittings had to be delivered quickly, and specially trained divers had to perform the installation.

GF Piping Systems Multi/Joint 3000 Plus couplings in the size DN400 were selected, as they met the high requirements of the harsh environment. Using thrust blocks or other anchoring materials to secure the connection was not necessary. The nominal angularity of 8° per coupling side compensated for the misalignment of the pipes below sea level.

A quick delivery was possible, because the fittings were in stock at the distribution centre of Georg Fischer SpA. All requested certificates and a clear user manual could also be provided on short notice.



Multi/Joint 3000 Plus couplings
Photo credit: GF Piping Systems

In September 2014, a team of divers arrived from a contractor specialised in working below sea level.

Special balloons were used to lift the pipes slightly off the seabed, allowing the divers to slide the couplings into position.

GF Piping Systems Ltd – Switzerland
info.ps@georgfischer.com
www.gfps.com

Valve World Expo 2016

Valves and fittings are used in a wide variety of different industries. They ensure safety in the oil and gas industry, channel liquids and gases in the chemical industry, regulate incoming and outgoing water and ensure a free flow of liquid in the drinks industry.

The fourth edition of Valve World Expo in Düsseldorf, Germany, will be held from 29 November to 1 December 2016, showcasing valves and valve-related products and parts, actuators and

positioners, compressors, engineering services and software applications.

A year before the event bookings had already been received for over 14,000m² of exhibition space, and 470 exhibitors from 36 countries had registered. The majority of European companies at Valve World Expo 2016 will be from Italy, UK, Germany, Spain, France, the Netherlands and Turkey. Many of the overseas exhibitors will be from the USA, Taiwan, India and China.

As before, the professional conference that accompanies the trade show in Hall 4 will be conducted by KCI.

The Pump Summit, the international trade fair and convention for pumps, will be held in Hall 7.0 (ground floor) on 29 and 30 November.

Messe Düsseldorf GmbH – Germany
info@messe-duesseldorf.de
www.valveworldexpo.com
www.pumps Summit.com



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Segment V-ball control valves from Turkey



Proval V210 valves

Proval V210 series segment V-ball control valves are produced in wafer and flanged versions from DN25 to DN500 sizes, with manual gearbox or pneumatic/ electric actuators for remote control applications.

V210 series valves are used for liquids, gas, slurry, sticky and crystallising mediums, as well as pulp and wastewater treatment process applications. The hard chromium or tungsten plated V-balls are designed for regulation and flow control applications in pulp and paper, mining and general industrial applications.

V210 segment valves have Class VI leak rate with soft PTFE and Class V leak rate with Stellite/Inconel metal seats. Segment valves equipped with Proval A210 series rotary pneumatic actuators and digital smart positioners offer accurate and lightweight process control solutions.

Proval Doruk Endustri Ltd – Turkey
info@dorukendustri.com
www.dorukendustri.com

Flanges and fittings from India

Petromet Flange Inc exports forged flanges, butt weld fittings, forge fittings, olets and customised fittings in common stock materials such as carbon steel, chrome moly alloy steel, cupronickel,

stainless steel, nickel alloys, aluminium bronze, zirconium, titanium and tantalum. The company generally stocks large quantities, and supplies products to national and international standards

including ASTM, BS, IS, DIN, ASME, AWWA and ANSI.

Petromet Flange Inc – India
www.petrometflange.com

Hygienic stainless steel valves and fittings

Pipeline Products is an importer of stainless steel hygienic and BSP valves, fittings and tube, with over 30 years' experience in the industry.

The company operates an in-house fabrication facility, and can produce machined items and welded products quickly from standard products or customer drawings. All welding is hygienic standard and is finished and blended to match the original material.

The range provides piping systems for hygienic applications in breweries, dairies, food production, chemical, pharmaceutical, packaging and OEM machinery.

The company states that its most important attributes are stock range and service, and claims to hold the widest



range of hygienic stainless steel valves, fittings and tube in the UK. Deliveries are generally next-day.

Pipeline Products has been involved in a wide range of projects. Customers have used its stock of different radius bends on jacketed piping systems for chocolate manufacturing; its valves and flanges on wastewater methanol dosing systems; full bore ball valves and bespoke bends on pigging systems for cosmetic manufacturing; and RJT machined liners to reduce waste on a toothpaste manufacturing line. The

company places great importance on its relationship with its suppliers. Alongside its products in the UK it is able to take advantage of its supply chain to offer bespoke products, or larger volume orders with quick lead times.

Pipeline Products can accommodate all sorts of requests, from changing the colour of a valve or union seal to match factory standards, to producing a machined item to drawing for a machinery build.

The company supplies products internationally, and aims to work in partnership with customers to find the best supply solution.

Pipeline Products Ltd – UK
info@pipeline-products.co.uk
www.pipeline-products.co.uk

Welded industrial valves

Shut-off valves, check valves and combined shut-off check valves under the Exentromat brand name have over 50 years of tradition at Alfred Konrad Maschinenfabrik GmbH. The success of the valves was the consequence of the series production of metallic seals and the resulting double eccentric locking geometry.

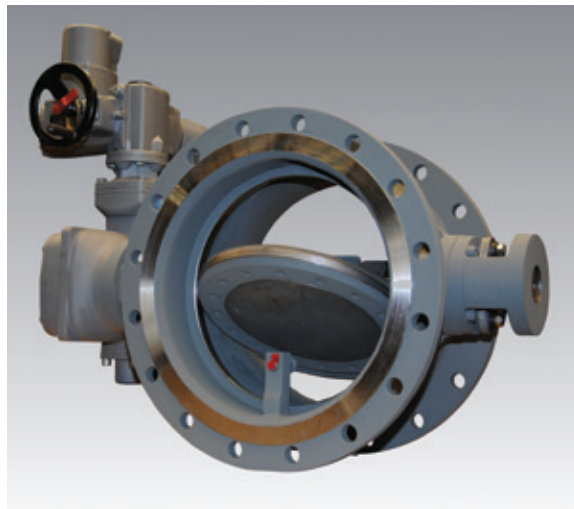
Konrad Armaturentechnik GmbH has continued its business at the same location under its managing partner, Dipl.-Ing (FH) Lutz Löbardt, since April 2010. The company's valves are manufactured exclusively as welded structures, which allows for a wide variety of possible materials in comparison to conventional cast iron valves.

Nominal sizes range from DN 100 to DN 2000. Different flange connections are available, as are wafer check valves or welded valves. The overall length is manufactured as standard in accordance

with EN 558-1, series 14, but special lengths are also available to meet customer requirements. Metallic seals can also be provided for different pressure and/or temperature requirements, in addition to different elastomer materials.

Slider crank gear mechanisms, which are produced in-house and have an intermediate gear for higher torque requirements, are typically used as drives. Third-party gear mechanisms can also be assembled at the customer's request. Manual hand-wheels are available, as are pneumatic, electric or hydraulic drives from all well-known manufacturers.

A small, specialist team with many years of professional experience



manufactures, assembles and delivers valve components to customers as a complete unit for easy installation into pipelines following extensive testing.

Konrad Armaturentechnik GmbH –
Germany
info@konrad-armaturen.de
www.konrad-armaturen.de

Accurate position detection of multi-turn valves

Netherlocks Safety Systems has launched its next-generation Valve Position Indicators for manual multi-turn valves. With the new VPI A-series and S-series models Netherlocks offers an accurate alternative for existing position indicators.

Many switch boxes and related products are available for detecting the open and closed position of manual quarter-turn valves. However, for manual hand-wheel operated valves, operating companies still often create their own solutions with custom-made bracketing and proximity switches.

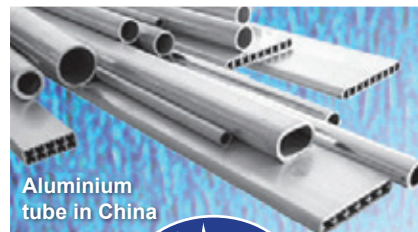
The Netherlocks Valve Position Indicator (VPI) now offers an off-the-shelf solution that fits any type of multi-turn valve. A mechanical counting mechanism is protected by an aluminium (A-series) or AISI 316 (S-series) housing. Integrated sensors detect the end positions of the counter, and transfer that information directly to the control room, giving a real-life valve position signal to the DCS.

VPI is an intrinsically safe, ATEX- and IECEx-certified product approved for use in Zone 1 classified areas.

Netherlocks states that ahead of the formal launch, various prominent end-users in the oil and gas industry had already ordered their first pieces, largely based on positive experiences with previous editions of the company's position indication solutions.

Since 1993, Netherlocks has manufactured industrial valve safety solutions such as valve interlocks, valve position indicators, partial stroke testing devices and portable valve actuators. The company's head office and factory are in the Netherlands, and local service centres are established in India, USA, Germany and the Middle East.

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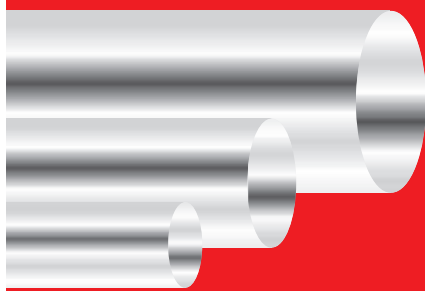
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www.messe-duesseldorf.de



Stainless steel and high alloy valves

YPS Valves has been manufacturing valves at its Leeds, UK, factory for more than 40 years, and is one of the few companies still manufacturing stainless steel and high alloy valves in the UK. The company's history dates back many years due to a family association with Dixon's of Leeds (Valve Manufacturers), a company established in 1730. YPS is still owned by the family of a previous managing director of Dixon's.

YPS currently manufactures stainless steel and high alloy valves in pressure ranges from 150 to 2,500lb and sizes up to 24" bore. The products are supplied worldwide to the oil, petrochemical, offshore, nuclear and water industry. It predominantly manufactures from castings sourced from within the UK, but is also able to offer fast-track deliveries of valves made from bar or forgings.

Facilities at the factory include emission testing, and high temperature, low temperature and ultrasonic oxygen cleaning up to 1,000kg. The factory is equipped with the latest CNC machinery and design and finite element software.

The company's latest products include axial flow nozzle check valves, which are particularly useful for the water industry, and a range of strainers – both standard and Y type.

YPS Langley Valves – UK

info@yps-valves.co.uk

www.yps-valves.co.uk



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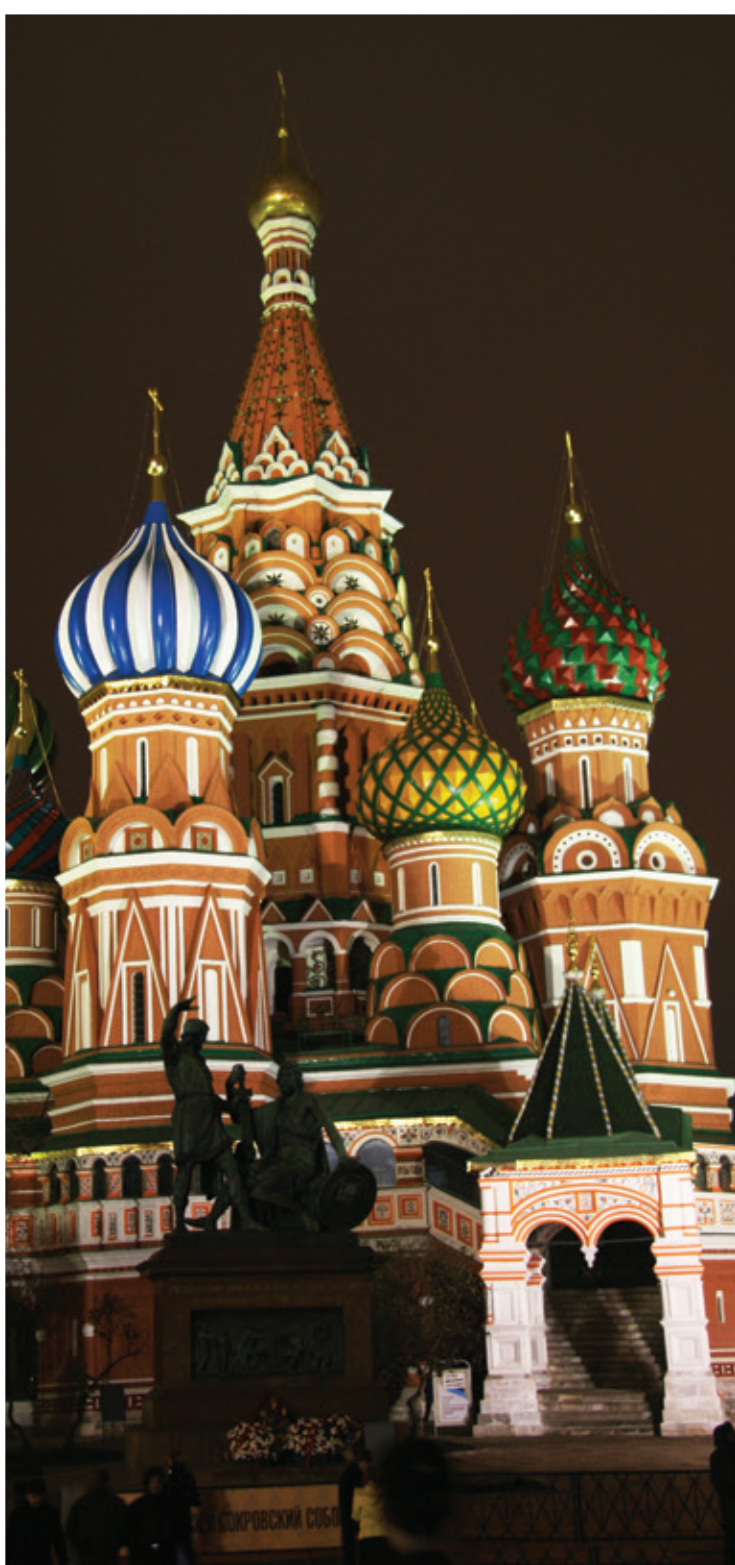
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Messe Düsseldorf GmbH | Tel: +49 211 4560 01 | Fax: +49 211 4560 668
www.messe-duesseldorf.de

Opening times

6 to 8 June: 08:10am – 06:00pm | 9 June: 10:00am – 04:00pm

The international tube and pipe trade fair in Russia



Despite a difficult economic environment over the past few years, the tube industry is now looking to the future with optimism thanks to the constantly improving investment climate in Russia.

Investment activities are up, the construction sector is picking up speed again, and consumption remains a strong pillar of this upswing.

The trade fair is one of the most important trading and contact platforms in Russia and for the neighbouring states. The organisers are aware of the optimism prevailing in the industry and can now already see a positive trend in exhibitor registrations.

Messe Düsseldorf GmbH, Messe Düsseldorf Moscow OOO and its Russian partner Metal-Expo have secured official participations from Germany, Italy, Austria and China. The trade fair is supported by the leading international industry associations AMAFOND – Italian Association for Foundry Machines and Products, ITA, VDMA – German Engineering Association, EUnited Metallurgy – The European Metallurgical Equipment Association, CEMAFON – The European Foundry Equipment Suppliers Association, and CECOF – The European Committee of Industrial Furnace and Heating Equipment Associations, as well as by the important partner MC-CCPIT – Metallurgical Council of China Council for the Promotion of International Trade.

www.metallurgy-tube-russia.com

“The passion and entrepreneurial spirit of the team is incredibly motivating. Every day is a learning experience. It is both an exciting and a humbling job.”



Jeyachandran Rajasekaran,
CEO ArcelorMittal Tubular Products Europe

The Tubular Products Division of ArcelorMittal is one of the world's largest and most diversified producers of pipe and tube products, servicing markets around the world from 23 operating locations in 12 different countries.

It produces and markets virtually the full spectrum of tubing products in an extensive range of sizes. With its seamless, spiral welded and longitudinal welded small and

large outside diameter products, the company is active in the energy, mechanical and automotive markets.

ArcelorMittal operates pipe and tube making facilities on four continents: Europe, Asia, Africa, and North and South America. With capacity from Canada to Kazakhstan and from Poland to South Africa it is able to meet customers' needs around the world.

■ *What does your company specialise in and why is it the best at what it does?*

We are one of the most diversified producers of pipes and tubes in Europe, servicing markets around Europe and the world from our nine plants. We produce and market virtually the full spectrum of tubular products in an unparalleled range of sizes. With our seamless, spiral welded and longitudinal welded small and precision pipes, our company is active in the energy, industrial, construction and automotive markets.

■ *What are your future plans for the company?*

Coming from a technical and commercial background, I understand the importance of providing value to our customers, which is why, ever since Tubular Europe was created in 2014, our focus has been on improving our product range, while improving our lead-time and reliability in order to offer maximum value to answer our customers' needs. We have started investing in our people, facilities, raw materials and products, but we need to continue in our efforts to be real partners to our customers.

■ *Do you see a lot of potential for growth in the regions that you deal with?*

The oil crisis represented a big challenge for Europe in 2015, meaning we have had to adapt to the current difficult situation. But we are confident that huge opportunities remain in our markets. The automotive sector is growing, with numerous new projects in gas transmission and district heating pipes, and most of our mills are based where the growth is still happening.

■ *What are the main projects you are working on at the moment?*

As I mentioned earlier in the interview, we have been investing in our people and making huge efforts to modernise our mills in every product line: in line with our continuous improvement projects and incremental modernisation, we are in the process of achieving benchmark productivity and cost efficiency while enhancing reliability and customer service.

■ *What's the most enjoyable thing about your job/working for the company/working in your current role?*

The job offers new challenges every day, in a complex environment, with people from diverse backgrounds and with diverse competencies. When you're in it for the long haul, the passion and entrepreneurial spirit of the team is incredibly motivating. Every day is a learning experience. It is both an exciting and a humbling job.

■ *What is the toughest aspect of your job? And what is the most difficult thing about being in a position of responsibility at a large company?*

What I love about my job is also the toughest part: each time we find a solution, a new problem appears. We can put huge efforts into working on a project, but external factors are always likely to influence the outcome, calling for a change in course: oil crisis, cheap imports, Chinese competition in the Middle East, governmental regulations, etc. In order to overcome all these challenges, we need to constantly reinvent ourselves, and lead by example.

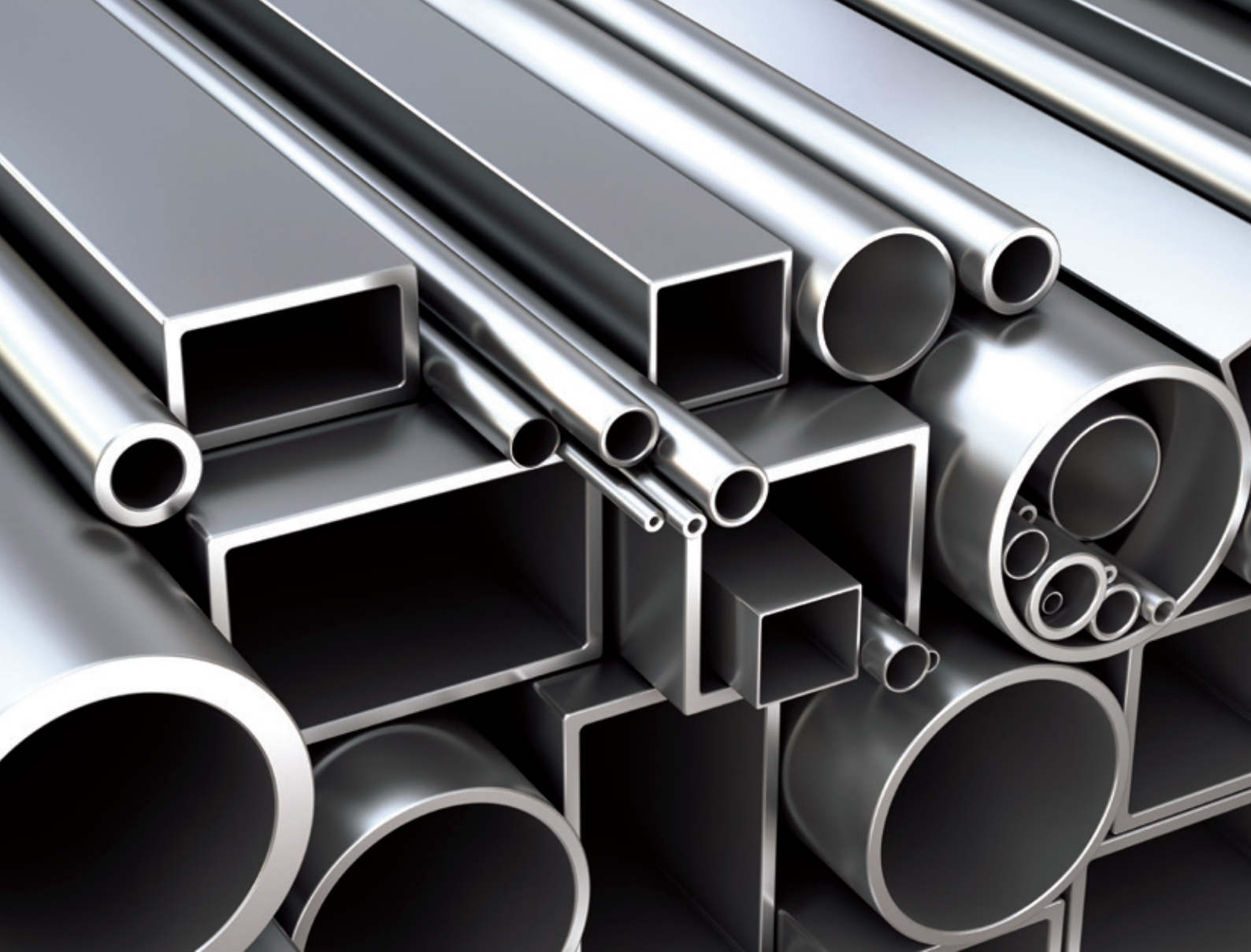


Photo ©Shutterstock.com - Inozemtsev Konstantin

■ *What's the most challenging situation you have overcome?*

When our team became part of what used to be European Tubular Mechanical BU in 2012, some of our plants were in a challenging situation. Our biggest source of pride has been to turn those plants around and make them profitable, through incremental modernisation, redesign of the flow, increased productivity and cost efficiency. Of course there are still improvements to be made and we need to maintain our efforts in this field, but we now have a good basis to make these plants references in our industry. We want to keep the same spirit for the energy plants, which joined our perimeter late 2014.

■ *What is your proudest moment?*

One of our biggest concerns is to improve health and safety. Last year was very difficult for our team as we had several major accidents in our mills, which is always shocking and disappointing. Our main concern is for our employees to be safe. Accordingly, our focus is to change the mindset of our employees so that they take safety into account at all times. It starts from the top; all operational line managers have to become owners of the safety programme. Our greatest source of pride is the great level of commitment shown in our team and I would personally like to thank everyone in Tubular Europe for their dedication and diligence, against all odds.

■ *What advice would you give to a young person trying to make it in the industry?*

Be passionate about your job. Follow your heart, commit to your team and results will follow you.

Jeyachandran Rajasekaran (JC) has a long experience in sales and marketing in the steel industry. He began his sales and marketing career in 1995 with Tube Investments of India Limited as sales manager for CR Steel Sales, which he continued at Tata Iron & Steel Co Ltd, India as customer account manager.



He joined ArcelorMittal in 2004 as Chief Marketing Officer in Iasi, Romania. From there his role grew from head of marketing for mechanical Europe to leading the European Sales Network.

He was appointed Chief Executive Officer Mechanical & Automotive Europe in 2011 and worked in this position until he was promoted to Chief Executive Officer of Tubular Products Europe in 2014.

JC holds an MBA from Anna University, Chennai, India, and a BSc in engineering – mechanical from Madurai Kamaraj University, India.

Pipe flanges and tubesheet flanges for shell and tube heat exchangers

By Andrew Johnson, business development manager, Alexander Comley Ltd, UK

A flange as defined by Collins dictionary is “a projecting disc-shaped collar or rim on an object for locating or strengthening it or for attaching it to another object”. This benign description does not reflect the true importance this product undertakes within its daily working function. In an attempt to gain perspective in terms of an O&G or power and process project, piping and its associated component makeup (which includes flanges) is one of the key considerations in terms of construction staff, engineering and monetary value.

Flanges are used in a wide variety of applications, across a wide variety of sectors, in a wide variety of working environments. This article highlights two specific examples of flanges manufactured in-house by Alexander Comley within the plethora of flanges available today – ‘standard’ bolted pipe flanges (specifically ASME standard), and ‘special’ flanges (in the form of critical, internal, 2,220+ multi-holed product for process equipment).

Pipe flanges

The most common method of joining together two pieces of pipe is through a flanged connection. Each of these connections (generally speaking) is comprised of a gasket, some fasteners (the volume/size of which is defined by the flange size and type) and, finally, two flanges. For the purposes of this example we are assuming metallic materials.

The gasket acts as a sealant. It is sandwiched between the faces of two mating flanges. This can be in pre-machined grooves on flange faces or the entire flat face of the flange. The fasteners act as the compressive force once tightened after being inserted through the outer bolt holes. Fastener tightening, application-dependent, is done in a specific order so as to maintain seal integrity. Connecting pipe in this manner means the joint itself is not a permanent one; however, it often remains in situ for great lengths of time.

Globally, there are many differing flange standards. Readily recognised ones include, but are not limited to: AFNOR (French), DIN (German), JIS (Japanese), KS (Korean), ANSI/ASME (American) and BS (British). Each of these have

dimensions that are standardised to a given/the given standard, ie all AFNOR/ASME/BS etc function dimensionally with others to the same standard – they are functional to one another.

However, each of these dimensional global standards have nuances that mean they are not always functional with each other. For example, an AFNOR flange may not mate against a BS flange. Examples of varying factors within these standards themselves include the flange faces, the flange type and the flange pressure rating.

Although produced to a given set of these ‘standard’ dimensions, flange faces generally are defined as any of the following: ring joint, tongue and groove, raised face and flat face. In addition there are many other less common variations. A flange can be offered to a variety of sub design types. These can include blind, weld neck, slip on, socket weld and lap joint.

Flanges are also defined by pressure class. These allow a given flange to be able to withstand different pressures they are to be exposed to in service. As previously, flanges of differing standards are normally not interchangeable. Continuing with the ANSI/ASME working example, pressure rating options (defined in psi) can be 150, 300, 900, 1,500 and 2,500lb (125 and 250lb for flat face flanges only).

As noted previously, there are a range of internationally recognised flange standards. Common examples of these are ASME B16.5 (½" to 24" Ø) and ASME B16.47 (26" to 60" Ø, Series A or B). This dimensional reference relates to the NPS or Nominal Pipe Size (aka Nominal Bore, sometimes referred to as NB in written descriptions). Both types are typically produced from a shaped or disc forging, then finished with machined and drilled surfaces.

Additional information defines product into pressure classes (in psi): 150, 300, 400, 600, 900, 1,500 and 2,500lb (for B16.5), and 75, 150, 300, 400, 600 and 900lb (for B16.47). It is important to note these pressure classes are not linked directly to a flange’s maximum working pressure. This is determined additionally by the base material it consists of, as required by its final working application and decided by the pipe engineering teams at the start of a given project.

Flange materials can be commonly defined within the ASTM standards. Examples for piping applications in ambient/high

temperature service are ASTM A105 carbon steel. In low temperature applications, materials such as A350 LF2 could be generally used. In other working environments, ones of a corrosive or high(er) pressure nature, a standard such as ASTM A182 (which covers a wide range of ferritic/austenitic materials) could be applied.

Case study #1 – 18" Class 900 flange, 625 clad, fast turn-around, Australasian customer

A leading Western Australian operator had a requirement that was holding up a major project. A solution was needed in the shortest possible time for a gas field that lay in up to 70m of water.

An 18" ANSI B16.5, Class 900, RTJ, ASTM A694 F65 weld neck flange needed to be manufactured to a bespoke drawing, pre-machined out, Inconel 625 clad, finish machined and shipped out with a full certification pack – all within three days. The flange had such project implications, the client flew in from Australia to see first-hand the work in production.

Neil Brown, Alexander Comley's works manager, commented, "Our customer's project deadline was significant enough for them to fly from Australia to witness the manufacturing process here. With the team here we manufactured, had

Inconel 625 clad and dispatched in a few days. I'm proud to say we were able to support a field operator directly at a time they needed it most."

Tubesheet flanges for shell and tube heat exchangers

One of the most common heat exchangers in service within industrial process applications is the shell and tube heat exchanger. They are available in many shapes and sizes, and have been used in industry for over 150 years.

In this exchanger group are various sub design types: fixed, U-tube and floating tubesheet. Variations of all can be denoted as type E, F, G, H, J, K or X. The main applications are where high pressure/temperatures are key considerations. Loosely, general designs consist of an outer shell in which resides a tube bundle (these can be configured as finned, plain, etc), sealed at each end by a tubesheet that isolates the tubes and the outer shell.

Shell and tube heat exchangers have the capability to transfer large amounts of heat at low(er) costs. This, in principle, is down to both design simplicity and effectiveness – a large tube surface for reduced weight, volume of liquid and floor space.

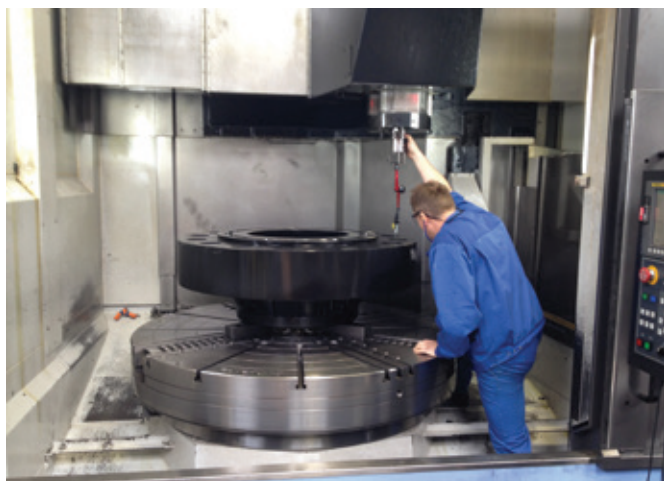
Whilst there is a wide variety to choose from, there are certain key components similar in all tubesheet flanges ('tubesheets'). Tubesheets have tubes attached to them within the body or 'shell' of the heat exchanger. The tubes allow the movement of a given medium (gas/fluid) through the shell chamber, stopping it mixing with a second fluid medium that lies outside these tubes. As long as there is a temperature difference between these, in effect, the two flow past one another exchanging heat without ever mixing. Tubesheets can be fixed or floating, dependent on the application the heat exchanger is designed for.

Tubesheets are a critical component. There are a multitude of materials they can be manufactured from. Material selection is made after careful consideration, as it is in contact with both fluids. It must therefore have the necessary corrosion

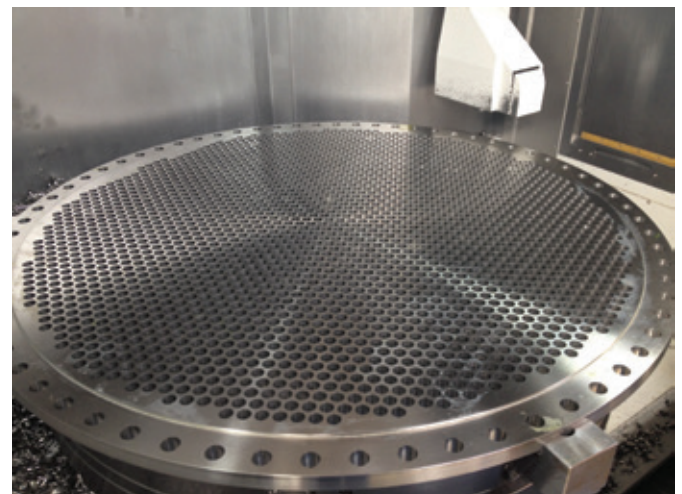


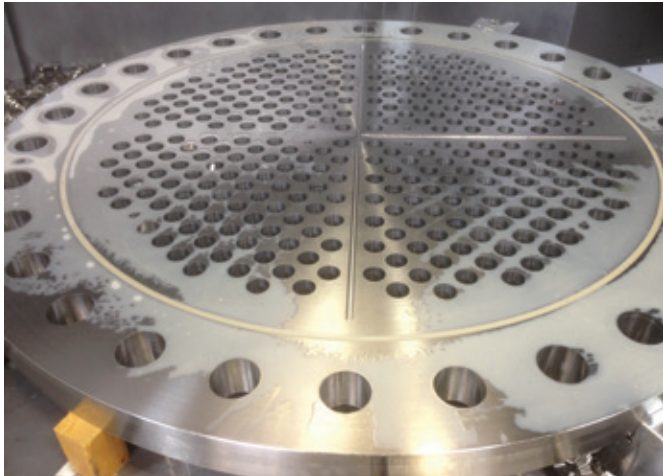
24" 1,500lb RFWN flanges, material F60, readied for client

Large diameter flange, mid-manufacture on the Doosan VTS1620M VMC machine

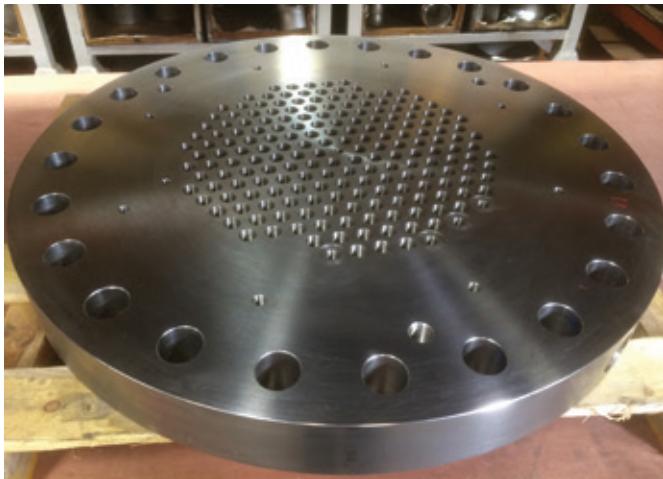


Tubesheet, 1,800mm Ø, 35mm thick, on machine bed, 2,220+ holes





Tubesheet, slotted face configuration, 345+ holes



Tubesheet, varied pitch configuration and diameters, some internally, fully threaded inners, some slight countersunk outer, 225+ holes o/a

resistance, electromechanical and metallurgical properties associated for its given working environment.

The tubesheets themselves have holes drilled into them. These are dependent on very specific design configurations, at very precise locations with critical tolerances. The quantity of holes can range from a few to thousands. These pattern or 'pitch' holes are relative to each other tubesheet within the shell. This pitch changes tube distance, angle and flow direction. These parameters have been varied to maximise the heat transfer effectiveness.

Because these tubesheets are the main, critical, internal flanged component(s) they are manufactured directly to OEM drawings as issued to Alexander Comley Ltd as DX files. In-house Delcam Featurecam CAD reading software means the final product supplied is manufactured to the exacting specifications as designed, released and issued from a given client.

Alexander Comley's experience in this highly specialised area means that whatever the requirement, whatever the timescale, the company has the technical in-house experience and know-how to approach a given task, and to deliver on time and in budget. The company states that this is why it is entrusted to manufacture to key, blue chip clients across the globe.

Case study #2 – a 2,220+ hole tubesheet flange

A process industry end-user had a project for a blue chip customer. The final delivery included complex special flanges within the final assembly.

One of these flanges, when manufactured, had over 2,150 drilled holes at 25.2mm Ø; ten holes at 22.5mm Ø; and 68 holes on the PCD (32mm Ø). The stainless steel was 304/L, of European origin. Production began with a laser cut profile. This profile was then machined back to its final 36mm face and 13mm outer ring thickness, and the pitch configuration was drilled with just over 2,220 holes of differing diameters.

Allan Roper, Alexander Comley Ltd's QA director, commented, "We were delighted to deliver these highly technical flanges on time and in accordance with our customer's drawings. The investment decision taken by the board to manufacture large diameter flanged product has taken the company on from strength to strength. It is a great opportunity to support this project and secure our standing as an end-user manufacturer."

Conclusion

The humble flange, simple or complex, standard or bespoke, large or small, whether in a general piping system or deep within a piece of critical process equipment, is one of the most integral components to be found on- and off-shore, above- and sub-sea. Its flexibility, application diversity and ability to be designed and re-designed as bespoke means projects can be delivered no matter how stringent the design criteria may be.

Alexander Comley has been trading since 1920 and the current board has over 100 years' experience in the market sector. Day after day, year after year the company comes across new, more challenging requirements from old, new, domestic and international customers and their associated projects.

In 2013, £500,000 was invested in a large vertical machining centre with live tooling, enabling the company to manufacture 2,000mm diameter x 1,600mm height. Whilst Alexander Comley is not a design company, the in-house Delcam Featurecam CAD reading software means almost any manufacture can be undertaken directly from DX files, eliminating the risk of human programming error.

This has helped the company secure its place for the next decade onwards as a forward thinking one, striving to be at the forefront of flanged product with all its associated, manufacturing challenges. The investment level has been recognised by customers globally, and has already led to increased business levels from mainland Europe, Australasia, Southern America and Asia, as well as partnerships in countries to develop their national markets, most recently in Ghana.

Alexander Comley Ltd – UK
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