

rotalk-22

Valve Actuation News from Rotork

The best takes a *quarter-turn* for the better

IQT brings intelligent, non-intrusive reliability to direct quarter-turn valve actuation

See page 3 and enclosed leaflet

Plus:

'Fluid System News'



www.rotork.com

Rotork opens new factories in Italy and Malaysia

Actuation News

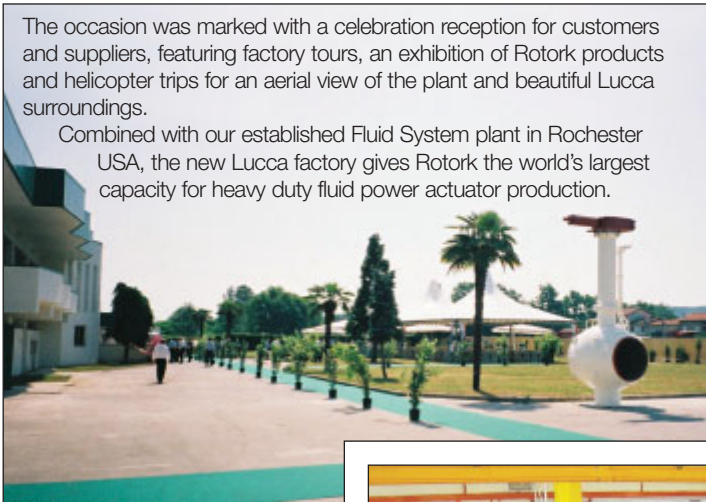
Increased business success and new products have generated the demand for more manufacturing capacity, resulting in the opening of new Rotork factories in Italy and Malaysia.

Fluid System, Italy

Rotork's new Fluid System factory at Lucca – a four fold expansion on the old plant – opened in June.

The occasion was marked with a celebration reception for customers and suppliers, featuring factory tours, an exhibition of Rotork products and helicopter trips for an aerial view of the plant and beautiful Lucca surroundings.

Combined with our established Fluid System plant in Rochester USA, the new Lucca factory gives Rotork the world's largest capacity for heavy duty fluid power actuator production.



Rotork in Malaysia

In April Rotork opened a new factory in Malaysia to meet the demand from world-wide markets for reliable, low cost multi-turn electric valve actuators.

Situated at Shah Alam, close to Kuala Lumpur, the manufacturing plant and offices, which employ mainly locally recruited staff, were officially opened by Bruce Cleghorn, the British High Commissioner in Malaysia, and Dato' Salamon Bin Salamat, the Mayor of Shah Alam.



Above: Rotork's new factory in Malaysia on the official opening day.

Left: Part of the Rotork production line; actuators ready for packing and shipment.

Below: Rotork Operations Director George Malcolm describes actuator test rig operation to Rod Brooks, business advisor in Malaysia, and – on the left – Bruce Cleghorn and Dato' Salamon Bin Salamat.



For a full Fluid System update, see the enclosed 'Fluid System News' special edition.



Cover Story: IQT completes the Rotork intelligent valve actuator family



For a decade, Rotork has led the world in intelligent, non-intrusive electric valve actuation technologies. Now in its second generation, Rotork's market-leading IQ multi-turn actuator delivers unrivalled levels of reliability, user-friendliness and installed cost economies in thousands of installations throughout the world, running on 3-phase, single phase or DC power supplies.

With the launch of the IQT, Rotork brings these proven benefits to the direct actuation of quarter-turn valves requiring up to 2000Nm.

The IQT embodies legendary Rotork features – permanent double-sealing, infra-red 'non-intrusive' commissioning and communication, on-board data logger, rationalised 'system on a chip' technology, comprehensive control and indication flexibility – with specialised direct drive elements designed for compact, efficient and economic quarter-turn valve operation. Now, virtually all the valve types in any plant can benefit from the inherent advantages of direct drive Rotork IQ intelligence. Secure, non-intrusive and intrinsically safe commissioning – with or without mains power connected – is just the beginning. IrDA communication

provides fast, standardised data exchange. Actuator settings can be analysed, reset and even transferred to other units. The data logger stores the operational log in historical order, including a record of valve torque profiles that can be downloaded for predictive valve maintenance. Rotork's dedicated IQ-Insight PC software facilitates all interrogation, analysis and re-programming activities, either in the field by direct connection to a laptop, or using a PDA running IQ Pocket-Insight to upload from the actuator and download later to a PC. IQ technology interfaces seamlessly with all popular digital two-wire

Advanced motor technology

The IQT will operate from 3-phase, single-phase or DC electrical supplies, and will always run in the correct direction irrespective of supply type and connection.

ATEX approved

All IQT actuators incorporate a double-sealed, permanently watertight enclosure conforming to IP68, 7 metres / 72 hours (NEMA 4, 4X and 6). Hazardous area actuators are fully approved to the latest ATEX standards.

Speed control

Rotork's proven quarter-turn motor control technology – now integrated with IQ 'system on a chip' – enables the IQT output speed to be non-intrusively adjusted over a 4:1 range without affecting the torque output.

Drive couplings

The easily removable drive bush facilitates convenient adaptation to virtually any valve stem. IQT base design and drive couplings comply with either ISO 5211 or MSS SP-101.

IQTF (full turn) option

The IQTF extends all the advantages of the IQT to non-thrust applications requiring up to 20 full turns.



remote control systems, offering more benefits with significant installed cost savings. Rotork's dedicated Pakscan system is capable of controlling up to 240 field devices on a single loop, using Rotork's In-Vision SCADA software to provide full monitoring and control

of complex installations by means of highly flexible graphic displays and overviews, running on a standard PC. Alternatively, IQ and IQT actuators offer connectivity with all major open fieldbus systems, including DeviceNet, Profibus and Foundation Fieldbus.

Now – for all valve types – compact, direct drive Rotork intelligent actuation has arrived.

Rotork retrofit project runs like the Eurotunnel timetable (On time and to schedule!)

The contract to automate valves inside the Channel Tunnel presented Rotork Retrofit with an unprecedented list of challenges to overcome, not only relating to the size and physical locations of the valves themselves, but also due to the very restricted timescales available to carry out the work.

The contract involved twenty-four ball valves on a total of 200 kilometres of 400mm chilled water running tunnel cooling pipework installed in the two main tunnels, which removes the huge quantities of heat generated by the trains that pass through and underground plant rooms. Situated at the mid-point and two cross-over points at each end of the tunnels, the valves are used to configure the flow of water through the appropriate tunnel sections to suit prevailing operating conditions.

Originally, all but four of the valves were manually operated, but the steady increase in the number of trains using the tunnel has dictated the need to automate all of them. This will ensure that the tunnel cooling can be efficiently switched between the appropriate loops for maximum efficiency and economy. For this to happen, the valves need to be remotely operated, using the Eurotunnel central control room and SCADA system, saving the time consuming exercise of despatching operators to the diverse locations whenever valves need to be opened or closed at frequencies of up to once a week. Eurotunnel's chosen solution was to equip the valves with a Rotork IQ electric actuator and Pakscan two-wire control package that would link directly into the Modbus protocol of the tunnel's existing PLC data highway. Rotork Retrofit's initial challenge involved the design of suitably compact adaptation to ensure that the actuators would be out of harm's way from passing trains. All the valves are in elevated locations, on the tunnel side, with various valve stem orientations, including inverted. Retrofit designers overcame the constraints of these space restrictions by utilising a combination of Rotork Gears worm and bevel gear operators with IQ20 intelligent electric actuators. The task of installation had to be programmed into a very restricted time frame, allowing the work to be performed only at set times at night on Saturdays and Sundays. In addition, access was only possible by means of Eurotunnel maintenance transport, which would deliver and collect the Retrofit engineers at strict, predetermined times. Therefore, as Rotork Lead

Engineer John White explains: "it was crucial to ensure that all the equipment to do the job was on board; there was no scope to go back and pick up any forgotten parts. It was equally important to ensure that the job was finished by the time we were to be collected in order to keep the project on schedule."

Specialised hydraulic lifting gear was brought in to hoist the actuator/gear operator packages onto the valves, often using the Eurotunnel maintenance train as a lifting platform. In this way, working in close co-operation with Eurotunnel staff and the cabling contractor, it was possible, on average, to complete one actuator installation during each night of working. At each of the three locations, a Rotork Pakscan IIS sequencer master station was installed to link the retrofitted actuators to the main data highway, enabling valve monitoring and control to be performed at the central control room. In addition, a Rotork Touch Screen Interface panel has been installed at each site, providing a back-up facility by which the actuators can be operated locally, using Rotork In-Vision software. In-Vision also has a data logging facility that records every actuator command and action, creating an event-by-event database of historical operating information. This information can be used diagnostically to prepare preventative maintenance schedules and avoid unplanned interruptions.

Peter Bithell, Eurotunnel's M & E Project Manager, has been pleased by the overall performance of all the participants in the retrofit project. He says "Generally the task has gone very smoothly, bearing in mind the enormous amount of organisation, planning and co-operation that was essential for practical and safety reasons. "Meticulous attention to every detail, ensuring that equipment and staff were in the right place at the right time, enabled the entire project to be successfully completed with no unexpected incidents. With the actuators installed we are now able to begin our programme of pre-planning valve configurations, which will further improve economy and efficiency in the future."



Rotork has been associated with Eurotunnel from the time it was first built. Pictured here is one of the 300 Rotork AQ valve actuators installed on the tunnels' fire mains.

Did you know?

The cooling system in the Channel Tunnel has a total heat rejection capability of 50 megawatts, the equivalent of the output from a small power station. This enables the ambient temperature in the tunnel to be maintained at between 25 and 30°C at all times. Eurotunnel's Shuttle railway engines are the most powerful in the world, equipped with 12 or 17 megawatt motors to pull their 3000 ton trains through the tunnel.

Up to twelve passenger and freight Shuttle trains pass through the tunnel each hour, in addition to many Eurostar and freight through-trains en-route to numerous UK and mainland European destinations.

Contract News



Top left: Eurotunnel's Peter Bithell and Rotork's Mike Howard test the operation of the Rotork Pakscan masterstation and Touch Screen Interface situated at the centre point of the tunnel, 70 metres below the English Channel seabed, 19 kilometres from the UK coastline.

Top right: Rotork Retrofit engineers installing the gearbox on one of the vertically installed Channel Tunnel valves.

Above: A completed valve gearbox and IQ20 actuator installation.

Rotork hydraulic actuators specified for Statoil platform development



Rotork Fluid System has won the order for heavy duty hydraulic actuators and control panels on the Statoil Kristin production platform New Development project in the Norwegian North Sea.

The order, awarded within the terms of Statoil's framework agreement, encompasses 74 Rotork LH range linear hydraulic spring return actuators to operate Petrovalves gate valves in sizes from 50mm (2") Class 1500 to 300mm (12") Class 600, and Control Seal rising stem

ball valves in sizes from 50mm (2") Class 300 to 150mm (6") Class 600. Each actuator will be supplied with a Rotork designed local control panel, for direct connection to the platform's hydraulic ring main. The compact and lightweight design of Rotork's linear actuators, some of which are pictured here at the new Fluid System production plant in Italy, made an important contribution to winning this order, which was awarded by Statoil's engineering contractor Aker Kvaerner.

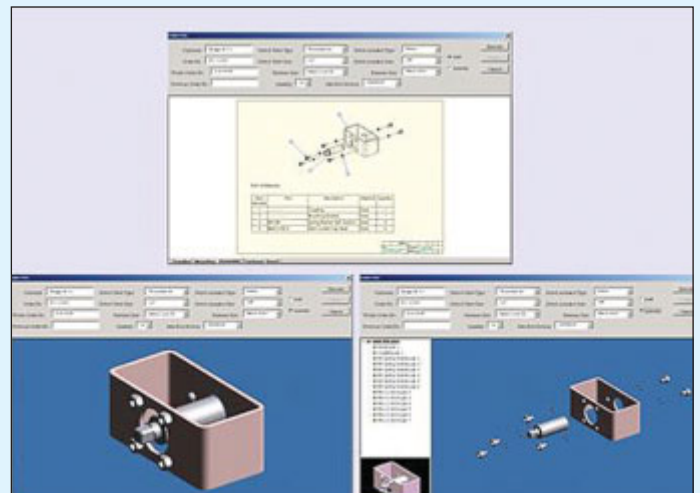
In addition, to comply with the stringent contract specification, each actuator is chemically cleaned and flushed internally after manufacture to safeguard commissioning activities and enhance long-term reliability. Rotork believes that it is the only manufacturer of heavy duty fluid power actuators to have invested in a dedicated in-house chemical cleaning plant to offer these additional safeguards.

QuickKits valve mounting kit service is another first for Rotork Valvekits

Rotork Valvekits is the first specialist valve mounting kit manufacturer to develop and introduce a bespoke CAD software programme to optimise design, production and delivery for virtually all of its range of kits. QuickKits covers all popular ranges of quarter-turn valves, gearboxes, and the principal electric and pneumatic actuator manufacturers. The compilation of over fifteen years of mounting kit expertise, QuickKits encompasses nearly 15,000 design permutations. Manufactured to ISO5211, DIN 3337 or customised dimensions, Rotork Valvekits' mounting kits offer open or closed designs, fabricated or cast in a range of materials and fitted with square,

keyed, hexagonal or 'double-D' couplings. The service is adaptable to volume or one-off orders and can be provided on a next day basis. In addition to optimising selection and speeding delivery, the new software also facilitates the production of engineering drawings and emailable electronic files.

Rotork Valvekits' managing director Martin Hunt enthuses: "Our QuickKits software is an exciting development for this market, offering customers the benefit of fifteen years' unrivalled expertise at the touch of a button. By investing in such innovation we confidently expect that we will continue to provide the most efficient and best value mounting kit service available."



Rotork QuickKits CAD screens, showing the engineering drawing, exploded view and completed item.

Technical support wins Rotork order for synthetic oil plant expansion

Contract News



Rotork has won an order for more than 300 IQ intelligent electric actuators with Profibus connectivity, for installation at a synthetic oil production plant in Sweden.

The order, which includes a large number of ATEX approved flameproof actuators, was awarded to Rotork's agent in Sweden, Alnab Valves Instruments, for a new storage tank farm and associated pipework at the Nynas plant in Nynasham, near Stockholm. The project, known as the 'Nynas Master Plan', also involves linking new and existing valves to a Profibus-based SCADA system designed by Siemens, which is being introduced to operate the site. During negotiations, Rotork and Alnab worked very closely with Nynas, their consultants PIC and Siemens to provide detailed technical support. This included the provision of an IQ actuator fitted

with the Rotork Profibus card that was supplied to Siemens to ensure full operational connectivity with their SCADA system and facilitate commissioning activities. These efforts contributed to the successful award of the order in the face of fierce competition from European actuator manufacturers. Three sizes of Rotork IQ intelligent actuators are being supplied to operate Velan gate valves in sizes from 150mm (6") to 350mm (14"). The valves are being fitted to the actuators and tested at Alnab's Gothenburg factory, whilst Alnab will also provide commissioning, service and support to the end user, delivering a simplified contractual route for the project.

Left to right: Riarmo Lindfors, Nynas procurement manager, Robert Nordin from PIC and Alnab's Rolf Arvidsson with some of the newly installed IQ actuators.

Rotork Gears wins Shell contract with new sub-sea gearboxes



Rotork Gears has successfully completed a fast-track contract to design and supply 22 specialised sub-sea valve gear operators for the Shell Exploration Penguins (Phase 1) project in the North Sea. Designated SSW (Sub Sea Worm), the gear operators will operate a range of ball valves at depths down to 190 metres approximately 150 kilometres from the Shetland Islands. In order to meet the strict demands of the contract, Rotork Gears successfully designed, manufactured and pressure tested all 22 units within a ten-week timescale. SSW gear operators embody specialised design features to

withstand the harsh challenges of the operating environment. These include pressure compensation, high integrity sealing, Super Duplex input shafts and seal housings and high visibility indication, together with direct and remote ROV docking facilities. For more information contact Rotork Gears on 0113 205 7276 or email info@rotorkgears.co.uk.

Valve actuation contract for China's largest gas pipeline project to date

Rotork has been selected to supply valve actuators throughout the largest and most significant gas industry distribution project ever planned in China. The \$25 billion West to East Natural Gas Pipeline will extend for 4000 kilometres, from Lunnan in Xinjiang through nine provinces to Shanghai, carrying gas from the Tarim Basin fields to the Yangtze Delta.

Rotork will supply more than seven hundred IQ range intelligent electric actuators to valvemakers in China, Holland, Italy and the USA. The majority will be fitted with Rotork Gears IW quarter-turn gearboxes for the operation of pipeline ball valves and plug valves. Sixty actuators are special IQM modulating versions for the operation of pressure control valves.

When completed in 2005, the 40inch diameter buried pipeline will have the capacity to carry 12 billion cubic metres of gas a year. To date, 505 billion cubic metres of reserves have been discovered at Tarim, enough to maintain a steady supply for an estimated 30 years.

The pipeline is designed with thirty-five process stations and 138 block stations, facilitating the development of municipal and branch pipeline networks in the future.

The orders for the West to East Natural Gas Pipeline – awarded to Rotork's Beijing Company – extend the company's success with oil and gas industry distribution projects in China. In 2001 Rotork was awarded the valve actuation contract for the Lan-Chen-Yu pipeline, which is the largest oil production pipeline in China, whilst in the 1990's Rotork was awarded 90% of all valve actuation orders in China for major natural gas pipeline and network renewal projects.

Skilmatic actuators provide solution to 'dry bedding' at water treatment plants

"Rotork Exeeco provided an excellent technical and economical solution that addressed all our concerns, we were delighted with the support we received throughout the contract..."

Carl Tetlow, United Utilities Project Manager.

When Rotork Gears company Exeeco were asked by United Utilities to solve a 'dry bedding' sand filter problem at water treatment works serving the north west of England, they were able to submit an ideal solution using Rotork Skilmatic actuators.

The problem was recognised after several power failures had led to 'dry bedding' in filter beds, caused by delayed closing of outlet valves, jeopardising the quality of the water reaching the reservoirs. It was decided that the process needed to detect a power failure in order to put the treatment plant inlet and outlet valves on 'standby' until the back-up generators cut in.

On some of the pumping stations an uninterrupted power supply (UPS) was the obvious solution, but

this was deemed to be too costly and require too much maintenance to be seen as the universal solution. However, these drawbacks could be overcome using Rotork Skilmatic failsafe electric actuators.

The Skilmatic actuator is a totally self-contained failsafe electro-hydraulic design capable of continuous modulation duty and failsafe action on loss of signal or power supply.

On power failure the Skilmatic actuator is programmed to automatically go into standby mode for a predetermined time, after which, if the back-up generator has not started, it prevents the filter from running dry by closing the outlet valve by means of its integral spring return mechanism. This successful solution saves the expense of



Carl Tetlow and Ian Elliott with the Skilmatic SHQ416 quarter-turn actuator installed at Watergrove WTW in Manchester.

installing separate pneumatic systems or back-up batteries. Carl Tetlow, United Utilities Project Engineer explained: "We approached Rotork Exeeco as our actuation specialists to design a specific solution for this problem. Their specialist knowledge of actuators and applications provided us with an excellent technical and economical solution that addressed all our concerns. We were delighted with the support we received throughout the contract

and would have no hesitation in considering this product to extend the scope to other treatment plants in the North West."

Rotork Exeeco Sales Director Ian Elliott adds: "We were pleased with our solution to this project as it has avoided the customer incurring the large expense of installing UPS or battery back-up systems, which were the customary failsafe systems until we devised our simple but effective alternative."



Skilmatic ATEX actuators for LPG plant

Pictured at the UK premises of the Weir Valve Group in Huddersfield, these Rotork Skilmatic SL413 linear actuators are being supplied to an LPG (liquid petroleum gas) plant at Vizag on the east coast of India. Fourteen of the ATEX certified failsafe actuators were ordered to operate globe valves on new plant being built by Engineers India Ltd of New Delhi.

Designed for modulating or two position valve duties, Skilmatic SL413 flameproof actuators combine the benefits and economies of electrical operation and control with failsafe security within Zone 1 hazardous areas.

Severn Trent Water treatment upgrade demonstrates Rotork Retrofit options

“Our ability to refurbish existing actuators as well as supplying new illustrates how a flexible approach can save money without compromising quality or reliability.”

New and refurbished Rotork electric valve actuators are being used throughout a major upgrade project at one of Severn Trent Water’s largest water treatment works.

Opened originally in the early 1900’s, Bamford WTW takes water from the Derwent, Howden and Ladybower reservoirs in the Peak District to supply Derbyshire, Leicestershire and Nottinghamshire at a rate of up to 197 megalitres/day.

The £5 million project for treatment modifications, undertaken by Norwest Holst Construction Ltd, involves the refurbishment of inlet works, rapid gravity filters and lime plant, together with the installation of new washwater recovery plant, instrumentation and analysers. As an integral part of this work, Rotork’s specialist Retrofit department has installed new IQ electric actuators on existing valves and refurbished sixty existing Rotork actuators on the site, as well as providing a commissioning service on the new Rotork AQ actuators that were supplied on new Saint Gobain valves.

Rotork Retrofit Site Services Manager Mike Dale explains: “Our ability to refurbish our customers’ existing actuators as well as supplying new illustrates how a

flexible approach can save money without compromising quality or reliability. Refurbished actuators are brought up to as new condition and usually carry the same warranties as new equipment.”

A significant area of Rotork activity involves the refurbishment of 28 rapid gravity filters, including 16 that are the first in the UK to be equipped with LP block filtration systems, supplied by Tetra. New actuators on filter inlet and outlet penstocks, together with backwash, diverter and air scour valves, linked to a new Boulting Group supervisory PLC system, will increase the automatic backwashing cycle from 24 to 36 hours, improving filter utilisation and reducing the amount of washwater required. Rotork actuators are also installed on new lamella separator plant that will filter the washwater before it is returned to the treatment works. This in turn will reduce the loading on the rapid gravity filter beds, further improving utilisation and efficiency.

Rotork Retrofit was awarded the valve actuation contract at Bamford under the terms of the framework agreement with Severn Trent Water. Rotork’s framework is now in its second period of agreement, following the expiry of the original five year agreement.

Rotork actuator improves flood protection for Constable’s landscape



Dedham Lock and Mill, the subject of the masterly John Constable oil painting, has seen relatively few changes in the 180 years that have passed since the celebrated British landscape artist was inspired to capture it on canvas.

Now, the integrity of this much admired Suffolk scenery is being further protected by its inclusion in an advanced river level management automation project

undertaken by the UK Environment Agency in the Anglian region. The project – initiated in the late 1990’s – is improving flood protection throughout Norfolk, Suffolk and



Norwest Holst M & E Supervisor Kevin Roddenby inspects a Rotork IQ actuator installed on a Bamford filter inlet penstock and (right) downloads operating data from IQ and AQ actuators installed on backwash and air scour valves.



Rotork in Control

Essex by automating manually operated sluice gates in rivers and bypass channels and linking them by telemetry to centralised control rooms.

Automation involves equipping the sites with Rotork electric actuators that operate automatically in response to control signals from upstream level sensors. At some of the most remote sites there is no mains electricity supply available to power the automation plant. At these locations the problem is overcome by the installation of Rotork actuators with d.c. motors, operated and controlled by innovative battery-powered packages that are kept charged by wind generators and/or solar panels. Situated on the River Stour between Colchester and Ipswich, the sluice at Dedham Mill is the latest site to be modernised, using a Rotork IQ range intelligent actuator connected to a Millronics ultrasonic level sensor and controller. According to Environment Agency

M & E Flood Defence Engineer Ivan Nicholls: "The Rotork actuators are introducing the ability to raise or lower the sluice gates in small stages at frequent intervals, reacting with accuracy to changing river conditions. Previously, manual operation offered only a crude and infrequent adjustment – usually fully opening or closing the gates – which doesn't necessarily suit prevailing or subsequent river conditions. Automation is improving our ability to prevent flooding and also enables us to monitor overall river conditions throughout the area at the Environment Agency's centralised telemetry control rooms."



One of the completed Rotork IQ actuated sluices at Dedham Mill.

Rotork pleases Corus with gas plant ATEX valve upgrade performance

Rotork's performance throughout a challenging valve actuation retrofit project on the Gas Booster Station at the giant Corus Scunthorpe Steel Works has been praised by the project manager.

The Rotork Retrofit contract involved changing twelve large electric actuators on 36 inch and 48 inch gate valves and installing a new actuator on a previously hand operated Emergency Shut Down (ESD) valve. The work was required following the reclassification of the Gas Booster plant as a Zone 2 hazardous area by Corus's own ATEX team under the directives of the latest legislation.

The plant makes Mixed Enhanced Gas (MEG) by boosting and mixing coke oven gas with blast furnace and natural gases at a rate of up to 30,000 cu.metres/hour, providing an economical main energy source for the weekly production of over 70,000 tons of steel sections, plate and rod at Scunthorpe. Since the operation of the entire steelworks is dependent upon the Gas Booster plant, it was essential to complete all the on-site retrofit activities within a very restricted window of pre-determined outages over a two-week period.

Within this span of time, the normally open valves had to be closed, old actuators removed and new ATEX certified Rotork IQ electric actuators fitted, wired up, commissioned and linked to a new

centralised control room situated outside of the ATEX classified area. At the same time, the manually operated ESD valve was partly dismantled and fitted with Rotork designed adaptation assembly and a new IQ actuator.

George Mounsey, a Senior Project Engineer in the Corus Northern Engineering Services Projects & Technology Department in charge of the project takes up the story: "The importance of this project demanded good planning, careful management, close co-operation and attention to detail. Teams from Corus and Rotork worked together as a joint venture, Corus arranging outages, facilitating access, providing craning and supporting Rotork's activities around the valves, all of which are in elevated installations.

"Rotork ensured that the new actuators were expedited specifically to meet the Corus timescale and delivered punctually to their field engineers. The programme worked particularly well; we are pleased with the way that Rotork worked with us at every stage of the contract to meet the extremely restricted installation and commissioning period. "As a result, the booster station was returned to operation on time, with the stations main control valves in a fully compliant ATEX Zone 2 area condition, without any disruption to the operation of the steelworks."



Corus's George Mounsey with the ATEX certified Rotork IQ actuators installed on a 48" gate valve (above) and the Emergency Shut Down (ESD) valve (right) at the Scunthorpe gas booster plant.



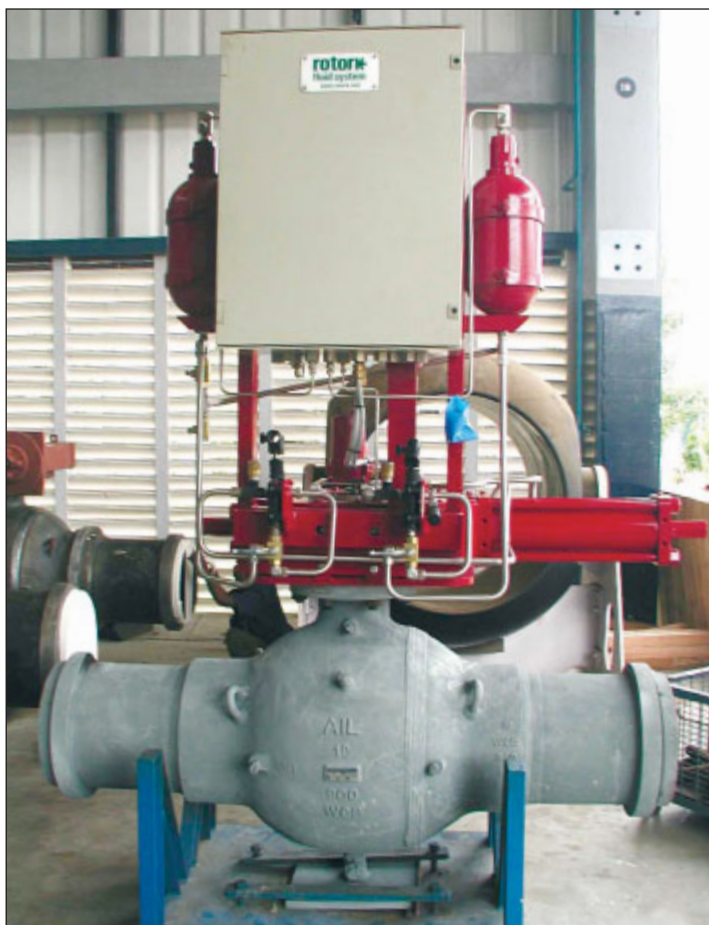
"The programme worked particularly well; we are pleased with the way that Rotork worked with us at every stage of the contract...." – George Mounsey, Corus project manager.

Fluid System's gas over oil design wins pipeline actuation orders in India...

Rotork Fluid System's new gas-over-oil GO range actuators are being supplied for natural gas pipeline network extension project in India.

Fifteen actuators in three sizes have been ordered by valvemaker Audco India Ltd at Chennai for the operation of 24", 12" and 8" Class 600 trunnion mounted ball valves. The valves will be installed on a new 64km section of pipeline running from Paguthan to Baroda, with a short branch line from Sherki towards Godra, in Gujarat State, north west India. Ambient temperatures in the area regularly

get as high as 45°C, which, combined with high levels of humidity, creates a challenging environment for the actuators and their control equipment. This is overcome by the careful selection of materials and finishes combined with rigorous attention to environmental sealing. The gas pipeline, constructed for Gujarat State Petronet Ltd by Larsen & Toubro Ltd, is scheduled for completion this year and will be followed by another section, running approximately 130kms between Baroda, Kalol and Ahmedabad.



...and the Middle East

Thirty-two GO actuators are also being supplied to Cooper Cameron for a large gas pipeline project in the Middle East to operate mostly 56" pipeline ball valves, pressure rated at ANSI Class 600.

Line Break ability

These GO actuators are equipped with Line Break control abilities, which constantly monitor the pipeline pressure and trigger the actuator to shut the valve in the event of an unexplained pressure drop, averting the risk of uncontrolled gas leaks.



Rotork expands valve actuation services for Gulf Coast customers

Rotork has introduced a significant expansion of its market leading valve actuation activities at Houston for the benefit of customers in Texas, Louisiana, Oklahoma, Arkansas and Mississippi.

The key to the service expansion was the opening in December 2002 of a new Rotork sales, service and workshop facility in Houston, where an increased number of staff are available to take care of every aspect of customer service, from quotation through delivery to after sales and warranty activity. The new premises incorporate offices, engineering and training facilities and a large, fully equipped workshop, supported by a strategic inventory of electric and fluid power actuators for fast deliveries. Workshop activities include valve adaptation, actuator mounting, actuator packaging and testing.

The entire facility has been designed to enhance Rotork's direct sales services to local valvemakers and OEMs and to deliver a proactive specification writing and products approval service for Gulf Coast based engineers, contractors and end users.



Rotork's new Houston contact details are:
Rotork Controls Inc.
 9777 West Gulf Bank, Suite 15A
 Houston, Texas 77040.
 Tel: 713-856-5640

Houston venue for Latin American Training Seminar



In April 2003 the new Houston facility was the venue for a combined Rotork Latin American training seminar, attended by seventeen delegates from Mexico, Brazil, Colombia, Ecuador, Peru, Chile, Argentina and Trinidad. The five day programme, which included seminars on Skilmatic

and Jordan products, was universally praised as a total success and a motivational boost for all involved parties. The seminar also further reinforces the strategy that had been agreed earlier in the year to combine the strengths of Rotork and Jordan in the Latin American marketplace.

High temperature, low maintenance solution for power plant upgrade



The Jordan SM-6000 actuator pictured here has provided the successful solution to an arduous, high temperature gas recirculation damper application at a Wisconsin power plant.

The upgrade was necessary to replace an old Jordan unit that had been operating in the dust laden environment at temperatures up to 85°C (185°F) for over fifteen years. The challenging environment necessitated the swiftest possible change-out, minimising the risk of exposure to contamination during installation and commissioning. This was economically facilitated by the new actuator's compatibility with the existing mounting pad and the convenience of push-button

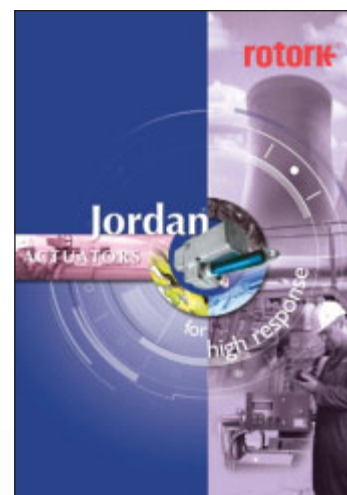
activated commissioning.

The SM-6000 offers a number of features that deliver improved performance for this type of application. Firstly, it has an unrestricted modulating duty rating, so can be continuously positioned to aid boiler combustion and reduce emissions. It also features an easily programmed digital amplifier within its watertight enclosure, providing swift access to status and diagnostic information on a fluorescent display. The actuator's oil filled gearbox provides reliable, maintenance free operation at temperatures up to 225°F, assuring the longest possible working life with the minimum risk of costly repairs or unscheduled maintenance.

New Jordan brochure

To find out about the complete Jordan product range, contact your nearest Rotork/Jordan office for a copy of the new Jordan brochure (publication number GOO5E) or download it from the updated and revitalised Rotork website: www.rotork.com

Actuation News



ATEX approval for 1000 Series

The popular Jordan 1000 Series actuator, designed to meet the exacting requirements of closed-loop modulating positioning control, has now received full ATEX approval for hazardous area applications.

Available in either rotary or linear versions, 1000 Series actuators utilise DC brushless stepper motor and digital amplifier technologies to achieve highly accurate positioning and unrestricted modulating duty. Applications include control valves,

metering pumps, regulators, pilot valves, small quarter turn valves, dampers and other low-to-medium torque/thrust applications.

The recently introduced, internally mounted digital amplifier makes the 1000 Series even easier to set up and adjust. Technically advanced electronics are simply programmed by pressing one of the five on-board buttons and turning the adjustment knob until the desired position or effect is reached.

Rotork chosen for ARAMCO's first Foundation Fieldbus electric valve actuator project

Rotork IQ intelligent electric valve actuators with Foundation Fieldbus (FF) connectivity are being installed at the first ARAMCO site in Saudi Arabia to utilise the FF protocol for electric actuators. Approximately 40 IQ actuators are being installed on new valves at Abqaiq, an important part of the ARAMCO Master Gas System, during the enlargement of gas compression and water treatment plant.

The order follows closely on the re-enforcement of Rotork's Foundation Fieldbus registered approval through successful testing to the latest ITC4 standard, which ensures that hardware from different manufacturers will co-exist on the same FF network without causing any operational problems.

The order also follows Rotork's approved listing for connection to the Delta V automation system, a key part of the PlantWeb architecture that is predominant with Foundation Fieldbus applications, which has been specified for the ARAMCO Abqaiq project.

continued on back cover

ARAMCO*continued from page 11*

Both approvals contributed to Rotork's selection during discussions with ARAMCO's engineering designer ABB Lummus and contractor Technip, who wrote the specification. To meet the specific requirements of this contract, Rotork engineered a special wiring diagram for the actuators, enabling control from local panels to override the Fieldbus loop when requested. A Rotork IQ actuator with the specially modified Foundation Fieldbus card was supplied to Delta V manufacturer Emerson for evaluation and approval of this feature.

Strengthened Saudi service

Local after sales support for these actuators will benefit from the appointment of **Dan Benson** to strengthen our agent's team of Rotork specialists. Dan, who originally joined Rotork as an apprentice, spent two years in the international sales department at Bath head office before joining Al-Hugayet Trading Establishment in Damman earlier this year.

Single-source valve actuator contracts for Arabian Gulf gas plant

Rotork's single source actuation abilities have been recognised with the award of a major contract for Fluid System and IQ electric actuators for a new on-shore gas plant at Assaluyeh on the Arabian Gulf.

More than 1000 Rotork pneumatic actuators and 250 electric actuators are being ordered by valvemakers for butane and propane production and storage facilities, sulphur

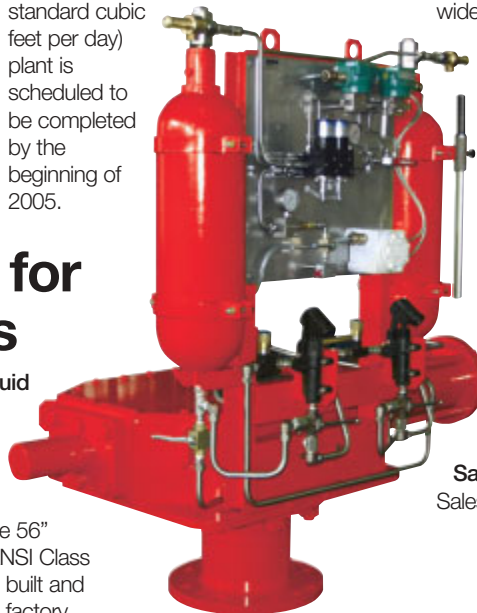
recovery plant and other utilities being built by Hyundai Engineering & Construction and Snamprogetti.

The huge 2000MMscfd (million standard cubic feet per day) plant is scheduled to be completed by the beginning of 2005.

Pipeline order for HPG actuators

For an associated project, Rotork Fluid System has won the order for HPG (High Performance Gas) actuators to operate giant pipeline ball valves.

Ten double-acting actuators will operate 56" pipeline ball valves, pressure rated at ANSI Class 600 and 900. The actuators are being built and packaged at Fluid System's new Italian factory.



Contract News

Fluid System sales appointments

To service the increased world-wide demand for Fluid

System actuators, **Nigel Willis** has been appointed International Sales Manager. Nigel has more than twelve years experience of the international fluid power actuation market, much of it gained in the Middle East.

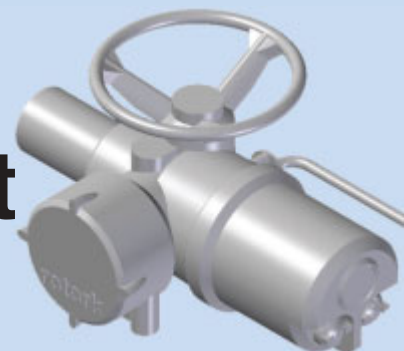
At the Lucca sales office **Vittorio Steffani** has been appointed Italian Sales Manager and **Sandro Necchi** is the new Sales Office Manager.

Plant designers – will it fit? Now you can easily find out

Rotork electric actuators are amongst the most compact available, even so there are still times when restricted space around valves can create potential problems. So how can you be certain that the actuators in your plant will fit in the space available? Also, how can you ensure the best configurations for ease of wiring, commissioning, interrogation, handwheel operation and maintenance?

The easiest way is to use Rotork's new 3D Solid Models software, which gives you a completely accurate three-dimensional representation of every IQ, IQT and Q range actuators' external shape, that can be quickly scaled, manipulated and added to your existing CAD drawings. Each actuator variation has been individually modelled to avoid having to cut and paste components together. Using 3D Solid Models you will swiftly identify any unexpected obstructions or potential interferences, whilst you can also alter actuator configurations to achieve maximum user friendliness during installation and operation.

3D Solid Models is available in all the popular CAD formats – Parasolid, ACIS, IGES, STEP, and Stereolithography. You can download your preferred formats from the '3D Solid Models' page on the Rotork website, or obtain a CD ROM with all formats from your Rotork office or representative.



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