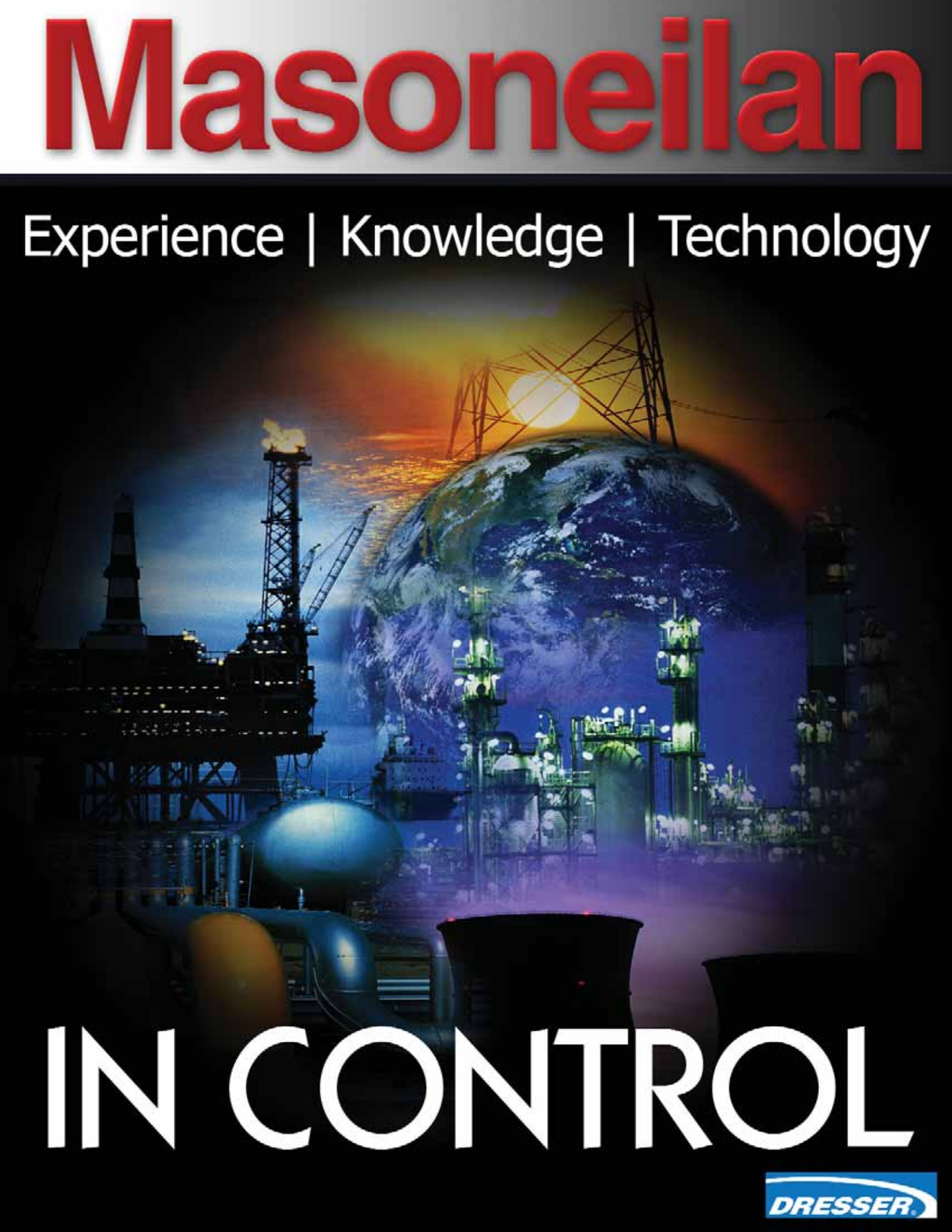
Masoneilan

Experience | Knowledge | Technology



IN CONTROL

DRESSER

Solving The Problem.

Control Solutions for the Process Industry

Masoneilan®, with 25 manufacturing units worldwide, supported by an integrated network of sales offices, provides the widest range of valve solutions and services for virtually every process control application.

Masoneilan was founded by William Mason in 1882. The company, then known as Mason Regulator Company, quickly established itself as an innovator in the regulation of steam, gas, air, and liquids. Some of the products that Mason patented in the early years are still being produced today. In 1931, Mason acquired the Neilan Company. Mason's pioneering spirit became an integral part of the new company, and it wasn't long before Masoneilan Regulator was setting technological standards for the rest of the industry to follow.

Technical Leadership

Masoneilan offers over 120 years of innovation and technology leadership to solve the most difficult process applications without compromise.

Innovative Solutions

Masoneilan continues to develop innovative valve and actuator product technology offering customized best fit solutions for the most demanding applications. Masoneilan has also set the standard with best in class HART® and FOUNDATION® fieldbus instrumentation and supporting software. Like no other competing product, Masoneilan's suite of digital valve positioners and software offer:

- Extreme accuracy and precise control
- Universal mounting - one model fits all
- Scalable hardware and firmware platforms
- Diagnostics for predictive maintenance

Masoneilan Firsts...

1882	1890's	1920's	1940's	1950's
Steam Pump Governor	Steam Reducing Valve	Industrial Control Instruments	Concept of C_V Coefficient	Quick-Change Trim 20000 / 21000 Series

Satisfying The Need.

Breadth of Offering

Masoneilan offers a broad portfolio of products including general and severe service control valves, actuators, pressure regulators, and field instrumentation. This breadth of offering allows Masoneilan to serve its customers as a single source global supplier. Furthermore, Masoneilan offers Dresser Total Valve Management (TVM), which combines the products and services of Masoneilan with product offerings from other Dresser entities. The result is a Dresser managed program that provides a total valve and controls package including: control valves and instrumentation, safety/safety relief valves, on/off valves, and actuation.

Solution Integration

Masoneilan is partnering with Honeywell, Yokogawa and others to offer total process management solutions, that are flexible and best fit to end users' specific needs.

Through a joint marketing program, Masoneilan and Honeywell offer integrated process solutions through bundling of highest value products and services. Central to this partnership is the ability to provide total plant-wide process automation solutions to manage information resulting in improved plant safety, productivity, and profitability.

Masoneilan and Yokogawa, through a joint technology agreement, design, and deliver best in class digital field devices. These devices offer truly open, interoperable control architecture providing for flexible and seamless connectivity to virtually any distributed control system.

Aftermarket Support

To provide comprehensive local support, Masoneilan has established a global network of fully authorized repair and service centers (MARC®s - Masoneilan Authorized Repair Centers). Masoneilan and its MARCs are driven by a "Customer for Life" philosophy, which comes to life through a comprehensive suite of aftermarket services: OEM Rapid Parts℠, on-site diagnostics, service, and repair.

Best In Class

Open design architecture, greatest breadth of valving products and services with best in class control performance set Masoneilan apart from all other control valve manufacturers.

Over 120 Years of Innovation..!

1960's	1970's	1980's	1990's	2000's	2004
Eccentric Plug Camflex®	Low Noise Valves Lo-dB® Trim	Axial Flow Liquid Letdown LincolnLog®	Extreme Precision Digital Positioner SVI®	FOUNDATION® Fieldbus Positioner Masoneilan FVP®	Differential Velocity Device

PLANT DESIGN ENGINEERING

- Resident Engineer
- ValSpeQ® Sizing & Specification Software
- Factory Technical Support

PROCUREMENT

- Product Design Engineering
- Factory Project Management
- Product Acceptability Testing

START-UP & COMMISSIONING

- Set-up, Calibration, & Commissioning
- Start-up Assistance
- Configuration Services

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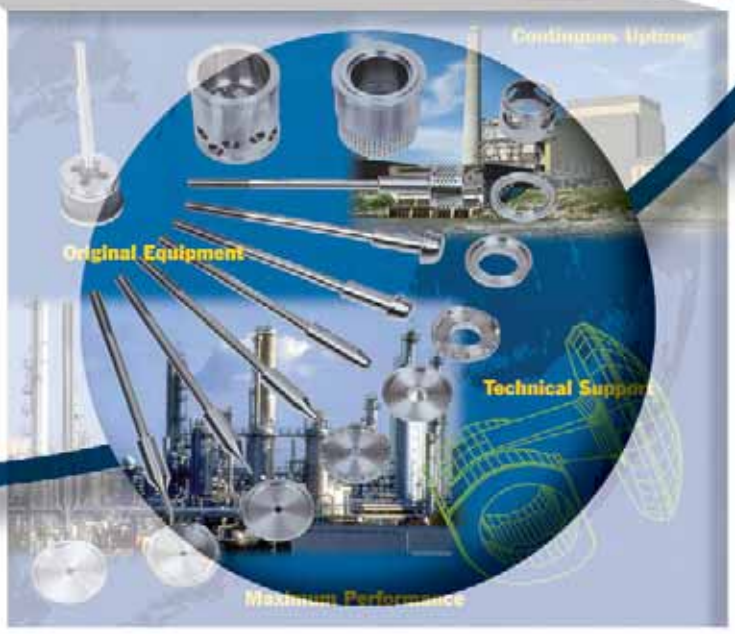
DIAGNOSTICS & ASSET MANAGEMENT

- In-line Testing & Troubleshooting
- Preventive / Predictive Maintenance Tools
- Asset Data Management Software

MAINTENANCE

- Factory Certified Repair
- On-site Service; Turnaround Management
- Valve Technician Training



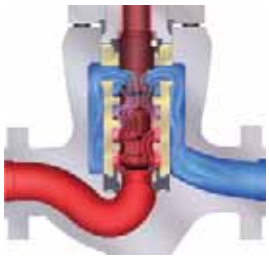
OPERATIONS

- OEM Parts, Upgrades & Retrofits
- Control Performance Optimization
- On Site Inventory Planning

Enhancing Revenue

	SVI®	SteamForm®	ValScope®
Technology	 **Smart Valve Interface** HART® based positioner packaged with numerous custom features provides extreme positioning accuracy.	 **SteamForm** patented steam conditioning technology meeting the most demanding steam temperature and pressure reduction needs.	 **ValScope** portable, microprocessor based data acquisition, and diagnostic system.
Expertise	Low voltage electronics. Non-contacting position sensing. PID process control. Control valve diagnostics.	Fluid flow dynamics: patented flow profiling technology. Design and application of drilled-hole pressure reduction technology. Steam conditioning system design, application, and installation.	Control valve dynamic performance. Performance data analysis and interpretation. Intimate OEM knowledge of the effects of design, wear, and environmental effects on valve performance.
Results	Greater process yield and improved product quality from extremely accurate control. Reduced process variability via auto-tune and custom characterization features. Preventive / predictive diagnostics ensuring maximum asset availability.	Tight shutoff performance ensures maximum availability of steam energy. Patented nozzle design provides best-in-class temperature control over a wide range of service conditions. Improved temperature measurement and control accuracy afforded by close proximity of sensor.	Improved end product quality and process yield due to control loop optimization. Real time diagnostics allows for performance adjustments on the fly. Maximize uptime as diagnostics are performed without removing valves from operation.

Reducing Cost

	Camflex®	LincolnLog®	ValVue®
Technology	 **Camflex** the industry's first and leading rotary globe control valve, offering best-in-class price and performance.	 **LincolnLog** the unmatched anti-cavitation solution for high pressure liquid letdown.	 **ValVue** the most powerful and versatile full function device management software for digital instrumentation.
Expertise	35+ years of design optimization and application experience. Shaft-seal integrity. Trim materials engineering. Noise abatement technology.	Cavitation prediction and damage prevention know-how. Axial flow trim staging. Protected seat design for dirty fluid service. Severe service application knowledge.	Control valve performance through design and configuration. Control valve dynamic performance and diagnostics. Intimate knowledge of positioner performance integrity.
Results	Most economically priced high tier throttling control valve. Simple and very reliable design affords very low life cycle cost. Lower maintenance costs with standard low emissions packing. Among the lowest cost per noise attenuation ratios in the industry.	Simple, robust design yields lowest maintenance costs of all high pressure liquid letdown valves. Extended life of all trim parts due to effective pressure staging. Long trouble-free service due to protected seat geometry and debris tolerant design. Product application knowledge yields best fit, cost optimized solution.	Quick and reliable product set-up with auto-calibration and tuning. Maintenance cost savings via remote access and predictive algorithms. Minimizing down time through alarm monitoring and comprehensive asset management tools.

Minimizing Risk

	ValvKeep®	V-Log®	FVP®
Technology	 **ValvKeep** maintenance data management software with associated radio frequency identification (RFID) imaging system.	 V-Log energy management trim for high mass flow, and high pressure drop compressible fluid applications.	 FVP FOUNDATION fieldbus valve positioner with robust on-board process control functionality.
Expertise	Decades of valve maintenance experience. RFID TAG Technology. Product quality assessment & diagnosis skill. Custom engineering and application knowledge.	Physics-based fluid modeling. Brazed laser-cut stacked plate manufacturing techniques. Noise prediction methodology. Fast stroke actuation packages.	Current to pressure converter technology. Frictionless position sensing. PID process control. Control valve dynamic performance and diagnostics.
Results	Uptime optimization through proactive predictive maintenance. Reduced risk of unnecessary or inappropriate repair through knowledge of maintenance history. Repair data history and trending allows for improved availability of required spares.	Reliable protection of critical equipment such as compressors, steam turbines, and reactors. Trim configuration and materials technology guarantee reliable trouble-free valve operation. Solution reliability ensured through best fit, customized applied technology.	Flexibility through interoperability with multiple host systems ensures quick and reliable commissioning. Integral process controller reduces control loop complexity, improving process efficiency. Robust, stable, and highly vibration resistant design provides improved reliability.

BENEFITS

Technology

Expertise

Results

CUTTING-EDGE SOLUTIONS ...

Application

Combined Cycle

Boiler Feedwater valve in a "peak shaving" Combined Cycle power plant. Service characterized by high pressure drop, cavitating start-up conditions, and high flow normal operating conditions. Operating cycle repeats once per day.

Ethylene Cracking

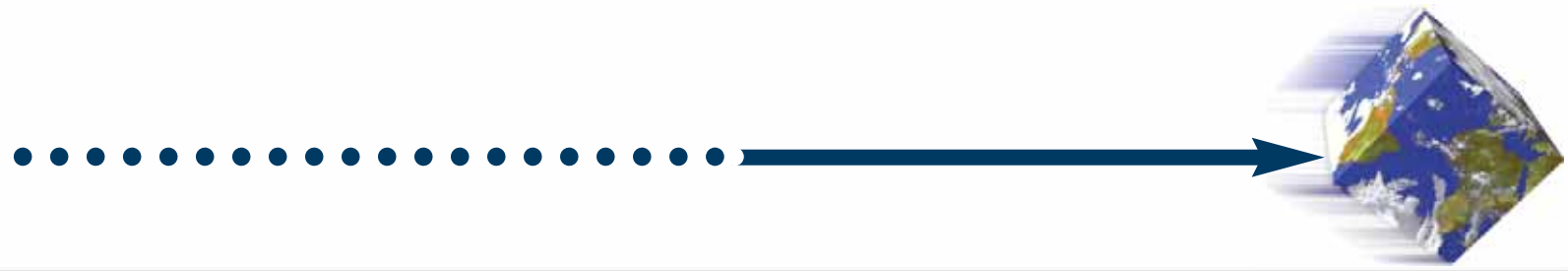
Fuel gas valves to furnaces in a petrochemical plant ethylene cracking unit. Hydrocarbon feedstock is thermally cracked at high temperatures. Complexity of cracking process dictates tight control for optimal yield.

Geothermal Brine

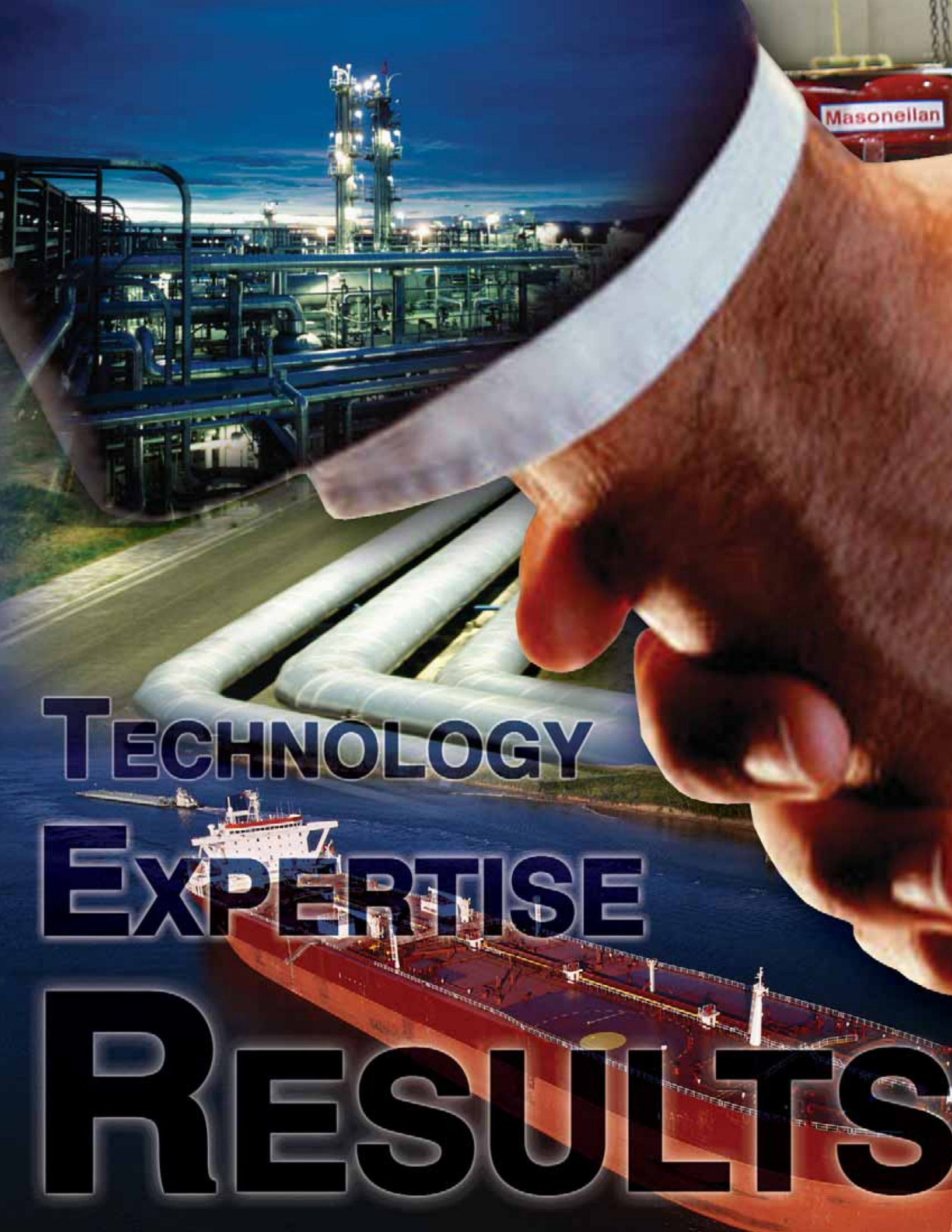
Flow, pressure, and level control on geothermal production well separators handling brine. The geothermal brine is comprised of 300,000 PPM suspended solids including chlorides, H_2S, sulphur, and various other minerals.

Offshore Oil Production

Offshore oil production facilities including over 50 wells, flow lines, risers, and two floating production, storage, and offloading vessels (FPSOs). Each FPSO produces 150,000 barrels per day and has a 2 million barrel storage capacity.



Challenge	Solution	Benefit
Provide a single valve solution for a typical two valve application. In satisfying start-up and normal operating conditions the valve must achieve a turndown of 500:1, where only 100:1 is normal in high pressure liquid letdown.	A single valve eliminating the difficult task of split ranging two valves with smooth, accurate control. A custom solution utilizing L-Log stack trim at low lift, drilled holes at higher lift, and a uniquely designed piston seal.	Cost savings resulted from reduced piping system complexity and elimination of one valve. Simplification of the control scheme improved throttling performance. Reliable and durable tight shutoff significantly reduced trim wear and associated maintenance costs.
Budget constraints preclude major investment. Loop performance must be optimized through instrumentation retrofit only. Fifteen year old valving and 25 new valve positioners must yield desired results.	SVI II digital valve positioners custom characterized using ValVue software. Positioners mount cleanly on all existing installed valves. Optimal tuning and custom characterization is achieved with SVI II and ValVue.	Significant improvement in temperature control performance with deviation to set point being reduced by more than 50%. Outstanding annual fuel cost savings and dramatic furnace availability improvement.
Geothermal brine is a highly erosive and corrosive two-phase flow. Solids build-up on valve internal trim parts is problematic. The application is so severe it is referred to as the “valve graveyard”.	Camflex -”geothermal version” proved its mettle in this very difficult application. Camflex valves with trim and body internals overlayed in stellite and trim parts modified to a geothermal slurry trim design with lubricated bushings.	With significantly less downtime and lower maintenance costs, the geothermal Camflex yields a far superior life cycle cost over a much longer useful life. The added benefit of superior control performance accentuates the economic payback.
The largest offshore valve and actuator contract ever to be awarded to a single valve company. Numerous design modifications affecting valve sizing and materials complicate the final engineering phase of the project.	Dresser Flow Solutions’ TVM approach, bundling Masoneilan control valves, Grove ball valves, Ledeen actuators, and Consolidated safety and safety relief valves. Dresser deploys an experienced team of technical and project management personnel at job site.	Savings in engineering, procurement, and commissioning result from an efficient bundling of product and services. Best in class products offer the highest level of reliability and process control performance.


Masonellan
TECHNOLOGY
EXPERTISE
RESULTS


Masoneilan
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FLEXIBLE
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