

Intelligent Pumping and Fluid Management Solutions For the Steel Industry



Armstrong **Industrial**

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Powering Industry with Performance and Purpose



Armstrong **Industrial** is a division of Armstrong Fluid Technology, leveraging over 90 years of global experience in a wide range of sustainable gas and hydraulic fluid applications.

Through our RMI Pressure Systems brand, we have an enviable reputation as a global leader for high-pressure and high volume fluid pumping systems for industrial and longwall mining markets.

Now rebranded as part of Armstrong Fluid Technology's Industrial division, Armstrong **Industrial**, our purpose is to protect the planet by reducing greenhouse gas emissions from buildings and industrial plants, through an extended portfolio of innovative fluid management products and technologies, that deliver measured efficiency, proven reliability and advanced performance.

Our research and design engineering expertise are honed for the diverse and extreme environments our products are exposed to. All of our equipment is put through extensive testing in-house before shipping, ensuring rapid installation, commissioning and optimal performance.

We aspire to deliver superior environmental performance standards – propelling us towards a greener, safer and more sustainable world for all.

Pumps: A Hidden Driver of Sustainability in Steel Manufacturing



The global steel industry is undergoing a profound shift as sustainability moves to the centre of its strategy. Traditionally one of the most carbon-intensive manufacturing sectors, steel production is now under increasing pressure from governments, investors, and customers to reduce emissions and improve energy efficiency.

Although not part of the core steelmaking process, pumps underpin almost every stage of production by ensuring safe temperatures, stable operations, and continuous material flow. They are used extensively across key areas such as furnace and mill cooling circuits, forging and press drive control, high-pressure descaling in rolling mills, boiler feedwater systems, water treatment and recycling plants, and chemical processing lines.

Energy use in pumps account for 10-20% of a plant's electricity use so from a sustainability perspective, pumps represent a significant but often overlooked source of energy consumption, due to their continuous operation. Therefore improving pump efficiency and system design is one of the most cost-effective steps facilities can take towards their sustainability goals resulting in reduced energy use, lower carbon emissions and reduced water wastage.

Partner with Armstrong for a Sustainable Future

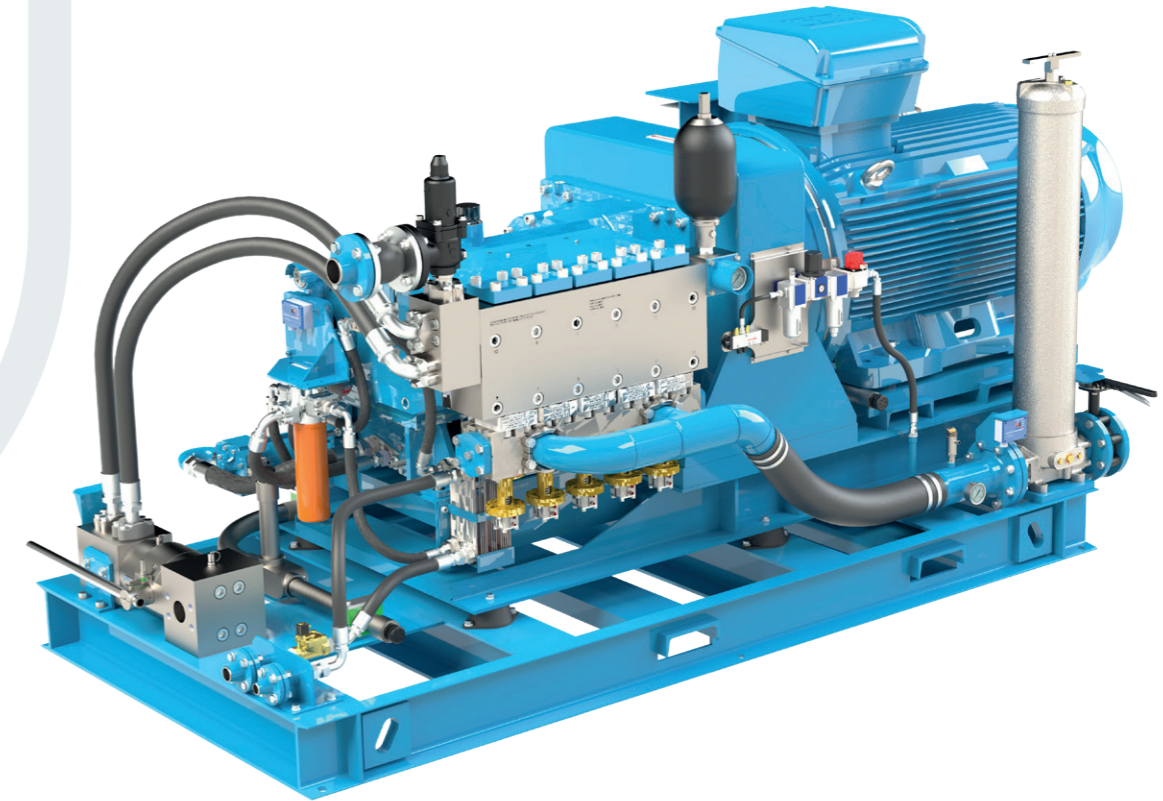


Cooling water systems

Pumps circulate large volumes of water to cool critical equipment such as blast furnaces, electric arc furnaces, continuous casting machines, and rolling mills. This is the largest and most continuous pumping duty in a steel plant.

Improving closed-loop cooling systems, reducing water losses, and using high-efficiency pumps can significantly cut both water and energy consumption.

Armstrong DEPM IVS pumps with IE5 motor efficiency reduce energy consumption and carbon emissions in descaling, cooling, and forging applications. The variable speed drive technology ensures optimised flow rates, minimising operational costs.



High-pressure descaling systems

Pumps generate very high-pressure water jets used in rolling mills to remove oxide scale from hot steel surfaces before shaping. Descaling removes oxidation layers from steel surfaces before rolling and finishing, typically requiring high-pressure water jets. Conventional systems are energy- and water-intensive, leading to high operating costs.

The S Range Quinmax and Trimax series of high pressure pump systems improve process efficiency, optimizing pressure and using variable-speed control to reduce unnecessary energy use and carbon emissions while maintaining surface quality. Utilising a closed-loop water system also enables waste to be minimised and contributes to the plant's net zero goals.

Hydraulic systems

Pumps circulate hydraulic oil that powers heavy mechanical equipment such as presses, rollers, and material handling systems. However, now water-based hydraulic press drive systems are replacing traditional oil-based alternatives, reducing emissions and elimination of fossil-fuel based fluids.

Our S Series Quinmax and Trimax high pressure pumps operate based on demand to regulate the flow and use variable speed control to regulate the pump speed to operate at the most efficient operating point based on the requirement rather than operating a high constant speed. This reduces energy consumption and carbon emissions significantly as well as minimising water wastage.

For full product range and specification details, please visit our website:
armstrongfluidtechnology.com/en/industrial/home



Chemical handling and treatment

Pumps transport acids, alkalis, and treatment chemicals used in processes like pickling, galvanizing, and surface finishing.

Armstrong Design Envelope VIL pumps are also available with stainless steel impellers are corrosion-resistant for such applications. With built in design envelope intelligence, these high efficiency pumps deliver on performance safety as well as energy efficiency.



Water Management

Pumps move wastewater through filtration, sedimentation, and treatment systems, enabling reuse of water within the plant.

Armstrong Design Envelope VIL are available from 0.25kW (0.33HP) for efficient water management systems to support higher water recycling and reduce the need for fresh water intake and discharge.



Waste heat recovery

Plate Heat Exchangers (PHEs) and heat recovery solutions can help capture and reuse waste heat from furnaces, to support sustainability initiative and reduce energy consumption and emissions.

We can offer individual plate heat exchangers for systems built on site or our new System Envelope - Energy Transfer Station offers the convenience of a complete, modular system which can be configured to suit any space available. It is supplied completed with pumps and PICV modules and 1,2 or 3 plate heat exchangers to suit the application requirements. The smart system is fully optimised to operate at best energy efficiency and has inbuilt algorithms also ensure regular self-cleaning and alerts for preventative maintenance.



LOWEST
ENERGY
USE



LOWEST
OPERATING
COST

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Nobody sees the whole system the way Armstrong does.

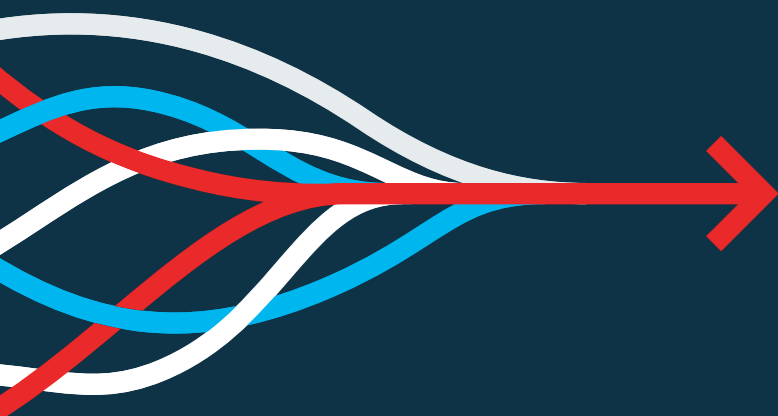
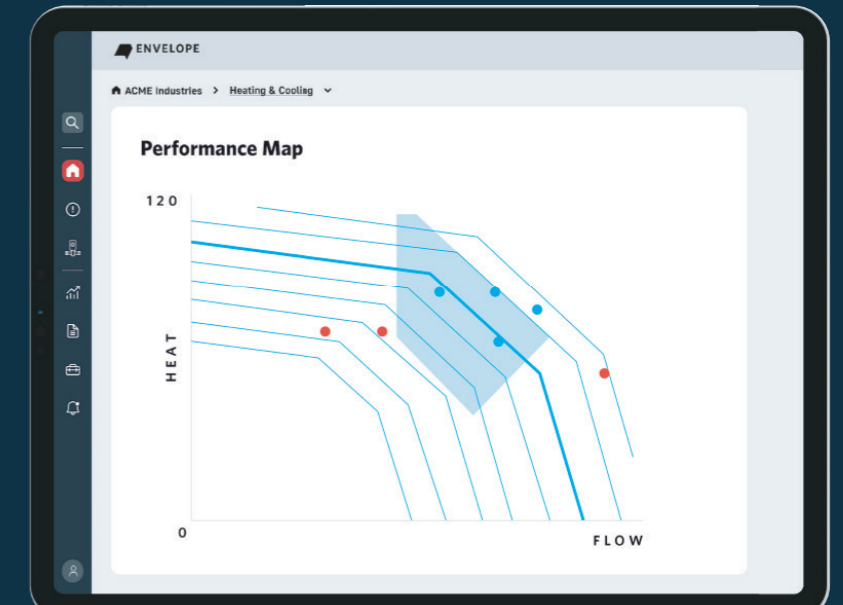
Envelope is an integrated digital platform that unites Armstrong and partner solutions, delivering optimisation through performance mapping, cutting-edge analytics and lifecycle services.

Performance mapping is a core element of Envelope that allows us to continually optimise performance through cutting-edge analytics and lifecycle services.

Changes in system performance can be detected at an early stage and enable early intervention (if required) to ensure efficiency is maintained. Predictive analytics also maximise uptime, reduce maintenance costs and risk.



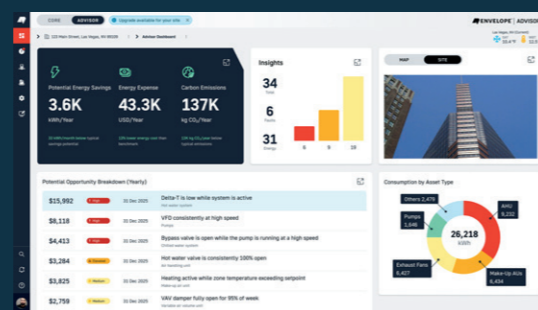
Scan the QR code for further information.



Continuous Optimisation

Delivering efficiency and sustainability

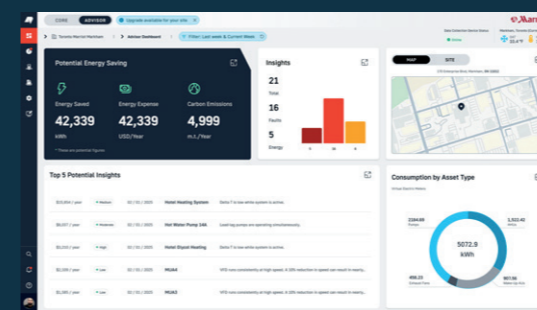
Manage



Envelope Core

Track and analyses performance data to identify and predict performance issues and provide actionable insights.

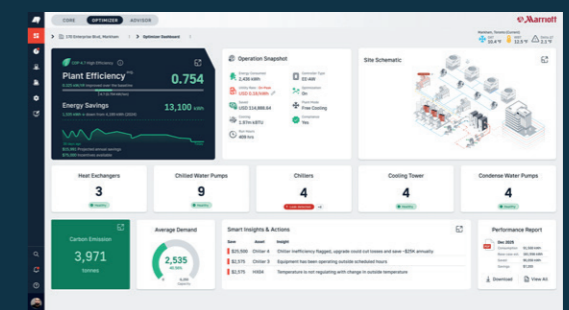
Analyse



Envelope Advisor

Portfolio-level performance auditing uses to provide analysis and recommended actions.

Optimise



Envelope Optimiser

Integrated performance management system provides analytics and insights through a cloud-based user interface.

360 SERVICE
AND
SUPPORT

**24/7 GLOBAL
RAPID RESPONSE**

With operations in the UK, USA, India, China and Australia our customers benefit from local specialist service support. Our highly skilled service engineers provide complete peace of mind and are ready to visit site whenever needed.

Commissioning - Local engineers available to commission your new system and fast-track productivity.

Training - Onsite training for facility engineers and operators to ensure that they are equipped to operate the equipment safely and execute routine maintenance tasks.

Service/Repairs - Maintenance visits, annual service contracts or emergency repair plans delivered by our expert engineers, which can be tailored to your individual site needs and budget.

Overhauls/Upgrades - Scheduled (on or offsite) maintenance to enhance your system longevity, to bring your equipment performance back to peak performance.

Spare parts and kits - Our genuine spare part modules and kits are designed to ensure you have the right set of components on hand, when needed, to avoid delays waiting for deliveries. And as we continuously improve the design and materials of our solutions, our latest generation genuine spare parts effectively upgrade older equipment's to better than new during repairs/overhauls.

For full product details and specifications, please see the relevant product pages on our website for brochures, design submittals and data sheets can be found.



Scan the QR code for further information.

Keep up to date with the latest news, events and launches from Armstrong **Industrial** by connecting with us on LinkedIn.



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