

# Productivity **by design**





# Global Presence

The RMI Customer service commitment is supported by a global presence with wholly owned operations in the UK, China, the USA and Australia. This is supported by fully trained partners in many countries including China, Russia, Poland, Turkey and the USA.

RMI equipment is installed worldwide including UK, Scandinavia, Eastern Europe, France, Spain, South Africa, India, China, Australia and USA.





**RMI Approved Agent  
and Distributor**

**RMI Approved Agent  
and Distributor**

**RMI Customer.** Daw Mill,  
Warwickshire, UK

**RMI Sales and Services  
Centre.** Shanghai, China

**RMI Approved Agent  
and Distributor**

**RMI Customer.**  
Shen Hau Group, China

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and Distributor**

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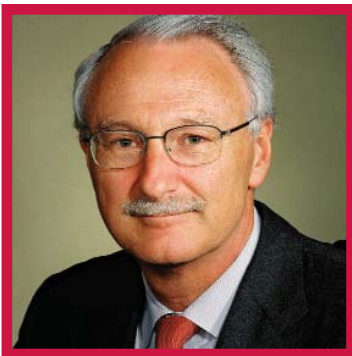
**RMI Pty. Ltd.** New South  
Wales, Australia

**Beltana Mine.** New South  
Wales, Australia

**“We look to our heritage with pride and to our future with confidence based on our unrelenting quest for improved performance and our refusal to compromise on quality.”**

TONY KERRY MANAGING DIRECTOR, RMI PRESSURE SYSTEMS LTD.

# Welcome



**CHARLES ARMSTRONG**  
EXECUTIVE CHAIRMAN  
RMI PRESSURE SYSTEMS LTD.

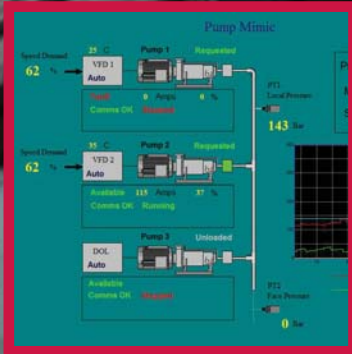
## Company History

For more than a century, RMI has been producing premium-quality high-pressure pumps for global mining and industrial applications. An early innovator in the design and manufacture of high-pressure systems for longwall mining, today RMI employs the expert resources at its UK engineering research centre to great effect, introducing new solutions designed to reduce process complexity and optimise customers' productivity. The collaborative relationships RMI forms with clients enables this pioneering company to respond proactively to feedback, driving progress and resulting in consistently high service levels.

RMI is a wholly owned subsidiary of SA Armstrong Limited, a global leader in fluid flow innovation.

## Our Vision

At RMI, we aim to deliver enhanced value and reliability to customers, focusing our efforts on helping them become more productive by cutting operational costs and boosting output. We can only achieve these advancements by listening to - and learning from - the issues that are important to our clients. It is this unwavering commitment to the learning process that helps RMI drive innovation with, and for, the customer. It elevates our ability to better serve our customers - and, ultimately, the world in which we live.



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**1. Energy Saving**

Screen shot of patented our ODIN On Demand Intelligent control system.

**2. Environmental Responsibility**

Engineers completing final site commissioning.

**3. Safety**

Comes first for our design and production engineers.

# Customer Benefits

## Energy Saving

RMI's continuous product development programme is driven by a commitment to minimise energy consumption. Our intelligent expert control systems provide total flexibility in the configuration and optimisation of system performance as operating conditions change. We have developed exclusive technology such as the RMI unloading valve which delivers unmatched reliability and constant pressure.

## Environmental Responsibility

We view regulations and standards as the minimum acceptable for our customers and their employees, and strive for continuous improvement to eliminate risk. We continue to research and develop designs that reduce decibel output to the lowest levels possible. Where necessary, full acoustic enclosures can be supplied to meet site targets. Working with our clients to reduce the impact of emissions is a key driver for our business and we take our global responsibility very seriously.

## Safety

Operator health and safety - and elimination of time lost through accidents - are of paramount importance. We exceed the requirements of all international safety standards and, to ensure that we never compromise safety in the pursuit of performance, we have specialist engineers who focus entirely on operational safety. RMI equipment complies with underground and fire safety regulations in the EC, USA, Australia, China, Russia and all other major markets.

**Developing our product range with major Global partners, is helping RMI to meet our own tough targets, for energy consumption, and reduce overall carbon emissions.**

**“We have traditionally used rotary pumps for our applications but the RMI engineers convinced us of the reliability we could expect from their positive displacement pumps, we have not been disappointed!”**

GLOBAL MINERALS COMPANY

# Productivity by Design

## Customer Support

RMI is arguably the world's leading manufacturer of high-pressure reciprocating pumps and pumping systems. The management team and engineers are all from mining or industrial market sectors with decades of specialist application experience and expertise. The world's largest and most productive longwall coal mines, steel producers, and power generation companies choose RMI pumping systems, prioritising safety, productivity and value for money through lifetime return on investment.

## Design Solutions

Using the latest software tools, RMI engineers will take modular products and incorporate them into the client's system, minimising the space required, reducing installed costs and maximising overall system efficiency. RMI is at the forefront of technological progress. The latest S500 range of pumps was developed to cater for increasing performance demands. The pump incorporates a unique five-plunger design which reduces internal stresses on the crank shaft and bearings, is significantly quieter than an equivalent three-plunger pump, and has a fully serviceable valve chest, obviating the need for its removal from the pump assembly.

## Repair and Maintenance

RMI's unique modular system design reduces setup time to a minimum. The pumps and power systems are designed to make repair and maintenance simple and fast. Most maintenance tasks can be carried out by the customer's engineers, often while the pump is in situ. Full training programmes are provided to site personnel, to ensure the equipment operates successfully during its lifetime, and that we achieve our minimum target of 98% machine availability time.

### 1. Customer Support

Descale system utilising variable speed pumps being commissioned.

### 2. Design Solutions

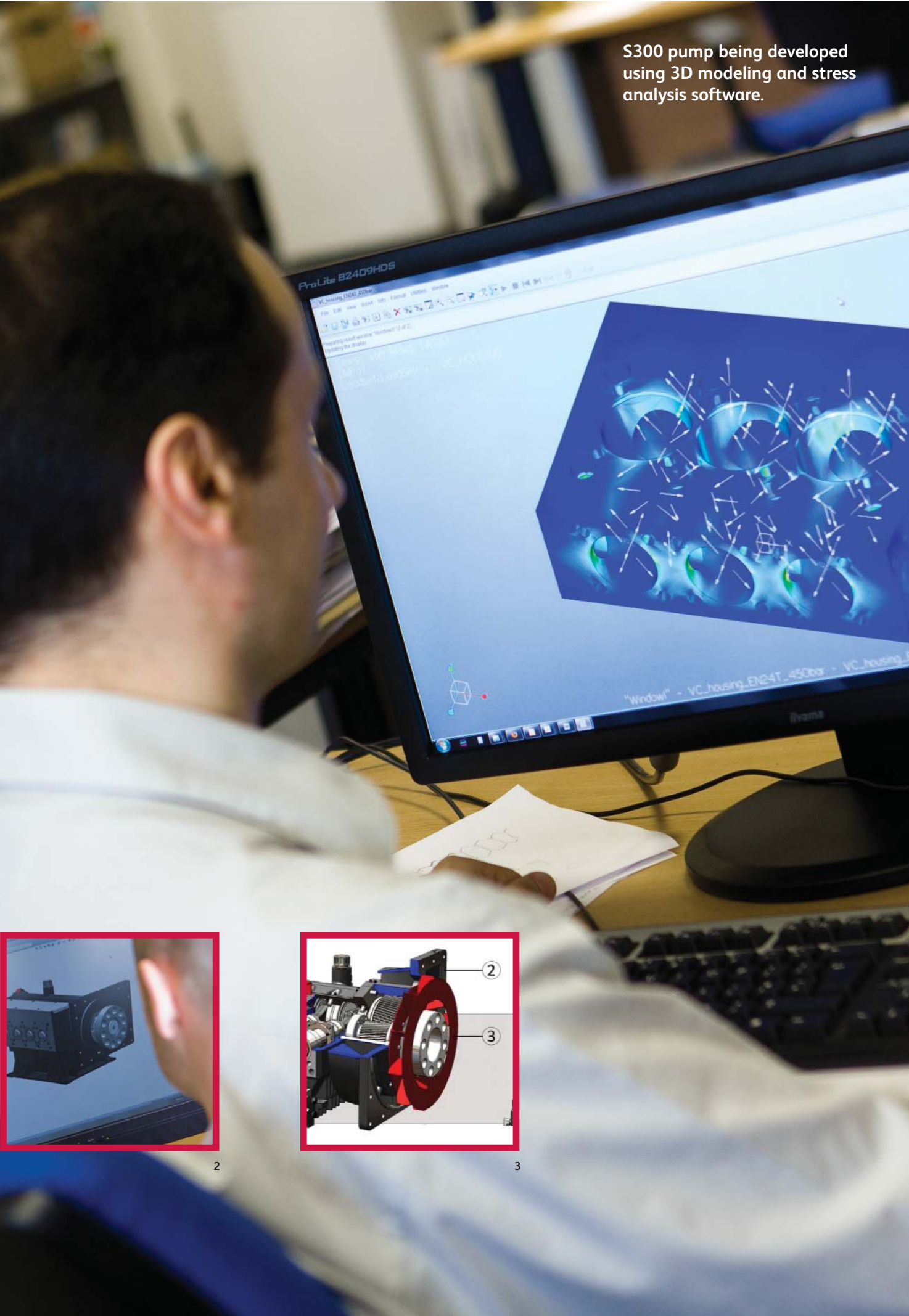
Utilising the very latest in IT technology to provide the most reliable and efficient products available.

### 3. Repair and Maintenance

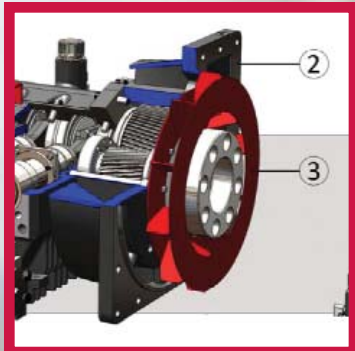
LinkOne electronic repair manual for a pump.



S300 pump being developed using 3D modeling and stress analysis software.



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# Control Systems

RMI - Delivering tomorrow's control solutions today!



One of the UK's most productive mine utilising our latest ODIN controlled roof support system.

### **Intelligent Controls**

At RMI, we believe that power without control creates waste. Our intelligent expert control systems provide complete configuration flexibility and optimisation of system performance as operating conditions change. Cutting-edge technology such as ODIN (On Demand Intelligence) monitors the shearer's performance and anticipates the required movement of the roof supports. Modulating the pump's speed and resultant pressure before the system demand changes creates a significantly more responsive and economical system.

### **Productivity**

When the additional costs of installing variable speed drives and associated controls are taken into account, the payback period is often very impressive - typically less than two years, without considering the additional savings associated with increased production. Rapid response to pressure changes in the ODIN-monitored system reduces the excess pressures typical in a conventional system with fixed speed pumps. The reduction in pressure surges will increase the expected life of critical components in the system such as hoses and valves.

### **Optimisation**

All our systems are fully tested in our factory prior to dispatch using techniques developed by Manchester University to match the customer's required duty. To further maximise the performance of your equipment, our engineers will commission the equipment and fine tune any controls to meet actual site conditions.

- 1. Safety**  
System undergoing final assembly prior to pressure testing.
- 2. International Management**  
Validating customer expectations and our commitments is essential at all stages of the order cycle.
- 3. Quality**  
Parts ready for quality inspection prior to use in production.



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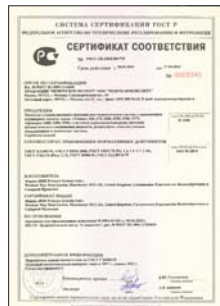
# Safety

## Safety Standards

RMI equipment is often installed in very hazardous and challenging environments that are tough on equipment and workers alike. We believe that nothing is more important than the well-being of people working in these conditions. We exceed the requirements of all international safety standards and to ensure that we never sacrifice safety for performance we have specialist engineers who focus entirely on operational safety. Our safety first design slogan and three degrees of safety philosophy ensure that any failure always occurs in safe mode.

## International Management

To ensure the equipment is used in the safest possible manner, our engineers travel the globe, checking that local operators are fully trained on all safety aspects. Our equipment and quality systems are tested and audited against the many applicable international standards and carry full accreditation. To provide the best service, we have local representation on all the major continents ready to assist clients' own engineering teams.



## Quality Control

All RMI equipment is designed, manufactured and supplied in accordance with European ISO 9001 Quality Assurance accreditation certified by Lloyd's and governed by Quality Management Systems to provide and maintain client and user service. Our systems are regularly audited and updated to ensure full and continued compliance.



**“We exceed all international safety standards and we never sacrifice safety for performance”**

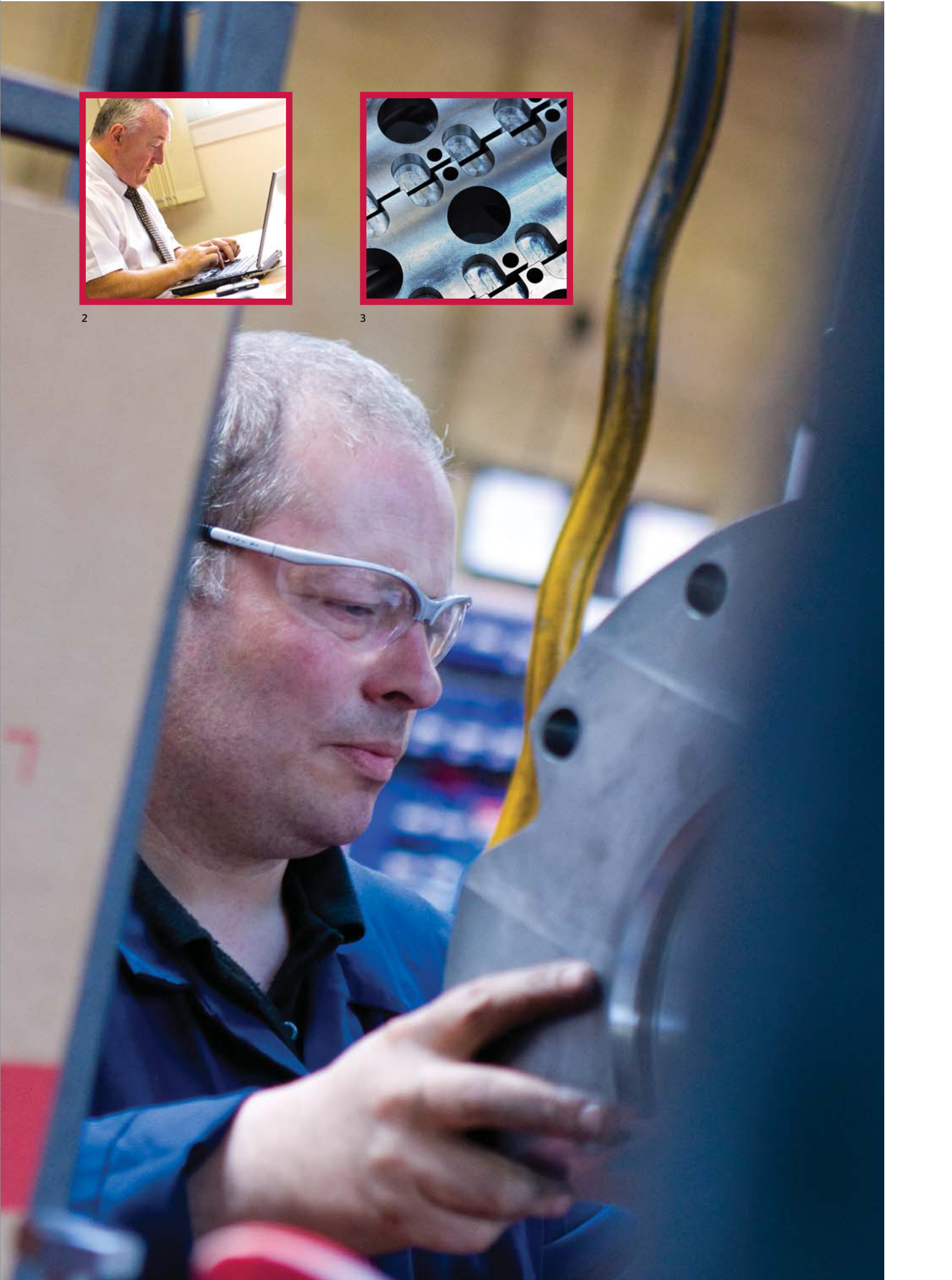
STEVE NEWTON ENGINEERING MANAGER, RMI PRESSURE SYSTEMS LTD.

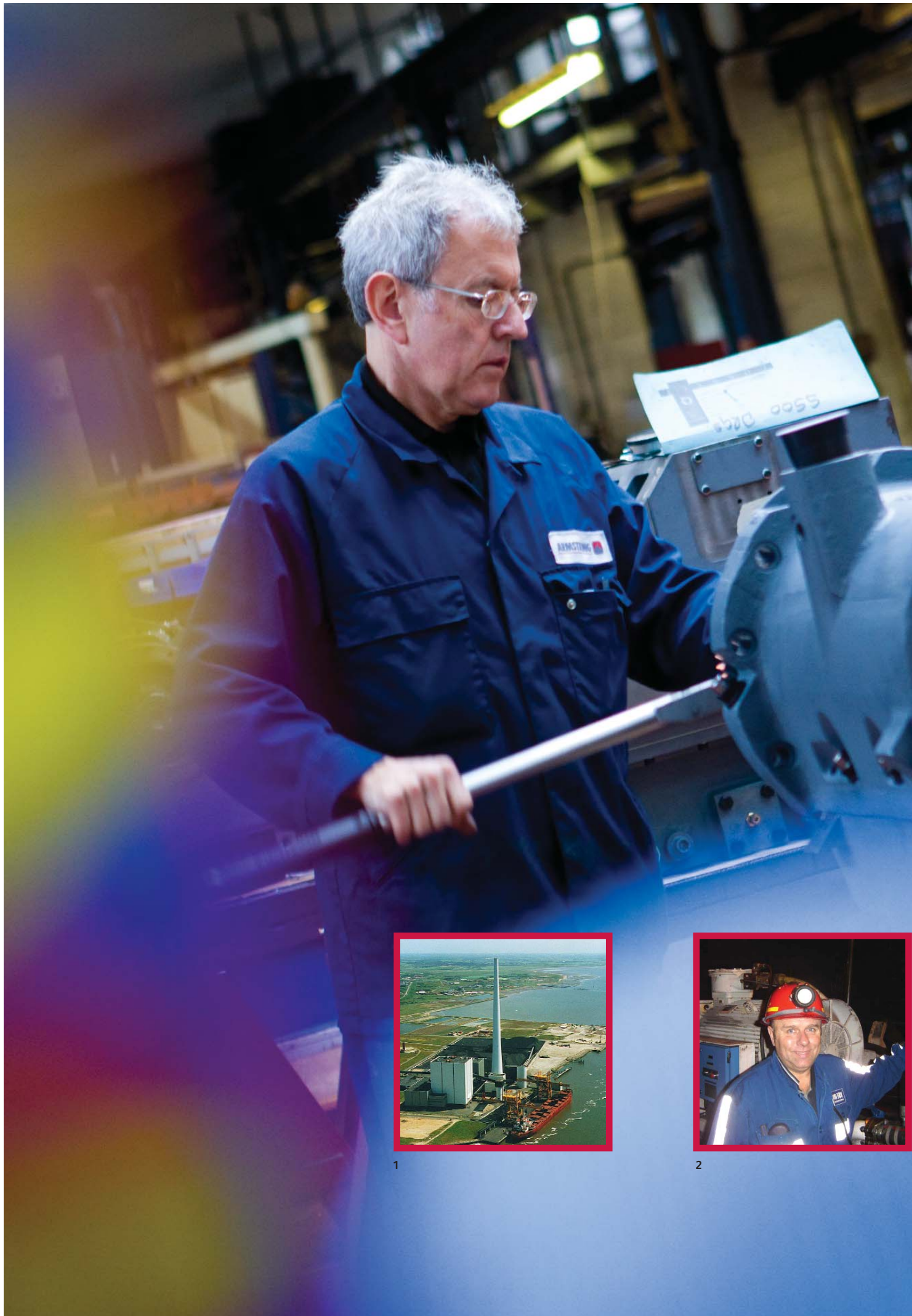


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The RMI Customer service commitment is supported by a global presence with wholly owned operations in the UK, China, India, the USA and Australia.

# Lifetime Support

## Partners

Because we work in partnership with customers on every continent - and because their success is our success – we provide a global partner support service. Our RMI service centres in China, USA, Australia and Europe carry a comprehensive inventory to ensure that overhaul or repair work is executed as quickly as possible. Our local service technicians are supported by specialist engineers 24 hours a day at the UK product development centre.

## Customers

We believe our success comes from consistently taking a solutions-based approach to customers' businesses. Understanding operational issues remains our key challenge and forms the basis of our approach to customer support. Building on these collaborative relationships with a view to developing focussed solutions is our constant aim.

## Product Warranty

Every RMI system is supported by a manufacturer's warranty; many customers choose to extend this with a service support agreement that incorporates regular health checks to give additional peace of mind. RMI installations across the globe have been running 24 hours a day for many years, but even the best and most reliable systems require careful maintenance and occasional repair.



### 1. Partners

working with Global System builders to develop market leading FGD technology for power stations.

### 2. Global Support

Completing fine turning of pumping system, Inner Mongolia, China.

### 3. Product Warranty

S300 pump undergoing test prior to final system assembly.



# Investment Value

**RMI pumping systems, delivering you the highest performance and reliability to maximise your productivity.**



**RMI service and design engineers checking customer requirements during the contract review process.**

### **Engineering Excellence**

Having a dedicated design team working to push the boundaries of design and materials, and ensuring maximum reliability and efficiencies, underpins our success and forms the bedrock of our future growth. The pumps and systems are tested in our own facility using techniques developed with Manchester University Engineering and Technical Institute to simulate actual operating conditions.

### **Return on Investment**

Our engineers' unrivalled knowledge of RMI products and their applications enables us to offer the best solution when the full capital and lifetime costs of any project are calculated. The RMI commitment to operational productivity and return on investment does not end when the system is commissioned. We work with our customers throughout the lifetime of the system, collecting information, monitoring performance and fine tuning applications to improve performance and productivity.

### **Continued Success**

RMI systems are designed to be the best available in their market sector, and are backed up by a skilled team of support engineers and agents around the world, making them the systems of choice for many major international organisations. We consider our policy of continuous dialogue with our partners essential to ensure the future success of RMI and its customers alike.

# Industrial and Mining Products

## Mining Products

RMI have built a reputation for supplying arguably the most efficient and reliable High Pressure pumping systems for the Longwall coal mining industry. This is why RMI are now seen as the supplier of choice for many of the top coal producers across the globe. Shenhua Group China, Consol Energy USA, Xstrata Australia and UK Coal have all chosen RMI products to support their investments in Longwall systems.

## Modular Design

Our modular design enables us to design and manufacture systems to our customers exacting specifications. Systems are supplied in many configurations including track, rail and skid mounted. Control options range from simple analogue control to fully interactive UK Patented systems with maximum, safe coal production being one of our targets.

A full range of supply tank options along with critical water filtration units are designed to suit each mine application and built into the Longwall pump station.

## Industrial Products

The pumps have been supplied to the Industrial sector for many decades and again operating in very arduous conditions. Ranging from large hydraulic presses in steel mills, to critical applications like Blow Out Preventer Accumulator Systems for the offshore Oil & Gas industry

### 1. Industrial Products

Fully enclosed pump system for power station Flue Gas Desulphurisation plant.

### 2. Mining Products

S500 Quinmax pump with a unique replaceable cartridge valve chest and S plunger design.



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RMI Pressure Systems is a member of the Armstrong Group