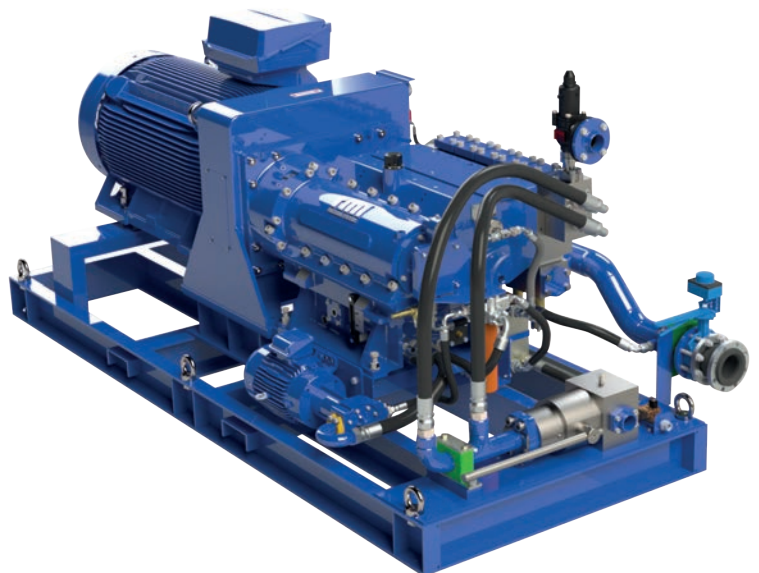


A Case Study for Heavy Industry

Sheffield Forgemaster's Steel Ltd



RMI has developed a sustainable partnership with Sheffield Forgemaster's Steel Ltd, a major producer of steel ingot for the forging and ring-rolling industries. The ultimate market for Sheffield Forgemasters' steel is at the leading edge of technology, in fields as demanding as aerospace, offshore oil exploration, power generation, shipbuilding, seamless tube, railways, bearings, defence, metals re-rolling, paper, dies and chemical engineering.



CASE STUDY

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Background

Sheffield Forgemasters is one of the world's most successful steel manufacturers, with a history that can be traced back to the 1850's. Much has changed over the years, but the importance of reliability has remained constant.

The relationship with RMI began over 20 years ago, when new pumps were required for one of the forges massive 2,500 tonne hydraulic presses. Four Trimax S-250 pumps were used for the application.

Despite high workloads, the pumps performed reliably and efficiently. When a veteran pump, which had been manning the hydraulic station since the 1960s reached the end of its serviceable life, Sheffield Forgemasters was keen to specify another pump from RMI.

Solution

5-plunger Quinmax S500 were supplied, providing a robust and reliable solution, with greater efficiency, to increase production.

The S-500 is a crankshaft driven positive displacement pump, capable of producing pressures up to 420 bar and flow rates up to 828 lpm.

Benefits

The Quinmax S500 pump, uses a 5-plunger design, which has several advantages over the Trimax 3-plunger design.

- Reduced crankshaft and bearing loads for extended operational life and extended routine maintenance/serviceable intervals.
- A 40% reduction in the fluid velocity per plunger, resulting in a reduction of hydraulic noise for a safer working environment.
- Slower crank speeds, reducing mechanical wear and tear and decibel levels, for increased uptime.
- Longer stroke length, leading to fewer reversals
- Smoother pressure profile, reducing impact of pressure surges on critical system components, such as hoses, seals and valves.

Ever since the Quinmax S500 pump was first installed it has operated reliably and has helped Sheffield Forgemasters meet its deadlines, despite having the biggest order book in its history.

“ This installation has been very successful and continues to operate with no significant issues. We look forward to working with RMI for any future installations we require ”

Ian Bickerton,
Engineering Manager And Chief Engineer