

# Custom Hydraulic & Mechanical Upgrade Transforms Refinery Reliability

A large crude oil refinery in the UK approached PRO Services for a solution to a longstanding problem with existing non-Goulds Pumps' OEM OH2 style re-boiler pumps, which had been identified as bad actors with a history of high vibrations, flow issues and frequent seal failures. The replacement pumps had to fit within their current site footprint and use their existing motors to minimize costs.

## The Situation

The existing pumps were too large for the current required flow range. A change in site process and flow requirements meant that the pumps were being throttled down to run back on curve at approximately 40-50% of design flow. As a result, the pumps experienced vibration issues, contributing to frequent seal failures and low reliability.

## PRO Services' Solution

A custom pump was designed to meet the hydraulic performance required, with the new casing configured to meet the existing site interfaces. A proven Goulds Pumps' OEM impeller was used in the new casing, matching the hydraulic performance needs of the process. A new PRX-OH2 aftermarket bearing frame

was used, facilitating an increase in shaft stiffness and improved reliability within the existing space envelope.

## PRO Services Impact

The innovative approach not only minimized the cost of the job, the newly upgraded pump, which was custom designed to the site space and process requirements, has improved the reliability of this part of the process. Reduced downtime also led to a reduction in maintenance spend and an increase in process profitability.

### PRO Services®

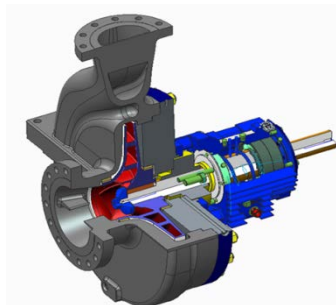
PRO Services is a sister brand of Goulds Pumps. Building on 170+ years of Goulds Pumps experience, PRO Services provides replacement parts, repair and upgrade services and maintenance programs to customers with the goals of extending equipment life and reducing Total Cost of Ownership.

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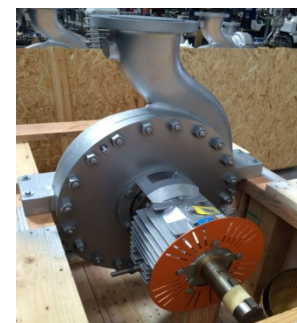
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