

# Enhanced production

Caltec's production-boosting and separation technology offers proven solutions to extending the life of oil and gas assets – with pay-back in days

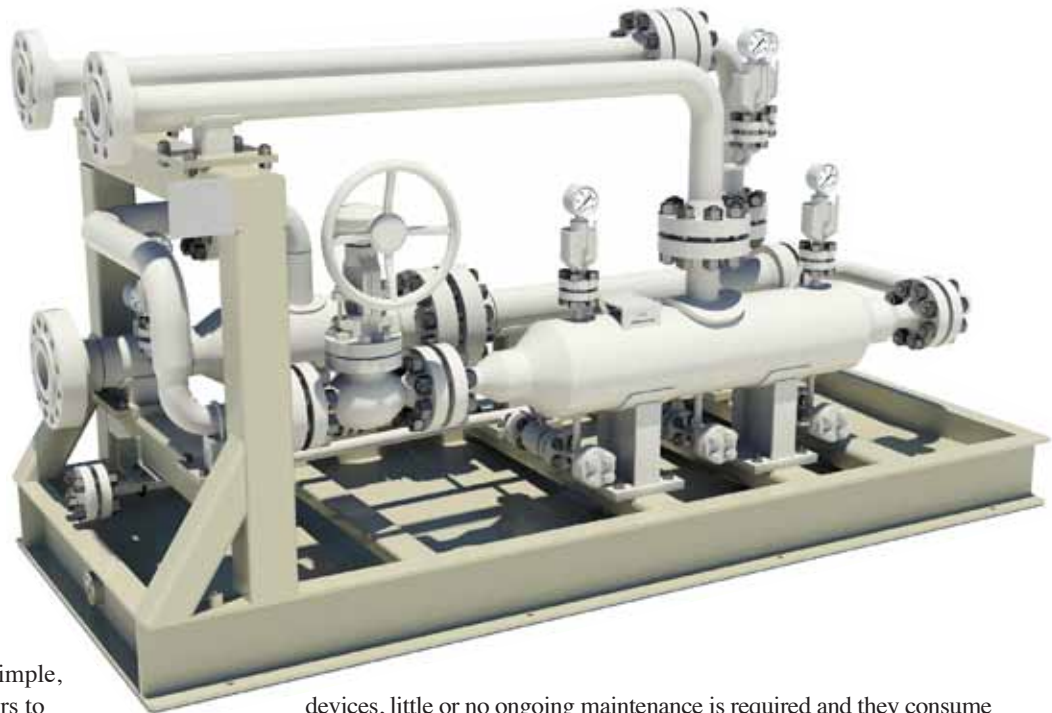
**C**ALTEC specialises in the identification, design, optimisation and provision of solutions based upon its proprietary Surface Jet Pump (SJP) and Compact Separation technologies. These simple, passive systems enable oil and gas operators to enhance production, improve processing and extend the economic field life of oil and gas assets. By harnessing intrinsic energy which would otherwise have been lost, such techniques can help increase both productivity and profitability, whilst also helping companies to meet their environmental obligations.

A subsidiary of Petrofac, Caltec's product family comprises production-boosting technology (SJP/Wellcom<sup>®</sup>) and compact separation technology (Wx<sup>®</sup>/I-SEP<sup>®</sup>). The former aids operators by allowing them to increase production from wells or entire fields, by reducing pressures and reviving liquid-loaded wells, flowlines and pipelines. In addition, it can be used to eliminate or enhance intermediate compressors, debottleneck compressors and recover flare or vent gas. It also enables the enhancement of artificially lifted wells (especially gas lift). The latter, Caltec's Compact Separation systems, are applicable for phase splitting, including gas-liquid separation, sand knock-out, oil-water separation and compact multiphase well testing using conventional meters.

## Surface Jet Pumps

SJPs are historically referred to as ejectors, ejectors, or more recently Velocity Spools<sup>™</sup>. Typically they are used in the same applications as above, alongside compressors or to prevent flaring. However, one key technological and engineering advantage presented by SJPs is their ability to be deployed where alternatives cannot.

SJPs harvest energy from existing process infrastructure, typically in the form of high-pressure gas, oil, water or multiphase flow, that is then used to boost low-pressure gas or liquid flow streams. As passive



devices, little or no ongoing maintenance is required and they consume no fuel so are therefore particularly well-suited to remote and harsh environments, including subsea deployment.

Furthermore, SJPs are both compact and low weight – typically a fraction of the size of alternative solutions. They can be installed in any orientation, allowing maximum flexibility in placement and integration with existing infrastructure. With a minimal footprint and a small initial cost, they are easy, quick and low-risk to install.

## Compact Water-Oil Separation

Based on Caltec's proprietary I-SEP<sup>®</sup> cyclonic uni-directional separation technology, Caltec has developed a compact water-oil separation solution (known as Wx<sup>®</sup>) which extracts almost clean water from a water/oil mixture, inline with the process and at a full range of operating pressures – from wellhead to low-pressure downstream processing. The system produces exceptional results, each with a turndown ratio (or rangeability) of 5:1. The output is similar to a conventional gravity separator, but comes at a fraction of the latter's size and weight.

The Wx<sup>®</sup> range has a very small footprint, reducing the demand on weight and support structure, while its modular design makes installation simpler and more cost-effective. Wx<sup>®</sup> water recovery systems also operate inline with existing process, at the process pressure, making it simple to retrofit existing facilities. Wx<sup>®</sup> is ideal for bulk water extraction, including debottlenecking and partial processing opportunities, as well as for high-pressure, high-temperature (HPHT) wellhead and subsea applications. ■

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# Compact Production Enhancement

Small footprint  
Big value  
Simple...



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