

# Pipeline

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ADIPEC أديبيك  
The Abu Dhabi International Petroleum Exhibition & Conference  
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## TOTAL QATAR:

**Exclusive:** Guillaume Chalmin, managing director of Total E&P in Qatar, talks about celebrating 80 years in the country

## VALVES, PIPES & FITTINGS:

Companies discuss the latest valves to hit the market

## GEO FOCUS: SAUDI ARABIA

How Saudi Arabia is looking to add value to its hydrocarbon industry

# STRENGTHENING ITS REGIONAL PRESENCE

**Exclusive:** David Dickson, President & CEO, McDermott explains how the integrated EPCI firm is looking to strengthen its presence in the Middle East

# STRENGTH THROUGH INNOVATION

By: Paul Root, director, Goodwin International and Karl Jenkins, sales director, Goodwin International

**The global oil and gas industry is in a difficult phase, with oil prices down, expenditures cut, projects cancelled or deferred. It is not an easy time for equipment manufacturers and service providers to this market sector.**

Fortunately, some areas of the Middle East, notably Saudi Arabia, Abu Dhabi, Oman and Kuwait, are continuing with a significant number of major projects, albeit that there is evidence that they are also slowing. For Goodwin International, the past, present and future supply of dual plate and axial check valve products to the Middle East market forms a major part of our strategy.

End users in the Middle East who are bold enough to forge ahead with projects are realising significant savings on equipment and services by shrewdly taking advantage of the current market conditions.

Regrettably, downsizing to reduce costs has been a common response from many companies, both large and small. Some consolidation has taken place through mergers and acquisitions, making the most of synergies in order to reduce costs. Improving efficiencies and reducing supply costs is perhaps the more evident and obvious route taken.

Despite the gloomy backdrop, there remain some areas of hope! The downturn

in the global market, although far from desirable, can be used as a window of opportunity to look forward, to analyse the needs of the market and determine how they can best be addressed. Goodwin has successfully deployed a strategy over the last 50 years which identifies and develops niche engineered products, the most significant market sector being oil and gas. Indeed 35 years ago, Goodwin launched a range of dual plate check valve products during a major international recession which have subsequently built an excellent reputation for quality and performance, with sales in excess of US\$750 million over the last 10 years. Highly approved with end-users throughout the Middle East, Goodwin is very active in pursuing dual plate and axial check valve business at both CAPEX and OPEX levels.

Continuing with the historically successful approach in spite of the challenging market conditions, several new and innovative products are due for launch in the coming months, making it an exciting time to be a part of Goodwin.

## New axial isolation & axial control valves

Goodwin International will be exhibiting a new range of axial isolation and axial control valves (Figure 1) at major international oil and gas exhibitions in Q4 2016.

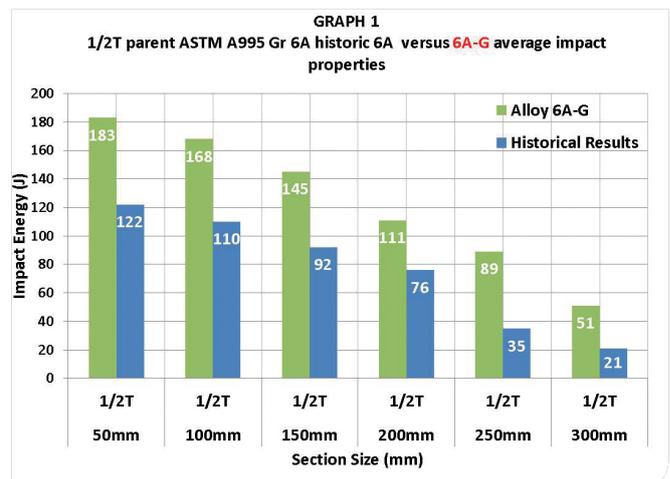
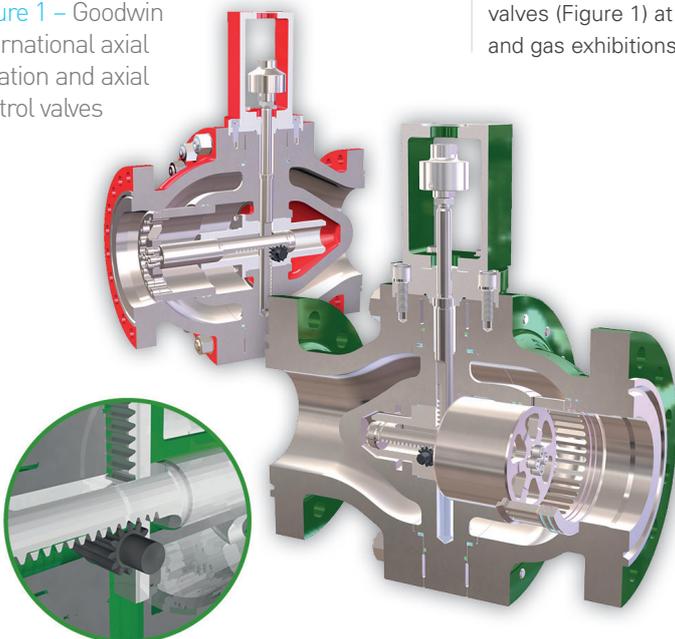
Extensive market research yielded very positive results in there being a market need for this valve type. With several years of research and development, Goodwin International has designed this new valve range from the ground up, incorporating a number of innovative features for which patent applications have been filed.

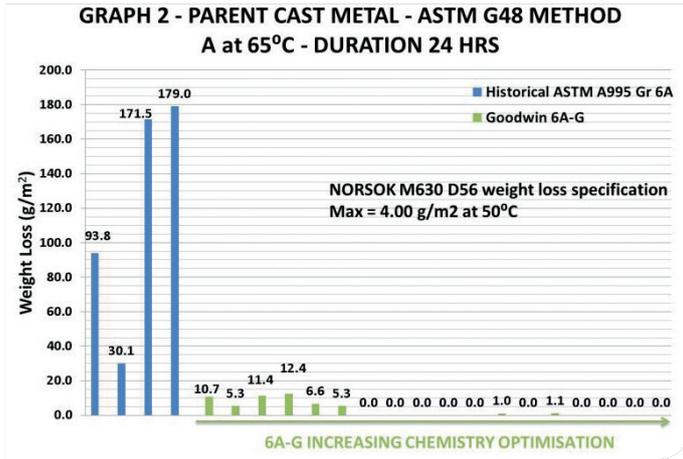
### Key features include:

- A 3 piece split body design allowing simpler manufacturing processes to be adopted, reducing defect rates and difficult weld repairs whilst also permitting 100% access for non destructive examination techniques. The 3 piece body also permits the use of forged or cast material for the pressure envelope components, which can be adapted according to the application.
- Unique rack-pinion-rack gear train with distinct advantages over alternative mechanisms.
- Fully pressure balance design which significantly reduces actuation forces.
- Main flow seals capable of tight shut off in line with international standards.

By offering economical engineering solutions for flow control, high pressure drop, noise attenuation and severe service applications, the Goodwin axial isolation and axial control valve represent a straight forward choice for a cost conscious industry that needs competitive deliveries and pricing.

Figure 1 – Goodwin International axial isolation and axial control valves





**Advanced materials for the oil and gas industry**

Goodwin Steel Castings have developed two new alloys specifically for the oil and gas industry with enhanced low temperature impact, mechanical and corrosion resistance properties, patent applications have been filed for both material types.

Goodwin 6A-G is of particular interest. It is an enhanced version of ASTM A995 Gr 6A, a 25 per cent chromium super duplex stainless

steel commonly used in oil and gas applications. Historically, ASTM A995 Gr 6A has struggled to achieve the low temperature impact performance required by the oil and gas industry, particularly in castings of greater than 200mm section. Goodwin 6A-G has been optimised in order to both comply with the chemical composition specified by ASTM, but also to achieve significantly improved impact resistance at minus 46C and retains impact resistance down to minus 101C consistently meeting the Norsok requirements of 45J average and 35J single value, opening up further opportunities for the material at lower temperature applications (Figure 2, Graph 1). Additional to the improvement in low temperature impact performance, which could in some cases remove the need to adopt difficult material grades such as 6Mo,

Goodwin 6A-G also demonstrates improved corrosion resistance at high temperature. (Figure 2, Graph 2).

Goodwin 6A-G was tested using ASTM G48 method A, albeit with the test temperature increased from 50C to 65C in order to generate more corrosive conditions. The test acceptance was set in line with Norsok M630 D56 at 4.00 g/m2 during a 24hr test cycle. The corrosion resistance was astounding, particularly as the chemistry of the material was further optimised during the development period. As the results show, Goodwin 6A-G now shows zero weight loss during the test, even with the temperature at 15C above the standard 50C.

In the event that this material is adopted by the oil and gas industry, the benefits in terms of reducing equipment costs are clear.

Goodwin is a market leading manufacturer and supplier of dual plate and axial check valves, exporting to over 80 countries. With the launch of the new axial isolation and axial control valves, plus the enhanced oil and gas material grades, the Goodwin group is committed to achieving acceptance and approval along with global recognition for the latest high quality, cost effective products.

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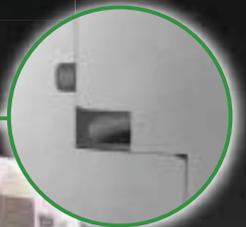
## Axial Isolation & Axial Control Valves

INNOVATIVE  
TECHNOLOGY

PATENTED  
FEATURES

Rack-Pinion-Rack  
Gear Train

3 Piece Split  
Body Design



Tight Shut Off

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