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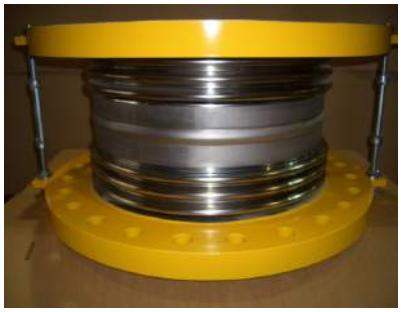
Reference list Oil & Gas

Technip Samsung Consortium	
Project	FLNG Prelude
Year	2014
Country	Australia
End customer	Shell
Scope of work	Design and manufacturing of 2 large rectangular expansion joints for steam duct between turbine and condenser. Full vacuum and large lateral movements with high number of cycles (up to several millions)
Solution	Multi-ply rectangular bellows DN 3640x1140 mm Bellows in Inconel 625 and intermediate pipes in Inconel 825 Permanent leakage control device Including Lloyds approval

SBM Offshore	
Project	Kizomba A+B offshore field deepwater
Country	Angola
Year	2004-2005
End customer	ExxonMobil
Scope of work	Manufacturing of several circular expansion joints Operation pressure 40 bar g Test pressure 60 bar g Design Temperature 50° C
Solution	DN 600 flanged expansion joints made of Inconel 625. Including pressure test at Kompaflex premises and DNV approval



Lurgi	
Project	Recycling refinery residues Ingolstadt
Year	2000
End customer	ExxonMobil and Esso
Scope of work	Operational conditions up to 650 ° C and 250 kPa for solid and gas carrying pipes. Very abrasive and corrosive media.
Solution	Deliver of over 40 custom-made FCCU expansion joints different sizes (largest piece 16 tons weight) Hexmesh inner construction and protected bellows by special sealing sleeves. Bellows made of Inconel 625 LCF.

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MAN Diesel & Turbo		
Project	Various Off-shore projects	
Year	1990 – today	
End customer	Various Oil&Gas customer of compressors	
Scope of work	Various expansion joints for compressors Operation pressure 8 bar g, Test pressure 15.1 bar g. Temperature 310° C	
Solution	Lateral expansion joints DN 1626, Angular expansion joints DN 1626 and axial expansion joints DN 2800	

Linde		
Project	Nitrogenia de Cantarell	
Year	2009 and 2012	
Country	Mexico	
End customer	Pemex	
Scope of work	Braced expansion joints for a Nitrogen plant. Operation pressure 5.4 bar g Test pressure 8.8 bar g Temperature 133° C	
Solution	Gimbal and angular expansion joints size from DN 900 to DN 1600.	

Dow Chemicals		
Project	Sadara Chemical Complex Project	
Year	2014	
End customer	Sadara	
Scope of work	An oval shaped and closed walkthroughs were put in place to connect the different chemical complexes of the Sadara Project. This oval walkthrough has to absorb through the help of a bellows Angular movements of 2.4°/0.8° Axial movements of 21 mm. Oval size 4216/2032 mm and 3556/1524 mm	
Solution	Kompaflex unique Multi-ply Oval Bellows with superior flexibility to allow angular and axial movements. To protect against corrosive media Hastelloy C22 was chosen. Connecting pieces carbon steel. Including inside installation for a connecting door and safe walkthrough gratings.	

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LAB GmbH		
Project	K2,K3 und K5	
Year	2010	
End customer	MiRO Raffinerie	
Scope of work	A reliable solution for large rectangular expansion joints Various DN 1810/1680, DN 2480/1680, DN 4040/1240, 1980/1980	
Solution	Multi-ply rectangular bellows in order to fulfil movements and cycles	

Nord-West Oelleitung GmbH		
Project	Oil storage tanks	
Year	2009- today	
End customer	NWO	
Scope of work	Expansion joints to compensate seismic movements for oil tank units. Lateral movements +/- 225 mm Angular movements 2.5° Media Crude Oil Design Pressure 19.8 bar g Sea atmosphere (corrosive)	
Solution	Lateral expansion joint DN 900, Building length 7700 mm Outside bellows protection layer against corrosion Avesta 254 SMO	

Norwegian Piping		
Project	Statoil Huldra	
Year	2006	
End customer	Statoil	
Scope of work	A replacement expansion joint was needed for the Statoil Huldra platform according to the Norsok standards	
Solution	DN 300 flange expansion joint Bellows made of Inconel 625 LCF Flanges in Duplex Production in just 4 weeks including full documentation (WPS, PQR, PMI,…)	

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Reference list Oil & Gas

OMV	
Project	Refineries Burghausen / Schwechat
Year	2005 - today
End customer	OMV
Scope of work	Designing the correct braced expansion joints for the pipe systems to avoid any reaction force on to the system
Solution	Tied expansion lateral and angular DN 350 to DN 800, with PED confirmation Design pressure 6 bar g Operation pressure 18 bar g

PCK Raffinerie	
Project	Ongoing maintenance
Year	2000 - today
End customer	PCK
Scope of work	Replacement of existing fabric and steel expansion joints Temperature 240° C Operation pressure 12 bar g Test pressure 29 bar g
Solution	Flange type expansion joints DN200 – DN300, Operation pressure 12 bar g Test pressure 29 bar g Design temperature 240° C Fabric expansion joints (low pressure application)

JJ Lurgi	
Project	Palm Oil refineries
Year	2003 – today
End customer	Palm Oil refineries
Scope of work	Selecting the correct tied expansion joints for tube systems on Palm Oil refineries
Solution	Delivery of various lateral and angular expansion joints DN 150 – DN 1000

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BASF	
Project	Titanium bellows
Year	2010
End customer	BASF Ludwigshafen
Scope of work	BASF asked Kompaflex to manufacture bellows made from 100% titanium.
Solution	Special forming process had to be used in order to avoid any surface cracks on the Titanium bellows and welding seams.

De Dietrich Process Systems / Rosenmund	
Project	Bellows
Year	2010 - today
End customer	BASF, Dow Chemical, Bayer, Novartis, Roche
Scope of work	Bellows for mechanical mixing systems, which need to absorb very high movements (e.g. 500 mm axial, within building length of 1000 mm) in combination with a lot of cycles (10'000). Corrosive media (various chemicals)
Solution	Connecting up to 4 bellows DN 50 – 200 to allow high movements/cycles Special alloys Hastelloy C4, C22, C276 Stainless steels 1.4571, 1.4404

Flowserve	
Project	
Year	2013 - today
End customer	Oil&Gas end customers
Scope of work	Very high outside pressure 50 bar g Very high tolerances on the mechanical parts
Solution	DN 370 – DN 580 Duplex material, 1.4462 All expansion joints tested with integral helium leakage test at kompaflex facilities

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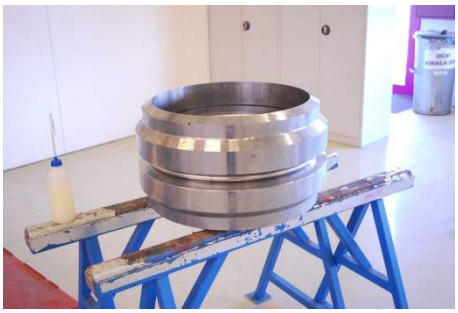
Heat		
Project	High pressure expansion joints	
Year	2015	
End customer	Oil&Gas end customers	
Scope of work	Expansion joints for heat exchangers Internal dimensions 554 mm Very high internal pressure of 110 bar g Test pressure 165 bar g Axial movements – 3 mm	
Solution	Multi-ply bellows DN 554 made of Inconel 625 Massive reinforcement rings for the bellows	

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