ConocoPhillips

Australasia Business Unit

Bayu Undan Facilities
Technical Delivery Terms

Material Description:	Flare Tip Spares		
Doc No:	TDT 08	**Rev:**	0
Prepared By:	S. MacKenzie	**Date:**	22 March 2006
Checked By:	J.Houston	**DOC CON Ref:**	ALL/CMP/SPE/008
Approved By:	P. Rogers		

1 SCOPE

This document outlines the general technical requirements for the supply of Flare Tip Spare Parts for the ConocoPhillips (COP) Bayu-Undan Facilities.

Specifically, flare tip spares shall be manufactured under the general requirements of the following codes and standards:

ASME B16.5	Pipe, Flanges and Flange Fittings.
ASME B16.20	Metallic Gaskets for Pipe Flanges – Ring Joint, Spiral Wound and Jacketed.
ASME B16.47	Large Diameter Steel Flanges NPS 26 Through NPS 60.
ASME B31.3	Process Piping.
ASME VIII Div 1	Boiler & Pressure Vessel Code (for NDT standards)
EN 10204	Metallic Products – Types of inspection documents.
NACE MR 0175	Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment.

2 GENERAL REQUIREMENTS

2.1 Flare Tip Spares

The materials supplied for the Bayu-Undan flare tips shall be suitable for a Class 1, Zone 1, Gas Group IIA, Temperature Class T3 environment.

Stainless Steel Grade 304 shall not be used in any place, regardless of whether component is pressure retaining or load bearing.

All welds shall be Pickled and Passivated.

2.2 Certification

All parts shall be supplied, as a minimum, with EN 10204 2.2 certificates. The flare tip bodies, both HP and LP, shall be supplied with EN 10204 3.1 material certificates.

All the documents relating to quality assurance and quality control including certifications shall be in English and readily legible. Documents provided in other languages or illegible shall not be accepted and shall be referred to COP before clearing final inspection.

When applicable, MDR documentation, including but not limited to, material certification, NDT reports, hydrotest reports, shall be provided for COP review.

2.3 Non Destructive Examination

2.3.1 All butt welds shall be 100% radiographed and all welds shall be subject to 100% liquid penetrant or magnetic particle examination. This applies to all welds including attachment welds.

All radiography shall be carried out by film techniques. Real time radiography is not acceptable.

2.3.2 Hydrotests shall be carried out on all welded piping assemblies. Hydrotest water shall contain less than 50ppm chlorine.

2.4 Lifting Equipment Requirements

All lifting lug materials shall be certified and traceable to EN 10204 Type 3.1 certificates and shall be subject to ultrasonic checks for laminations. Lifting lug welds shall be subject to 100% ultrasonic testing and 100% MPI/PT examination for full penetration welds and 100% MPI/PT examination for fillet or partial penetration welds.

If original design has been changed then all lifting lugs shall be proof load tested to 1.5 times design load or the design calculations shall be submitted to COP for approval.

2.5 Inspection Requirements

The Purchaser shall retain the right to inspect the spare components and certification prior to release from the Vendor's premises, to confirm compliance with the requirements of these Technical Delivery Conditions. Any defects noted at this stage shall be rectified prior to release from the Vendor's premises.

2.6 Packaging and Shipping

Material shall be suitably packed to prevent damage during handling or loss or damage in transit.

Material used for packaging, packing, wrapping, sealers, moisture resistant barriers and corrosion preventatives shall be recognized brands and grades and shall conform to the best world standards. Timber material shall be treated/fumigated to prevent infestation by insects or similar for all material destined for Darwin (Australia). This is to meet quarantine regulations and prevent impounding by customs in addition to preserving the timber whilst in tropical storage at delivery point.