COGFPSO8
Monitor and control cargo handling and ballast control operations

Overview

This unit is concerned with ensuring that the Cargo Handling and Ballast Control Operations are safely and efficiently monitored and controlled from the FPSO/FSU Control Room and all potential operational hazards (e.g. stability) are safely and effectively managed during the following operations:

1 processing (to include temperature control)
2 offloading/metering
3 storage
4 blowdown
5 isolations (effects on operations)
6 offloading station
7 shuttle connection

This unit deals with the following:

1 Monitor and operate the cargo handling and ballast operations

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices AS THEY APPLY TO YOU.

Previous Version:

Unit MOT8 National Occupational Standards in FPSO/FSU – April 2005

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Performance criteria

You must be able to:

P1 monitor steady state cargo handling and ballast operations
P2 update impact of weather conditions on operations
P3 evaluate heading control requirements against operational parameters
P4 establish and maintain navigational operational parameters
P5 monitor operations for potential abnormal situations and deal with them as appropriate
P6 maintain communications with relevant personnel
P7 carry out routine duties, checks and procedures and report as appropriate
P8 complete ongoing log details

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Knowledge and understanding

You need to know and understand:

K1 the factors which effect ballast operations and how to safely and effectively manage them

K2 how to monitor steady state cargo handling and ballast operations

K3 how to update operations to take into account impact of weather conditions (e.g. heavy weather, adverse weather, normal weather)

K4 the procedures for evaluating heading control requirements (e.g. turret, thrusters, prevailing weather data) against operational parameters as appropriate

K5 how to establish and maintain navigational (e.g. radar GPS, UTM's ARPA, charts, light/sound signals) operational parameters as appropriate

K6 how routine duties, checks and procedures must be carried out and reported

K7 how to clearly and accurately complete the relevant log details

K8 how to select, use and care for PPE (to include sight/hearing protection, gloves, footwear, hard hats, respirators)

K9 the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements

K10 how to interpret operational requirements (e.g. relevant policies, procedures, instructions, codes of practice, standards and schedules)

K11 the location and identity of all control room equipment using P + ID's as appropriate

K12 the layout of appropriate working areas (e.g. control room, control stations)

K13 the structure/function/operation of: process flows, ballast system, cargo system, crude oil washing, inert gas system, cargo heating system, cargo metering, cargo offloading system, shuttle tanker mooring system, FPSO/FSU mooring system, bunkering systems (e.g. polymers, potable water, lube oil, diesel), instrument and plant air, vessel cooling water, diesel system and hydraulic system using P & ID's and Process Flow Diagrams as appropriate

K14 the location of process high pressures, high temperatures and the relevant safety measures

K15 how to carry out effective trouble shooting procedures

K16 the location, function and operation of ESD systems using P & ID's as appropriate

K17 how to carry out effective handovers between shifts and maintain continuity

K18 the permit to work system

K19 how to carry out positive reporting of instructional actions, tasks, safety measures and checks ensuring reports are clear, accurate and complete

K20 the emergency procedures relevant to the cargo handling and ballast

control operations

K21 the emergency procedures relevant to the marine systems

K22 working understanding of the terms TPC, MCTC, KG, KM, LCB, C of G, Moments, Displacement, Reserve Buoyancy, angle of Loll, Volume, RVP, BS & W

K23 the minimum and maximum allowable draft

K24 the maximum allowable trim and limitation source

K25 effects on vessel due to loading or discharging weights on draft, freeboard, trim, list, density (of water and crude oil)

K26 effects on vessel of staggered loading conditions

K27 terms and consequences of FS Effect, Stiff and Tender ship, Hogging and Sagging, Stable, Unstable and Neutral Equilibrium

K28 terms and effects of shear force and bending moments, compressive and tensile loadings, area under curve of stability

K29 tensile loadings

K30 information sources in relation to the performance of manual calculations

K31 the routine checks on the loading calculator/computer equipment

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Developed by	Cogent
Version number	1
Date approved	June 2009
Indicative review date	June 2011
Validity	Current
Status	Original
Originating organisation	Cogent
Original URN	FPSO8
Relevant occupations	Engineering and manufacturing technologies; Engineering; Process, Plant and Machine Operatives; Plant and Machine Operatives
Suite	Floating Production & Storage Offload (FPSO)
Key words	safely, efficiently, monitor, control, cargo handling, ballast control, operations