

Competence Requirements for Shuttle Tanker Personnel

Operation and maintenance (OM)
Work requirements, WR2394, Final Ver. 2, valid from 2016-11-01

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1 Objective, target group and provision

1.1 Introduction

Offshore shuttle tanker operations are widely used for offshore loading from various fields at Norwegian Continental Shelf. Loading is taking place from different loading systems such as:

- OLS – Offshore Loading System. Operational procedures are given by OM101.09.01.02 and WR2589 Lasting av råolje til havs – Offshore Loading System
- Tandem Loading. Operational procedures are given by OM101.09.01.01 and WR2588 Lasting av råolje til havs – Tandem Loading
- Tandem Loading / Discharge at Mariner FSU (UK sector - Loading of Crude and Discharge of Diluent) Operational procedures are given by WR9075 Cargo Transfer at Sea UK
- Tandem Loading Alvheim FPSO. Operational procedures are given by Offshore Terminal Manual - Doc. no. ALV-A-4064, Latest revision
- Tandem Loading Skarv FPSO. Operational procedures are given by BP Lasteprosedyre for Skytteltankere Doc.nr: 1.81.316 Latest revision
- Cylindrical FPSO (Goliat). Operational procedures are given by Goliat Skytteltanker Lasteprosedyre – Document Id. 4.OPI.OPR.7453160 Latest revision
- FSL - Framo Submerged Loading System (Draugen). Operational procedures are given by Loading Procedure Manual for shuttle tankers at Draugen Field. Document number EP 201206212949 Latest revision

Loading and discharge operations are to be performed in DP mode and can only be performed with vessel with dynamic positioning capability (DP-2).

DP class notation shall be in compliance with TR2217, TR2396, TR2380 and 140-NOROG - Recommended Guidelines for Offshore Loading Shuttle Tankers.

Common for offshore loading is that shuttle tankers need utility and safety systems especially designed for the shuttle tanker operation at Norwegian Continental Shelf, such as:

1. BLS – Bow Loading System
2. Dynamic Positioning System
3. Position Reference Systems
4. Telemetry Systems and Communication Equipment.

1.2 Objective and target group

The main object with this document is to outline training and competence requirements in order to perform safe and reliable operations. In order to reach this goal, it is essential that the crew is familiar with the operation and the safety systems on board the vessel.

Target group: Offshore Installation manager and shuttle tanker personnel.

1.3 Provision

[OM101.09 Havneoperasjoner og lasting av råolje til havs – Upstream offshore.](#)

2 Language requirements (NCS)

With reference to the Norwegian Petroleum Safety Authority, Statoil requires all deck officers on duty during offshore loading and DP-operations within any Statoil's oil installation's jurisdiction on the Norwegian continental shelf shall be able to communicate in Norwegian language.

Established on board working language shall be used for internal communication.

3 Crew competence and Experience

As per WR2759 Statoil have specific requirements with respect to the vessel's officers and crew competence and experience. For the crew the minimum competence shall be in accordance with international regulations and industry standard. (STCW and MLC requirements).

For senior officers serving on-board the vessels Statoil requires the following minimum experience:

- Master and Chief Officer shall have a combined minimum of three (3) years on-board service in rank
- Chief Eng. and 1st Engineer shall have a combined minimum of three (3) years on-board service in rank
- Bridge Resource Management / Bridge Team Management course for all deck officers

Additional requirement for Time Chartered vessels:

- Master and Chief Officer shall have a combined minimum of two (2) calendar years employed by the operator
- Junior officers one (1) calendar year as combined minimum employed by the operator
- Chief Engineer and 1st Engineer shall have a combined minimum of two (2) calendar years employed by the operator
- Junior engineer one (1) calendar year as combined minimum employed by the operator

4 Training institutions

Each education and training institution shall have its academic and training programme approved by the flag state administration issuing the certificate (STCW). For offshore loading vessels DP operators shall have additional training at recognized simulator training center with proven track record.

5 Course, manning and training requirements

5.1 DP operator renewal requirement

DP certificates are required to be revalidated every 5 years and as such it is required to log DP sea time in the NI, IMCA or equivalent logbook. Confirmation letters are required for revalidation of DP sea time.

5.2 On shore DP operator refresher training requirements

The DP operator shall have refreshment training course minimum every third year. The training facility shall include at least the DP control station, power and management system, propulsion units, position reference systems, environmental and motion reference systems and systems related to external forces, including tension in hawser and weight loads on the bow loading system. DP Training Courses shall ideally be carried out by using ship models similar to vessel and DP system the candidate serves on. It is also required to use field specific procedures in the training program set up.

5.3 Engine room manning

The engine room shall be manned as per flag state requirements. However, from arrival 10nmz, during offshore loading and until departure 10nmz, the minimum manning in the engine room shall be one engineer and one rating.

5.4 General requirements for bridge manning during DP-operations

In addition to the Master, a minimum of two senior DP-operators (DPOs) on board shall hold a valid DP certificate applicable for the vessel type.

The following certificates are accepted:

- a) For DP-Class II vessels the unlimited DP-certificate applies.
- b) Shuttle Tanker DP certificate (DP-Class II)

Statoil accepts DP certificate issued by Nautical Institute or DNV GL.

Statoil's competence requirements for DP-operators (DPO):

a) Deck Officers

Chief Officer, Chief Officer Jr. or 1st. Officer (with min. deck officer Class 2 certificate) shall hold the appropriate DP certificate. Additionally, senior DP operators shall be evaluated by the Master to perform independent DP-watch duties.

For all DP-watch keeping personnel, the certified Senior DPOs are standing the DP-watches assisted by the Junior DPOs also performing cargo/loading duties. Senior and Junior DPOs should alternate watches as appropriate. When not directly performing the DP watch, the Senior DPO will remain immediately available on the bridge.

The Master shall normally not be part of the ordinary DP-watch scheme, but be present and available on the bridge at his discretion. However, the Master is responsible to ensure that he maintains sufficient practice in accordance with DPO-competence requirement.

5.5 On-board Training

Statoil requires that all shuttle tankers shall be provided with an on board simulator training program. The DP-operators shall comply with training scheme as described in the training program reflecting current trade pattern and field realistic conditions.

5.6 Training and Course requirements

		Master	Senior DPO1	Senior DPO2	Junior DPO1	Junior DPO2	Chief Engineer	1st Engineer	Electrician
DP Basic 1 (Induction)		Y	Y	Y	Y	Y			
DP Advanced 1 (Simulator)		Y	Y	Y	Y	Y			
Bridge Resource Management		Y	Y	Y	Y	Y			
Offshore Loading Basic 2		Y	Y	Y	Y	N			
Offshore Loading Advanced 2		Y	Y	Y	Y	N			
Date of Last DP Training or Refresher Course		<3Y	<3Y	<3Y	<3Y	<3Y			
DNV GL DP certificate / Nautical Institute DP certificate		Y	Y	Y	N	N			
On-board DP simulator training		Y	Y	Y	Y	Y			
Operating Courses for relevant Position Reference Systems installed on board	PRS 1	Y	Y	Y	N	N			
	PRS 2	Y	Y	Y	N	N			
	PRS 3	Y	Y	Y	N	N			
	PRS 4	Y	Y	Y	N	N			
	PRS 5	Y	Y	Y	N	N			
	PMS data recorder	Y	Y	Y	N	N			
DP, PRS, PMS and Telemetry Maintenance Courses	PRS 1						One(1) Technical Officer on board trained for each installed system		
	PRS 2								
	PRS 3								
	PRS 4								
	PRS 5								
	DP								
	PMS data recorder								
Telemetry									
OLS CD		Y	Y	Y	Y	Y			
BLS Course		Y	Y	Y			Y	Y	
VOC Operation Course									
Tank Inspection Course									
High Voltage									
Crane Operator Course									

See also notes below

Notes:

- Jr. DPOs are granted six (6) months grace after joining vessel (DP Basic 1)
- Technical Officer is granted six (6) months grace after joining vessel (Maintenance Courses)
- High Voltage Course is granted six (6) months grace after joining vessel (HV >1000V)
- Tank Inspection Course compulsory to deck officers who perform tank and structural inspections
- VOC Operation Course compulsory to all crew in charge of the operation of the VOC plant
- Crane Operator Training compulsory to all crew members who perform crane operations
- Ship Operators must ensure that loading systems the vessel is designed for are included in the training course syllabus
- DP operator certificate issued by an approved body - ref.5.4
- Minimum 12 hours on board DP simulator training annually.
- Relevant position reference systems
 1. Artemis
 2. DGPS / DARPS
 3. HIPAP / HPR / HAIN
 4. Radius

5.7 Master's offshore loading qualification requirements

These requirements apply to Masters without previous shuttle tanker experience, deck officers being promoted to Master and Masters calling at a new type of loading installation, FPSO/FSU (tandem), OLS, FSL, SAL or Cylindrical FPSO for the first time:

- Deck officers being promoted to Master, shall conduct at least six (6) offshore loading operations trained/supervised by a qualified Master before operating the vessel without supervision
- A Master without previous shuttle tanker experience shall sail as trainee until he qualifies the requirements given in this document for DP 2 classed vessels before taking command. For this category of Masters, the requirement for six (6) independent loading operations can be included at the end of the trainee period.
- Qualified Masters calling at FPSO/FSU (tandem), OLS, FSL, SAL or Cylindrical FPSO's for the first time shall be trained/supervised by a Master with required experience during the two (2) first loading operations.
- Training record and logs for loading qualification requirements shall be available on board

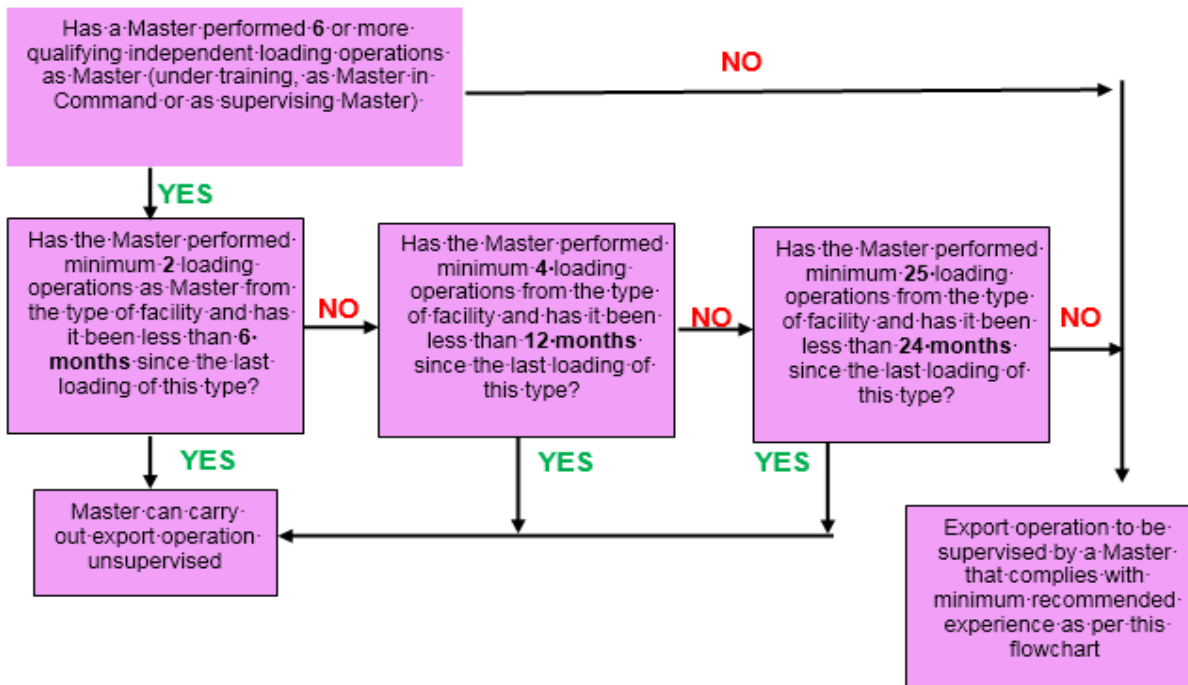
5.8 Offshore loading refresher training requirements

Masters without operational experience at any category of installation during time frames indicated below shall at the first loading operation after said period, be accompanied by a qualified Master with relevant experience from the loading operation in question.

Note:

One operation means a full round trip from entering the 10 NMZ, approaching the installation, connecting, and loading, disconnecting, departing and passing the 10 NMZ outbound. A part loading involving disconnection and reconnection will be accepted as two (2) loading operation.

For the purpose of training and familiarization a DP-operation with the vessel connected/moored to the relevant loading installation/buoy will be accepted as a compensation for a loading operation.



5.9 Minimum Required Experience for Senior DP Personnel

General professional experience is based on calendar. Facility specific required experience is based on required numbers of exports.

	Master	Senior DPO1 Chief Officer	Senior DPO2 Chief Officer	Master months since last export at facility type
General Professional Experience				
Master and Senior DPO1 Chief Officer shall have a combined minimum of 3 years on board service in rank.	Y	Y	N	See flow chart
Facility Specific Required Experience				
	OLS	2		
	F(P)SO (Tandem)	2		
	Cylindrical* F(P)SO	2	*	*
	FSL **	2	**	**
	SAL ***	2	***	***
Number of DP exports performed at heading controlled F(P)SOs	2			
Number of DP exports performed at passive weathervaning F(P)SOs	2			

Note:

- * Vessels loading at Goliat must comply with ENI requirements
- ** Vessels loading at Draugen must comply with Shell requirements
- *** Vessels loading at SAL system must comply with relevant companies' requirements

5.10 Requirement for proficiency in BLS area during connection and disconnection

The Deck officer in charge of connection and disconnection at offshore loading facilities shall have undergone BLS course provided by the maker and have relevant experience and good knowledge of the bow loading equipment. Additionally, before being in charge of the operation the officer shall be supervised by a senior deck officer in order to comply with minimum experience as shown below.

Minimum Facility Specific Required Experience		
Number of supervised connections and disconnections performed at each type of single point offshore installation	OLS	3
	F(P)SO (Tandem)	3
	Cylindrical F(P)SO*	3
	FSL **	3
	SAL ***	3

Note:

- * Vessels loading at Goliat
- ** Vessels loading at Draugen
- *** Vessels loading at SAL systems

6 Hours of rest for watch personnel

Shuttle tankers shall be manned in order to perform all specified services as stated in the charter party or in contracts of agreement. The Master shall ensure that all personnel comply with current STCW and MLC regulations at all times. Requirement for rest hours shall be taken into account in preplanning of offshore loading activities.

7 Additional information

7.1 Definitions and abbreviations

ARTEMIS	Position Reference System for DP
BRM	Bridge Resource Management
DARPS	Diffstar Absolute Relative Positioning System
DGPS	Differential Global Positioning System.
DP	Dynamic Positioning System
DP CAP	Dynamic Positioning Competence Assurance and Practice
DPO	Dynamic Position Operator
FPSO	Floating Production Storage Offloading
FSL	Framo Submerged Loading (FSL)
FSU	Floating Storage Unit
HiPAP	High Precision Acoustic Positioning System
HPR	Hydro Acoustic Positioning system
HV	High Voltage

IMCA	International Marine Contractors Association
IMO	International Maritime Organization
MLC	Maritime Labour Convention
NMD	The Norwegian Maritime Directorate
NMZ	Nautical Mile Zone
OCIMF	Oil Companies International Marine Forum
OLS	Offshore Loading System
PMS	Position Monitoring System Recorder
PRS	Position Reference System
RADIUS	Position Reference System for DP
STCW	The IMO's International Convention on Standards of Training, Certification and Watchkeeping for Seafarers.
VOC	Volatile Organic Compound

7.2 Changes from previous version

Major change. Must be read as new document..

7.3 References

[WR2588 Lasting av råolje til havs - Tandem](#)

[WR2589 Lasting av råolje til havs – Offshore Loading System \(OLS\)](#)

[WR9075 Cargo transfer at sea \(UK\)](#)