Annex B Basic Offshore Safety Training (BOST) without Helicopter Underwater Escape Training under SD 4.1.2(HS-TH02)

TPTI APPROVED STANDARDS

Basic Offshore Safety Training (Without HUET Training)

REV. 0 DATE 01/06/07

AMENDMENTS				
AMENDMENT	PAGES	CHANGES MADE BY:	CHECKED BY:	APPROVED BY:

Any amendments made to this standard by TPTI will be recorded above.

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Appendix 1 Trainers Guidance for Basic Offshore Safety Emergency Training without HUET

GLOSSARY

ABC ALARP	Airway Breathing Circulation As low as reasonably practical
ACOP	Approved Code of Practice
BOST	Basic Offshore Safety Training
BOST-H	Basic Offshore Safety Training without HUET
BOP	Blow-out Preventer
COSHH	Control of Substances Hazardous to Health
CO2	Carbon Dioxide
CPR	Cardio Pulmonary Resuscitation
CR	Central Register
EBS	Emergency Breathing System
ESD	Emergency shutdown
DMF	Department of Minerals and Fuels
FOT	Further Offshore Training
GPA	General Platform Alarm
HASAWA	Health & Safety at Work Act
HELP	Heat Escape Lessening Position
HLO	Helicopter Landing Officer
HSE	Health & Safety Executive
HS&E	Health, safety and environment
H2S	Hydrogen Sulphide
IADC	International Association of Drilling Contractors
MHSWR	Management of Health & Safety at Work Regulations
MOB	Man overboard
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OPITO	Standards & Approvals function of Cogent Sector
	Services Limited (sets international standards)
POB	Personnel onboard
PRfS	Personal responsibility for safety
PPE	Personal Protective Equipment
PTW	Permit to Work
SMS	Safety Management System
TEMPSC	Totally Enclosed Motor Propelled Survival Craft
TOFS	Time Out for Safety

BASIC OFFSHORE SAFETY TRAINING WITHOUT HUET

Introduction

This standard was developed jointly by TPTI and OPITO in conjunction with a workgroup representing the interests of the offshore oil & gas industry in Thailand

The rational behind this development was the need for a "fit for purpose" standard to meet the requirements for basic offshore safety training in Thailand **for those who do not travel by helicopter**. The key objective was to establish a basic competency based training standard, appropriate Thailand.

TPTI recognises the contribution made by OPITO in the development of this standard and thanks the directors and management of OPITO for their assistance.

This Document introduces and describes the core competence and safety training requirements relative to the offshore Oil & Gas Industry in Thailand. It is envisaged that by achieving the core competence requirements within the TPTI structure of approved training providers and central recording system, personnel will only require additional training when operating outwith Thai waters and no duplication of previous training will occur.

It is recognised that a major objective is to prevent incidents occurring and if they do occur to be able to respond effectively to them. The training establishment should recognise that this is only part of a broader training programme. There will also be company and installation specific inductions and emergency response training of which most will be conducted offshore on a regular basis as offshore drills and exercises.

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A.1 Target Group

This programme is designed to assist in meeting the initial onshore safety and emergency response training and assessment requirements for personnel new to the offshore oil and gas industry in Thailand.

This BOST-H Standard contains:

Learning Outcomes Training Programme Content Statements on: Assessment

Further Training/Assessment

The standard consists of the following modules:

Safety Induction Sea Survival Boat Transfer Firefighting and Self Rescue

A.2 Delegate Prior Achievement

No prior achievement required

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Basic Offshore Safety Training without HUET

The responsibility for delivering and assessing this programme rests with TPTI Approved Training Providers.

A.3 Learning Outcomes

During the BOST-H programme delegates will gain a basic level of understanding and an awareness of safety and emergency response on offshore installations.

They will be required to demonstrate their skills and the level of knowledge and understanding of the following key areas.

SAFETY INDUCTION

Delegates will explain/identify: (testing knowledge)

- 1. Offshore hazards, their control and consequences.
- 2. Waste disposal/environmental awareness.
- 3. How offshore safety is regulated.
- 4. How offshore safety is managed.
- 5. Procedures for prescribed medicines offshore.
- 6. Alcohol and substance abuse policy.
- 7. PPE requirements.
- 8. Procedure for reporting incidents, accidents and near misses.
- 9. The role of the Medic.

Basic Offshore Safety Training without HUET

A.3 Learning Outcomes (continued)

SEA SURVIVAL

Delegates will demonstrate practically: (testing skills and knowledge)

- 10. Donning of a permanent buoyancy lifejacket prior to use in an emergency.
- 11. Actions when mustering and boarding a survival craft (TEMPSC) as a passenger during launching operations.
- 12. Fitting of a helicopter strop and correct body posture during winching.
- 13. Immediate first aid actions including the ABC.

BOAT TRANSFER

Delegates will demonstrate practically: (testing skills and knowledge)

- 14. Donning a permanent buoyancy lifejacket
- 15. A method of transfer between a simulated boat deck and a simulated fixed installation deck e.g. swinging rope transfers

FIREFIGHTING AND SELF RESCUE

Delegates will demonstrate practically: (testing skills and knowledge)

- 16. Use of appropriate hand held portable fire extinguishers.
- 17. Self-rescue techniques with a smoke hood from areas where visibility is reduced due to smoke*.
- 18. Self-rescue techniques with a smoke hood from areas where visibility is completely obscured**.
- 19. Small group escape techniques with a smoke hood from areas where visibility is completely obscured.

^{*} smoke hoods to be used in cosmetic smoke only

^{**}This may be achieved by conducting exercises in darkness or by using "blacked out" smoke hoods

Basic Offshore Safety Training without HUET

A.4 Training Programme

The training programme outlined below will assist delegates to meet the stated training outcomes.

In order to make efficient use of time and ensure effective learning, the three phases of explanation, demonstration and practice should be integrated wherever practicable.

Full use should be made of visual/audio-visual aids and course handout materials.

Practical exercises should be designed and delivered solely to meet these standards, and must not place on delegates any physical or mental demands other than those required to meet the standard.

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

SAFETY INDUCTION

1. Industry Overview and Installation Overview

Give an overview of:

- a. Offshore oil and gas activities.
- b. Formation, finding and exploitation of oil and gas.
- c. Types of installations
 - drilling
 - production oil and gas/gas
 - construction
 - accommodation
 - specialist vessels.
- d. The offshore environment.

2. Offshore Hazards

Give an explanation of:

Offshore hazards and comparative risk levels

- e.g.
- pressure hazards
- motion hazards
- chemical hazards
- electrical hazards
- gravity hazards.

3. Managing Offshore Safety

Give an explanation of:

The multiple barriers model and systems in place to prevent hazards from contacting targets including:

- safe systems of work
- personal responsibility for safety
- safety observation programmes.

4. Controlling Offshore Hazards

Give an explanation of:

The hierarchy of control and how control measures are implemented offshore; discuss the consequences of failure to control the risks.

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

SAFETY INDUCTION (continued)

5. Regulating Offshore Safety*

Give an explanation of:

How offshore safety is regulated e.g.

- legislation applicable
- legislative requirements
- legal responsibilities
- role of industry organisations
- documenting the SMS

Industry Safety Aims and Visions*

Give an explanation of:

Industry's expectations of personal safety behaviour e.g.

- Industry vision
- Expected standards for safety
- Behavioural safety tools

*The Trainer's Guide for Basic Offshore Safety Training without HUET in Appendix 1 includes further information relevant to this topic.

6. Living and Working Offshore

Give an explanation of:

Fitness requirements, medical standards, The procedure for taking prescribed medicines offshore Alcohol and substance abuse policies.

> Offshore routines: reporting in installation induction cabin/laundry/bond recreation /smoking getting on with others

Working routines: procedures work authorisation maintaining a safe workplace personal protective equipment waste disposal the right to stop unsafe work

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

SAFETY INDUCTION (continued)

6. Living and Working Offshore (continued)

Give an explanation of:

Involvement in safety e.g.

- observation systems
- PTW
- toolbox talks
- safety meetings
- drills & exercises
- additional duties

Communicating safety, including:

lines of communication

Injuries and illness:

- reporting incidents, accidents near misses and illnesses
- the role of the medic
- investigation
- preventing a recurrence
- support available to relatives in the event of illness/injury/major incident/evacuation

A Trainer's Guide for Basic Offshore Safety Training without HUET is shown in Appendix 1

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

SEA SURVIVAL

1. Evacuation (Theory)

Give an overview of the actions to be taken prior to, during and after selective evacuation or escape from an offshore installation covering:

- a. Layout of installations (escape routes, temporary refuge, muster locations, abandonment locations, access routes including helideck, bridge landing points, tertiary escape points).
- b. Installation alarms and communications (locations, use and appropriate response).
- c. The possibility of devolved command within the installation's organisational structure and appropriate procedures and actions should this occur.
- d. The need for and use of personal protective equipment (gloves, torch, smoke hoods, etc).
- e. The SAR organisation and means of rescue from sea and survival craft.
- f. The importance of correct personal clothing.
- g. The first aid actions suitable for use in a liferaft and TEMPSC.

a to d above are in advance of the information detailed during installation safety briefings.

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

SEA SURVIVAL (continued)

2. Evacuation and Escape (Practical)

Give an explanation and demonstration of:

- a. The various types of survival craft (TEMPSC), their function, the procedure for mustering, boarding and strapping in, including the safety precautions during lowering and release, emergency equipment and supplies.
- b. The various means of tertiary escape (this may be achieved by the use of video, slides, OHP transparencies, etc).
- c. Water entry and the precautions when entering from a height.

Delegates to practise and demonstrate:

- d. The donning of a permanent buoyancy lifejacket.
- e. As a TEMPSC passenger mustering, boarding and strapping in (the craft then to be lowered into water and released.)
- f. Boarding a marine liferaft from the water and carrying out initial and secondary actions.
- g. The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter.
- h. In-water procedures, including individual and group survival techniques, followed by rescue by one of the recognised methods available offshore.
- i. The first aid actions suitable for use in a liferaft and TEMPSC.

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

3. Emergency First Aid

<u>Note:</u> Emergency first aid training will normally be delivered along with survival first aid (1g. and 2i.)

Give an explanation and demonstration of:

- a. Raising the alarm.
- b. Appropriate behaviour at the first aid scene.
- c. Immediate first aid actions suitable for use prior to the arrival of the medic / first-aider.

Delegates to practise and demonstrate:

- d. Raising the alarm.
- e. Immediate first aid actions including ABC.

A Trainer's Guide for Basic Offshore Safety Training without HUET is shown in Appendix 1.

BOAT TRANSFER

1. Boat Travel

Give an overview of the procedures for:

- a. pre-boarding
- b. safe boarding
- c. on board

This is in advance of the information

d. safe disembarkation

detailed during pretrip briefings

e. personnel transfers

Give an explanation and demonstration of:

- a. swing rope transfers
- b. basket transfers (this may be achieved by the use of videos, slides, OHP transparencies, etc.)

Delegates to practice and demonstrate:

a. swing rope transfers in both directions between a simulated boat deck and a simulated fixed installation deck

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

2. Boat Emergencies

Give an explanation of boat emergencies with specific reference to:

- donning of a permanent buoyancy lifejacket
- flotation characteristics
- use of emergency equipment onboard
- abandonment
- survival techniques following abandonment

Give an explanation and demonstration of:

- a. the donning of a permanent buoyancy lifejacket
- b. boarding a marine liferaft (from vessel/water)
- c. carrying out initial and secondary actions
- d. in-water survival techniques

Delegates to practice and demonstrate a. – d. above

Note: It is not necessary to repeat any exercises carried out within the Sea Survival section

providing the relevance to both situations is explained to delegates.

A Trainer's Guide for Basic Offshore Safety Training without HUET is shown in Appendix 1

FIREFIGHTING AND SELF RESCUE

1. Firefighting Offshore

Give an overview of:

- a. The common causes and nature of fires onboard offshore oil and gas installations.
- b. Raising the alarm.
- c. The purpose of fixed fire and gas detection and firefighting systems; the actions to take in areas where these systems are deployed.
- d. Hydrogen Sulphide; the hazards, methods of detection and the actions to take in the event of discovery.

This is in advance of the information detailed during installation safety briefings

Basic Offshore Safety Training without HUET

A.4 Training Programme (continued)

FIREFIGHTING AND SELF RESCUE (continued)

Give an explanation and demonstration of:

- d. The actions on discovering a fire.
- e. The operation of hand held portable fire extinguishers, small bore fire hose reels, fire blankets and their use against Class A and B fires.

Each delegates to practise and demonstrate:

- f. Raising the alarm on discovery of a fire.
- g. The operation of water (or foam), dry chemical and CO2 hand held portable fire extinguishers in extinguishing Class A and Class B fires as appropriate.

<u>Note</u>: Delegates may practice operation of small bore fire hose reel and/or fire blanket if requested and if sufficient time is available.

2. Self Rescue

Give an explanation and demonstration of:

- a. Self rescue techniques with and without respiratory protection from areas which are being subjected to smoke and heat.
- b. Small group escape techniques with respiratory protection from an area which is being subjected to smoke and heat.

Delegates to practise and demonstrate:

- c. Self-rescue techniques with a smoke hood from areas where visibility is reduced due to smoke*.
- d. Self-rescue techniques with a smoke hood from areas where visibility is completely obscured**.
- e. Small group escape techniques with a smoke hood from areas where visibility is completely obscured.

* smoke hoods to be used in cosmetic smoke only

**This may be achieved by conducting exercises in darkness or by using "blacked out" smoke hoods

A Trainer's Guide for Basic Offshore Safety Training is shown in Appendix 1

Basic Offshore Safety Training without HUET

A.5 Duration of Training

The optimum 'contact time' for this training and assessment is seen as 15 hours 55 minutes.

The Safety Induction part of this module is 100% theory.

It is suggested that the ratio of 40% theory to 60% practical is appropriate for the remaining parts of the module.

Where this training is part of a programme of longer duration:

- the total contact time per day shall not exceed 8 hours.
- the total training day shall not exceed 10 hours

The total training day includes

- contact time
- refreshment and meal breaks
- travel between training sites where applicable.

A.6 Assessment

Delegates will be judged against the learning outcomes using direct observation and oral and/or written questions as appropriate.

Training Providers should have a policy and procedure in place for dealing with persons not meeting the stated learning outcomes.

A.7 Further Training/Assessment

The initial BOST-H certificate is valid for a period of three years. Thereafter, further training should be undertaken.

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RESOURCES

C.1 Staff

In order for a competence programme to be delivered successfully it is necessary to have appropriate persons in presenting and supporting roles.

TPTI Approved Training Providers will deliver and carry out assessment of the programme.

- 1. Training staff will be
 - trained in instructional/lecture techniques and/or have proven instructing /teaching experience.
 - included in an ongoing training programme, which includes visits to offshore oil and gas installations, to enable them to maintain and update skills.
- 2. Assessors will be:
 - discipline experts and will hold a recognised formal assessor award
 - knowledgeable of the areas being assessed.
- 3. All Staff will have the appropriate competencies to conduct/assist with the element of training being undertaken.

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RESOURCES

C.2 Trainer/Delegate Ratio

- 1. The ratio shown for theory sessions indicates the maximum number of delegates attending the course.
- 2. Other ratios indicate the maximum number of delegates to be supervised by an Instructor at any one time during each activity.

Safety Induction	
Theory	1: 16
Sea Survival	
Theory	1: 16
TEMPSC (per craft)Theory & Demonstration	1:8
Lowering and Release	1 : 16
• In-Water	1:8
	(One instructor to be nominated pool supervisor and a minimum of 2 staff appropriately dressed for response to any in-water emergency).
Emergency first aid theory	1: 16
Supervision of ABC practical	1: 4
Boat Transfers	
Theory	1 : 16
Theory & Demonstration	1 : 16
 Practical Swing rope transfer 	1:8

RESOURCES

C.2 Trainer/Delegate Ratio (continued)

Firefighting & Self Rescue

Theory	1: 16
ExtinguishersTheory & DemonstrationPractical Extinguishers	1 : 16 1 : 4
Practical self rescueGroup escape exercise	1:4
 Self-rescue in cosmetic smoke 	1:4

RESOURCES

C.3 Facilities

Administration arrangements appropriate for enrolment and certification of delegates and all aspects of the delivery of training in accordance with this standard.

Theory training area(s) so designed to enable each delegate view, to hear and participate fully in the subject matter being taught.

Practical training areas so designed to enable each delegate, to individually or as part of a team to view, hear and practise the following;

- (a) The donning of a permanent buoyancy life jacket.
- (b) The use of a helicopter lifting strop and winching to a simulated rescue aircraft.
- (c) The boarding of a marine life raft from the water.
- (d) In-water procedures, including individual and group survival technique, followed by rescue by one of the recognised methods available offshore.
- (e) As a passenger TEMPSC mustering, boarding and strapping in (the craft then to be lowered and released).
- (f) Swing rope transfers in both directions between a simulated boat deck and a simulated fixed installation deck
- (g) The use of portable fire extinguishers against the following:
 - Class B contained spill
 - Class A fire
- (h) The donning and wearing of a smoke hood in an area which can be smoke logged using cosmetic smoke.
- **Note:** Facilities provided for delegates to enter the water, either for the HUET or Sea Survival sessions must consist of a purpose built pool with appropriate filtration and water quality checks. Open sea or river facilities are not acceptable.

All facilities must be maintained and where appropriate, inspected and tested in accordance with current standards/legislation and manufacturers recommendations.

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RESOURCES

C.4 Equipment

- 1. Equipment, of a type found on offshore oil and gas installations and vessels involved in offshore operations, required to meet the needs of the training programme.
 - (a) Marine liferaft and ancillary equipment
 - (b) TEMPSC and ancillary equipment
 - (c) TEMPSC means of lowering, launching and recovery
 - (d) Tertiary Escape Systems (video/slide presentation)
 - (e) Helicopter rescue strop
 - (f) Boat transfer simulator
 - (g) Portable Extinguishers water, foam CO₂ and dry chemical
 - (h) H2S detectors
 - (i) Water fire hose reel
 - (j) Fire blanket
 - (k) Smoke hoods
- 2. Safety Equipment appropriate to training being delivered.
 - (a) Personal Protective Equipment (PPE)
 - (b) First Aid Equipment
 - (c) Fire fighting equipment

All equipment must be maintained, and where appropriate, inspected and tested in accordance with current standards/legislation, guidance and manufacturers recommendations.

GENERAL GUIDANCE & REQUIREMENTS

C.5 Certification and Recording

Registration of BOST-H & Module

Training Establishments are responsible for the following:

(a) The issuing of certificates direct to the delegate completing the programme and to the sponsoring company (when required). Each certificate must indicate that the delegate has been assessed against the agreed training outcomes and must contain the following:

Establishment name

Full TPTI course title stating that it is TPTI approved

TPTI course identification code

Delegate's name

Course dates

Expiry date (will be the day before the course completion date)

Unique Certificate Number

Establishment Signatory

- (b) Each individual attending any TPTI approved programme must be registered with the Central Register (CR) operated by TPTI. Registration must be made by the training establishment to TPTI on a weekly basis.
- (c) All Joining Instructions contain information which indicate certain aspects of the course are of a physical nature. The responsibility for the individual completing the course without any adverse effects to their present state of health lies with the delegate and/or the company sponsoring the delegate
- (d) Prior to each course commencing, delegates must sign a declaration indicating they have read and understood a written statement regarding the physical nature of the programme and the need for delegates to be in good health. Instructional staff should also read out a statement indicating this at the time.
- (e) Where doubt exists regarding the medical fitness of any delegate the establishment should seek the advice of a medical officer.
- (f) A medical officer, familiar with the nature and extent of the training is "on call".

GENERAL GUIDANCE & REQUIREMENTS (cont)

- (g) Risk assessment of all training areas and provision of all appropriate safety equipment.
- (h) Written statements of organisation for all sessions, which clearly define responsibilities and relationships for all staff either directly or indirectly involved.
- (i) All training and supporting activities are carried out in accordance with current legislation

C.6 Medical and Health Requirements

Emergency response training contains physically demanding and stressful elements. All personnel who participate in such training should be medically fit and capable of participating fully.

Training Establishments are required to ensure that prior to participating in practical exercises the delegate either;

a) Possess a valid, current offshore medical certificate

Or

b) Undergoes an appropriate medical screening by the training establishment

It is recommended that this information is given to delegates along with pre-course joining instructions

Guidance and advice on this standa	rd is ava	ilable by contacting:
TPTI 6 th Floor Shinawatra Tower III 1010 Vibhavadi-Rangisit Road Chatuchak Bangkok 10900	Tel: Fax: E-mail:	66 2929 66 2791 tpti_kd@yahoo.com

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Appendix 1.

GUIDANCE TO THE TRAINER

Basic Offshore Safety Training without HUET

Trainer's Guide

It is the intention that the following trainer's guide be used as a reference tool by training staff in the development and provision of theory and practical lessons. Resources and key topics listed should not be seen as lists that are either definitive or exhaustive when being used for lesson preparation.

The optimum 'contact time' for this training is seen as 15 hours 55 minutes.

The times indicated for individual lessons are flexible within this overall optimum time. However instructional staff should see these times as indicators to the amount of detail required for the delivery of the topic.

The training 'contact time' should not exceed 8 hours per day and except in unusual circumstances the total training day should not exceed 10 hours.

<u>Content</u>	<u>Optimum Contact</u> <u>Time (hrs)</u>	<u>Page</u>
1. Registration and Safety	Not included	
2. Safety Induction	3 hrs	10
3. Sea Survival	6hrs 30min	13
4. Boat Transfer	1hr 30min	15
5. Firefighting & Self-Rescue	4hrs 25min	16
6. Assessment of Safety Induc	ction 30 min	
Total Optimum Contact	Time 15 hours 55 mins	

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Instructor's Guide – BOST-H (Registration & Safety)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Registration Safety	 Medical Fitness CR (refer to TPTI 'Personal Record') Training Provider Registration Certification Training Provider Health & Safety Policy Fire Alarm/Emergency Actions First Aid Accident reporting Site Plan of training facility 	E			Visual Aids Medical Statement CR Registration Forms Training Provider documentation	Not included in course training time total

E - Explanation (by training staff)

staff)

D-

Demonstration (by training staff)

P - Practice (by delegate)

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Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Session Introduction	 Aim (what the session is designed to do) Training Outcomes (what is expected of delegates) Timetable/Programme (how delegates can achieve what is expected of them) Staff (who will be involved with the delegates) 	E			Visual Aids	10 mins

E - Explanation (by training staff) D - Demonstration (by training staff) P - Practice (by delegate)

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Instructor's Guide – BOST-H (Safety Induction)

A.4 Safety Induction 1 Pg 12 Industry & Installation Overview • Overview of offshore oil and gas activities. E Visual Aids 30 mins 1 Pg 12 • Formation, finding and exploitation of oil and gas - how hydrocarbons are formed, found and produced. • Formation, finding and exploitation of oil and gas - how hydrocarbons are formed, found and produced. • Types of installations and specialist vessels and their main functions and features. • Types of installations and specialist vessels and their main functions and features. • drilling - jack-up, semi-sub, drill ship - production oil & gas/ gas - fixed, floating - construction - heavy lift, pipe laying - accommodation - flotel - specialist vessels - standby, support, diving support. • Safety Induction 2 • The offshore environment - remote nature - harsh conditions • The offshore environment - remote nature • Safety Induction 2	Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
- proximity of working/living environments P - Practice (by delegate) E - Explanation (by training staff) D - Demonstration (by training staff) P - Practice (by delegate)	Induction 1 Pg 12	Installation Overview	 Formation, finding and exploitation of oil and gas how hydrocarbons are formed, found and produced. Types of installations and specialist vessels and their main functions and features. drilling - jack-up, semi-sub, drill ship production oil & gas/ gas fixed, floating construction - heavy lift, pipe laying accommodation - flotel specialist vessels - standby, support, diving support. The offshore environment remote nature harsh conditions proximity of working/living environments 	E				30 mins

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Instructor's Guide – BOST –H (Safety Induction)

Safety H	Offshore Hazards Introduction	 Definitions hazard risk control measure 	E	Safety Induction 1		
					Visual Aids	10 mins
-	Offshore	 Accident Statistics comparison with other industries Environmental impact / statistics 		Safety Induction 2	Acc/incident figures	
H	Hazards	 Pressure Hazards oil/gas reservoir process/drilling pipework water / gas injection gas compression noise Motion Hazards drilling tubulars exposed machinery parts moving heavy equipment manual handling 		Safety Induction 1		20 mins

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Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Ρ	Learning Outcome	Resource	Time
	Offshore	Chemical Hazards			Safety Induction 1		
	Hazards (cont.)	- drilling chemicals			muuclion		
		 reservoir fluids/gases (inc. H2s and narcotic effects of hydrocarbon gas) 	E				
		- confined space entry					
		- process chemicals					
		- solvents					
		Electrical Hazards	_				
		- maintenance of electrical equipment	E				
		- faulty electrical equipment					
		Gravity Hazards					
		- working under suspended loads					
		- working at heights					
		- slips & trips					
	Consequences	Accidents & incidents				examples	

E - Explanation (by training staff) D - Demonstration (by training staff) P - Practice (by delegate)

Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Safety Induction 3 Pg 12 A.4 Safety Induction 4	Managing offshore safety Controlling Hazards	 Concepts of hazards contacting targets & barriers to the contact being made risk assessments procedures training competency assurance communications permit to work Behavioural safety programmes the 9 elements of PRfS safety observation programmes Hierarchy of control Determining risks (inc. to environment) and implementing control measures e.g. reservoir/ pipe work isolation 	E		Safety Induction 4	Multiple barriers model • Step change products - task risk assessment - lifting and mechanical handling - personal responsibility for safety - look this way • OIAC "Guidelines to PTW Systems in the Petroleum Industry"	20 mins
Pg. 12	ion (by training staff)	 B.O.P. training on handling tubulars guarding of machinery MSDS's / chemical & dust protection electrical isolation fall protection etc. 	Ρ		Practice (by delegate)		

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Safety Induction 5 Pg 14	Regulating Offshore Safety	 Hierarchy of legislation directives Acts / regulations / ACOP's etc. Acts supported by regulations goal setting rather than prescriptive Specific Acts and Labour Laws duties of employer & employees concept of ALARP Regulations and guidance mostly risk assessment based MHSW COSHH noise environmental Use of ISO standards e.g. ISO 14001 Safety Regulations identification of major hazards, risks and control measures demonstration of how safety is managed 	E		Safety Induction 3		15 mins

Instructor's Guide – BOST-H (Safety Induction)

E - Explanation (by training staff) D - Demonstration (by training staff) P - Practice (by delegate)

Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Regulating Offshore Safety Cont.	 Safety Regulations (cont.) how safety is audited acceptance by regulator verification of safety critical systems and performance standards Firefighting and Emergency Response 	E		Safety Induction 3		
		 goals for prevention / protection & emergency response emergency response planning performance standards 			Safety Induction 3		
	The Regulator	 Role of the regulator structure scope activities powers of the regulator 					
E - Explanation (Industry Aims and Vision	STEP Change what it is why it exists where it is going					5 mins

E - Explanation (by training staff) D -Demonstration (by training staff) P - Practice (by delegate)

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Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Safety Induction 6 Pg 14	Living and Working Offshore	 Personal Standards fitness medical standards medicines substance abuse policies Living offshore reporting in items permitted/not permitted offshore installation induction cabin/laundry/bond recreation/smoking getting on with others Responsibilities of employer / employee line of reporting 	E		Safety Induction 5 Safety Induction 6	Installation organisation chart	5 mins

E - Explanation (by training staff)

D- Demonstration (by training staff)

P-

Practice (by delegate)

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Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Ρ	Learning Outcome	Resource	Time
	Living and Working Offshore Cont.	 Working routine procedures work authorisation personal protective equipment (PPE) maintaining a safe place of work waste disposal right to stop unsafe work 	E		Safety Induction 7	Examples of common PPE	10 mins
		 Your involvement in safety safety observation systems PTW toolbox talks safety meetings emergency drills & exercises 				STOP/START/TOFS etc. Examples of permits	30 mins
		 additional emergency response duties getting involved what to do when not satisfied e.g. immediate supervisor OIM 				Installation emergency organisation chart	
E - Explana	tion (by training staff)	D - Demonstration (by training s	staff)		P -	Practice (by delegate)	

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Instructor's Guide – BOST-H (Safety Induction)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Living and Working Offshore Cont.	 Reporting injuries & illness the role of the medic first aid arrangements offshore reporting incidents, accidents & near misses investigation preventing a recurrence support available to relatives 	E		Safety Induction 8&9		10 mins
	Summary Assessment	Formal assessment of knowledge				Question papers/ question bank	30mins

(180 minutes) + 30min

assessment

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Instructor's Guide – BOST-H (Sea Survival)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Session Introduction	 Aim (what the session is designed to do) Learning Outcomes (what is expected of delegates) Timetable/Programme (how delegates can achieve what is expected of them) Staff (who will be involved with the delegates) 	Ε			Visual Aids	15 mins

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Instructor's Guide – BOST-H (Sea Survival)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Sea Survival 1 Pg. 17	Evacuation	 Layout - escape routes, muster points, safe refuge, abandonment points, access routes, helideck, boat landing points, tertiary escape points Alarms and communications Station bill Types of emergencies Command and devolved command PPE SAR Personal protective clothing 	E			Visual aids	30 mins

E-Explanation (by training staff)

D-Demonstration (by training staff)

P-Practice (by delegate)

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Instructor's Guide – BOST-H (Sea Survival)

A.4 Sea Survival 2 Pg. 18 TEMPSC - Types – freefall/ single/twin E&D Visual Aids TEMPSC & Equipment Video - Pyrotechnics 90 mins Functions and capabilities (e.g. air supply, fire protection, buoyancy, etc) - Lowering and release - Emergency equipment - Lowering and release - Muntaring - Muntaring 90 mins	Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
 Mustering Boarding Strapping in As passenger Muster Muster Muster Muster Strapping P Sea Survival 14 &15 	A.4 Sea Survival 2		 Functions and capabilities (e.g. air supply, fire protection, buoyancy, etc) Lowering and release Emergency equipment Mustering Boarding Strapping in As passenger Muster Board 	E&D	Ρ	Sea Survival 14	TEMPSC & Equipment	90 mins

E-Explanation (by training staff)

D-Demonstration (by training staff)

P-Practice (by delegate)

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Instructor's Guide – BOST-H (Sea Survival)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Sea Survival 3 Pg. 19	Emergency First Aid	First aid arrangementsRaising the alarmMaintaining safety	E		Sea Survival 17	Visual Aids	
		 Emergency actions/ behaviour ABC/ recovery position bleeding/burns (immediate actions) chemical contact What not to do 	E&D	Ρ		Mannequin (eg. Ambu-Man/ Resusci Annie)	120 mins
i	First Aid Actions in TEMPSC Liferaft	 Airway CPR Bleeding Exposure to elements (heat & cold) 	E&D E&D	P P		Video (Hypothermia)	

E-Explanation (by training staff)

D-Demonstration (by training staff)

P-Practice (by delegate)

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Instructor's Guide – BOST-H (Sea Survival)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Tertiary Escape	 Knotted Rope Scramble Net Liferaft Ladders Personal descending escape devices 	E&D			Visual Aids	30 mins
	Water Entry	 Precautions on water entry from - a height - water level 		E&D		Pool	5 mins

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Instructor's Guide – BOST-H (Sea Survival)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Rescue by Helicopter	 Crew control - winchman Methods of lift - hi-line Single lift Double lift Body posture Aircraft entry Donning of permanent buoyancy lifejackets Water entry level (stepping off poolside max 1m fall) Individual survival techniques swimming/HELP/wave slap protection Group survival techniques towing/chain/huddle/circle Marine raft boarding initial & secondary actions 		E E,D E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P	Sea Survival 16 Sea Survival 15	Helicopter strops Winch Pool Lifejackets Marine raft & ancillary equipment Rescue facility (optional)	30 mins 60 mins
- Explana	Summary ation (by training staff)	FRC inet basket ladder D-Demonstration(by training staff) P	- F	ractice (by dele	gate)	 	10 mins al 6.5 hours (390 minute

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Instructor's Guide – BOST-H (Boat Transfer)

Ref OPITO Std	Subject	Key Topics	Th	Ρ	Learning Outcome	Resource	Time
	Session Introduction	 Aim (what the session is designed to do) Training Outcomes (what is expected of delegates) 	Ш		Intro	Visual Aids	5 mins
A. 4 Boat Travel 1	Boat Travel	 Introduction with a brief overview of boat operations Arrival time 	E & D		Boat transfer	Visual Aids	15 mins
P. 18	Pre-boarding safe boarding	 Correct dress – emphasise Documentation Prohibited Articles 				Video	
	sale boarding	 Check-in 					
	on board	Safe boardingOn board					
	safe disembarkation	 Safe disembarkation Personnel transfers 					
		 Summary – mention pre-travel briefings 					

Practice (by delegate) Ρ -

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Instructor's Guide – BOST-H (Boat Transfer)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A. 4 Boat Emerge ncies 2 P. 19	Boat Emergencies On-board Abandonment	 Abnormal conditions Types of alarm Fire – inform crew Follow crew instructions Permanent buoyancy lifejacket Emergency equipment Escape routes Liferaft, stowage, operation, launch Liferaft - boarding, vital and secondary actions. Survival techniques 		D&P		Safety Staff Personal flotation device (workvest) Swing rope transfer simulator PPE	40 mins
	Practical Personnel Transfers Summary	 Swing rope transfers in both directions between a simulated boat deck and a simulated fixed installation deck. 			Boat Transfer 17 & 18		25 mins 5 mins

Total Time 1.5 hours

(90 minutes)

Е -

Explanation (by training staff) Demonstration (by training staff) Practice (by delegate) D -

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<u>Instructor's Guide</u> – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Session Introduction	 Aim (what the session is designed to do) Learning Outcomes (what is expected of delegates) Timetable/Programme (how delegates can achieve what is expected of them) Staff (who will be involved with the delegates) 	E			Visual Aids	15 mins

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Firefighting & Self Rescue 1 Pg. 20	Fire onboard an offshore installation Nature of Fire	 Triangle of combustion Fire spread relate conduction, directly to convection, triangle of radiation combustion Extinguishing media water, dry powder, foam, co₂, 	E			Visual Aids	25 mins
	Common causes of fire onboard	 Processes and Activities emphasis on electrical, domestic and welding related fires. 	E				

E - Explanation (by training staff) D - Demonstration (by training staff)

P - Practice (by delegate)

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Fixed Systems Onboard Response	 Purpose of fixed fire and gas detection and firefighting systems. Actions to take in areas where these systems are deployed in respect of those having an effect on a persons health and safety (ie, deluge, halon, CO₂, and the urgent need to evacuate the area.) Action on discovering a fire (as Installation Emergency Procedures) with emphasis on raising the alarm (methods) location of portable hand held firefighting equipment (types to be used during practical session) evacuate to designated area. 	E E&D			Visual aids <u>Note</u> : More detailed information on fire equipment and procedures specific to an installation will be included in installation safety briefings.	
	Hydrogen Sulphide	 The hazards of H2S, methods of detection and the actions to take if it is discovered 				Visual aids H2S detectors	10 min

E - Explanation (by training staff)

P - Practice (by delegate)

D - Demonstration (by training staff)

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	PPE Issue PPE to delegates	 Protection offered Correct method of wearing/fit Condition of PPE 		D&P		PPE as appropriate	15 mins
	Portable hand held firefighting equipment Fire Extinguishers	 Raising the alarm. Recognition of the different types of fire extinguisher (water, dry chemical, foam, CO₂ - not halon) Operate and use of each type of extinguisher on appropriate fire (class A and B) position of user techniques Delegates to practice operation and use of the range of extinguishers 	E	D&P D E,D,P P	Firefighting & Self Rescue 18	Extinguishers (Water, Dry Powder, Foam, CO ₂ - not halon) Hose Reel Fire Blanket Fuel (Class A & B fires) Props (appropriate to practical training requirements) First Aid	65 mins
	Small bore fire hose reels	 Operation and use on class A fire by training staff 	Е	D			
	Fire Blanket	Use on class B fire by training staff	E	D			

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Ρ	Learning Outcome	Resource	Time
		 Notes:- 1. All practical sessions involving the use of the above equipment should include the appropriate procedure on discovering a fire with emphasis on raising the alarm. 2. The TPTI Standard will be satisfied if each trainee practises the operation and use of each of the following types of fire extinguisher: water or foam CO2 dry chemical 3. Although not a requirement of the standard, delegates may operate a small bore hose reel and/or fire blanket if sufficient time is available. 					

E - Explanation (by training staff)

D -

Demonstration (by training staff)

Practice (by delegate)

Ρ-

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
A.4 Firefighting & Self Rescue 2 Pg. 20	Self Rescue Self rescue techniques	 Self rescue, without smoke hood with smoke hood 	E&D			Visual Aids	20 mins
		To include correct methods and procedures for escape when exposed to smoke and heat e.g. movement in corridors, on stairs with consideration of heat & visibility levels					
	Smoke hoods	 Donning and use of smoke hood Explanation & demonstration of a selection of smoke hood types to delegates. 	E&D			Selection of smoke hoods for demonstration	15 mins

E - Explanation (by training staff)

D - Demonstration (by training staff)

P - Practice (by delegate)

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Instructor's Guide – BOST-H (Firefighting & Self Rescue)

Ref OPITO Std	Subject	Key Topics	Th	Р	Learning Outcome	Resource	Time
	Self Rescue						
	Practical Self Rescue	 Brief for practical session. Delegates to practise self rescue using smoke hood when, operating in restricted visibility (cosmetic smoke) visibility is completely obscured. Delegates to practise small group escape using smoke hood when visibility is completely obscured 	E	D&P	Firefighting & Self Rescue 19 Firefighting & Self Rescue 20 Firefighting & Self Rescue 21	Cosmetic smoke generator Smoke hoods Facility/Prop Torches First Aid/Resuscitation equipment	10 mins 80 mins
	Summary	Note : More detailed information on escape equipment and procedures specific to an installation will be included in installation safety briefings.					10 mins

E - Explanation (by training staff) D - Demonstration (by training staff) P - Practice (by delegate)



(265 minutes)