TPTI APPROVED STANDARDS

Basic Offshore Safety Training (BOST)

and

Further Offshore Training (FOT)

REV.	1	DATE	16/07/09

AMENDMENTS				
AMENDMENT	**PAGES**	**CHANGES MADE BY:**	**CHECKED BY:**	**APPROVED BY:**
Add Section B.3 Learning Outcomes For Sea Survival **Revision 1 Date : 16/07/09**	**23**	**Yutthaphoom K.**	**Yutthaphoom K.**	**Vichai T. (TSAG Chairperson)**

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

CONTENTS

GLOSSARY

ABC	Airway Breathing Circulation
ALARP	As low as reasonably practical
ACOP	Approved Code of Practice
BOST	Basic Offshore Safety Training
BOP	Blow-out Preventer
CAA	Civil Aviation Authority
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 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)
PFEER	Prevention of Fire, Explosion and Emergency Response Regulations
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

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. 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.

BASIC OFFSHORE SAFETY TRAINING

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 Standard contains:

Learning Outcomes
Training Programme Content
Statements on:
Assessment
Further Training/Assessment

The standard consists of the following modules:

Safety Induction
Helicopter Safety and Escape
Sea Survival
Boat Transfer
Firefighting and Self Rescue

A.2 Delegate Prior Achievement

No prior achievement required

Basic Offshore Safety Training

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

A.3 Learning Outcomes

During the BOST 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.

A.3 Learning Outcomes (continued)

HELICOPTER SAFETY & ESCAPE

Delegates will demonstrate practically:
(testing skills and knowledge)

10. Donning an aviation lifejacket.

11. Actions in preparation for a helicopter ditching and an emergency landing.

12. Actions following:
    a. A controlled emergency descent to a dry landing with evacuation via a nominated exit.
    b. A controlled ditching on water (including operation of a push out window).
    c. A partial submersion of an aircraft (without operation of a push out window).
    d. A partial submersion of an aircraft (including operation of a push out window).

13. Actions following:
    a. An aircraft capsize in water (without operation of a push out window).
    b. An aircraft capsize in water (including the operation of a push out window).

SEA SURVIVAL

Delegates will demonstrate practically:
(testing skills and knowledge)

14. Donning of a permanent buoyancy lifejacket prior to use in an emergency.

15. Actions when mustering and boarding a survival craft (TEMPSC) as a passenger during launching operations.

16. Fitting of a helicopter strop and correct body posture during winching.

17. Immediate first aid actions including the ABC.

A.3 Learning Outcomes (continued)

BOAT TRANSFER

Delegates will demonstrate practically:
(testing skills and knowledge)

17. Donning a permanent buoyancy lifejacket

18. 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)

19. Use of appropriate hand held portable fire extinguishers.

20. Self-rescue techniques with a smoke hood from areas where visibility is reduced due to smoke*.

21. Self-rescue techniques with a smoke hood from areas where visibility is completely obscured**.

22. 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

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

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

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 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:	Working routines:
reporting in	procedures
installation induction	work authorisation
cabin/laundry/bond	maintaining a safe workplace
recreation /smoking	personal protective equipment
getting on with others	waste disposal
	the right to stop unsafe work

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 is shown in Appendix 1

Basic Offshore Safety Training

A.4 Training Programme (continued)

HELICOPTER SAFETY & ESCAPE

1. Helicopter Travel

Give an overview of the procedures for:

a. Pre-boarding
b. Safe boarding
c. In-flight
d. Safe disembarkation

This is in advance of the information detailed during pre-flight briefings

2. Helicopter Emergencies

Give an explanation and demonstration of:

a. In-flight emergencies
b. Ditching and emergency landing
c. Evacuation

with specific reference to,

- Donning of an aviation lifejacket.
- Aircraft flotation characteristics.
- Emergency equipment onboard.
- Escape routes.
- Exit points and their operation.
- Survival techniques following evacuation.

A.4 Training Programme (continued)

HELICOPTER SAFETY & ESCAPE

Delegates to practise and demonstrate:

d. Donning of an aviation lifejacket.
e. Preparation for a helicopter ditching/emergency landing.
f. Evacuation from a helicopter using a nominated exit, following a controlled emergency descent to a dry landing.
g. Dry evacuation, using a nominated exit, to an aviation liferaft from a helicopter ditched on water (including operation of a push out window), assisting others where possible and carrying out vital and secondary actions.
h. Escape, through a window opening which is under water, from a partially submerged helicopter (without operation of a push out window).
i. Escape, through a window opening which is under water, from a partially submerged helicopter (including operation of a push out window).
j. Escaping through a window opening which is under water, from a capsized helicopter (without operating a push out window).
k. Escaping through a window opening which is under water, from a capsized helicopter (including operation of a push out window).
l. Inflation of an aviation lifejacket and boarding of an aviation liferaft from the water.

NOTE:

Although push out windows are to be fitted for the final capsize exercise, competence in the operation of these should be assessed during the partial submersion exercise.

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

Basic Offshore Safety Training

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

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

A.4 Training Programme (continued)

SEA SURVIVAL (continued)

3. Emergency First Aid

Note: 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 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
d. safe disembarkation
e. personnel transfers

This is in advance of the information detailed during pre-trip briefings

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

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 is shown in Appendix 1

Basic Offshore Safety Training

A.4 Training Programme (continued)

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 fire and emergency 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

Give an explanation and demonstration of:

e. The actions on discovering a fire.

f. 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:

g. Raising the alarm on discovery of a fire.

h. 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.

Note: 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

A.5 Duration of Training

The optimum 'contact time' for this training and assessment is seen as 20 hours 25 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 certificate is valid for a period of three years. Thereafter, further training should be undertaken. The Further Offshore Training (FOT) is conducted at TPTI Approved Training Centres and is undertaken by all offshore workers and should be completed every three years.

Further Offshore Training

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

Further Offshore Training

The information in this section is for Trainers. It provides the requirements, outcomes, content and guidance for further training. This programme will enable those being trained to acquire the necessary knowledge and skills that underpin the tasks to be performed.

B.1 Target Group

This programme is designed to meet the further onshore safety and emergency response training and assessment requirements for personnel working in the offshore oil and gas industry.

This FOT Standard contains:

Learning Outcomes
Training Programme Content
Statements on:
- Assessment
- Further Training/Assessment

The programme consists of the following parts:

Helicopter Safety and Escape
Sea Survival
Firefighting and Self Rescue

B.2 Delegate Prior Achievement

Persons who have previously attended a TPTI approved BOST or FOT and hold a current certificate; alternatively holders of a current OPITO approved T-BOSIET, T-FOET, BOSIET or FOET certificate.

In the case that, the person who hold a current certificate of BOnST and FOnT want to work for offshore oil and gas industry in Thailand, they shall be deemed to further study on uncovering issues on SAFETY INDUCTION, HELICOPTER SAFETY AND ESCAPE, SEA SURVIVAL AND BOAT TRANSFER over those certificates and also finish the paper examination with the minimum of 70% screening criteria.

Further Offshore Training

B.3 Learning Outcomes

During the FOT programme delegates will have an opportunity to practice and demonstrate skills which it is not possible to practice offshore during drills, exercises and offshore training. They will be required to demonstrate their skills and the level of knowledge and understanding of the following key areas.

HELICOPTER SAFETY & ESCAPE

Delegates will demonstrate practically: (testing skills and knowledge)

1. Donning an aviation lifejacket.

2. Actions in preparation for a helicopter ditching.

3. Actions following:
   a. A controlled ditching on water (including the operation of a push out window).
   b. A partial submersion of an aircraft (without operation of a push out window).
   c. A partial submersion of an aircraft (including operation of a push out window).

4. Actions following:
   a. An aircraft capsize in water (including the operation of a push out window).

SEA SURVIVAL

Delegates will demonstrate practically: (testing skills and knowledge)

5. Donning of a permanent buoyancy lifejacket prior to use in an emergency.

6. Actions when mustering and boarding a survival craft (TEMPSC) as a passenger during launching operations.

7 Fitting of a helicopter strop and correct body posture during winching.

8. Immediate first aid actions including the ABC.

B.3 Learning Outcomes (continued)

FIREFIGHTING AND SELF RESCUE

Delegates will demonstrate practically: (testing skills and knowledge)

9. Use of appropriate hand held portable fire extinguishers.

10. Self-rescue techniques with a smoke hood from areas where visibility is reduced due to smoke*.

11. Self-rescue techniques with a smoke hood from areas where visibility is completely obscured**.

12. 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

Further Offshore Training

B.4 Training Programme

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

In order to make efficient use of time and ensure effective learning there should, wherever practicable, be an integration of the three phases of explanation, demonstration and practise with the emphasis on practise. Full use should be made of visual/audio, visual aids and course handout material.

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.

Further Offshore Training

B.4 Training Programme (continued)

HELICOPTER SAFETY & ESCAPE

1. Helicopter Escape and Rescue

Delegates to practise and demonstrate:-

a. Donning an aviation lifejacket, operating a push out window and carrying out a dry evacuation via a nominated emergency exit to an aviation liferaft from a helicopter ditched on water

b. Assisting others where possible and carrying out vital and secondary actions

c. Escape, through a window opening which is under water, from a partially submerged helicopter (without operating a push out window)

d. Escape, through a window opening which is under water from a partially submerged helicopter (including operating a push out window)

e. Escape, through a window opening which is under water, from a capsized helicopter (including operating a push out window), inflating a lifejacket and carrying out in-water procedures (including individual and group survival techniques).

f. Boarding of a heliraft from the water.

g. Being rescued by one of the recognised methods available offshore.

Note:

- Although push out windows are to be fitted for the capsize exercise, competence in the operation of these should be assessed during the partial submersion exercise.

Further Offshore Training

B.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.

h. The importance of correct personal clothing.

i. 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.

Further Offshore Safety Training

B.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.

Further Offshore Safety Training

B.4 Training Programme (continued)

SEA SURVIVAL (continued)

3. Emergency First Aid

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

Give an explanation and demonstration of:

b. 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 is shown in Appendix 1.

FIREFIGHTING AND SELF RESCUE

1. Firefighting and Self Rescue

Give an overview of:

a. Hydrogen Sulphide; the hazards, methods of detection and the actions to take in the event of discovery.

Delegates to practise and demonstrate:-

b. Raising the alarm on discovery of a fire.

c. The operation of water (or foam), dry chemical and CO2 hand held portable fire extinguishers in extinguishing Class A or Class B fires as appropriate.

d. Self-rescue techniques with a smoke hood from areas where visibility is reduced due to smoke.

e. Self-rescue techniques with a smoke hood from areas where visibility is completely obscured.

f. Small group escape techniques with a smoke hood from areas where visibility is completely obscured.

A Trainer's Guide for Further Offshore Training is shown in Appendix 2

B.5 Duration of Training

The optimum 'contact time' for this training and assessment is seen as 10 hours 15 minutes

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.

B.6 Assessment

Delegates will be judged against the learning outcomes using direct observation.

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

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. Trainer will be :
   - full time staff or contractor, working with the training providers. For the training assistance, the freelances can be allowed.
   - trained in instructional/lecture techniques and/or have proven instructing /teaching experience.
   - graduated from the university, vocational school, school, institute, or any organisation that are accredited by the government.
   - included in an ongoing training programme, which includes visits to onshore oil and gas installations, to enable them to maintain and update skills.
   - Able to clearly communicate and teach in English language.

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.

4. All Training staff will be trained in the causes and consequences of stress/anxiety, coping skills and how to manage delegates who are suffering from anxiety.

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	

Helicopter Escape		
Theory	1: 16	
Theory & Demonstration	1: 16	
Practical Dry Helicopter Escape Trainer	1: 8	
Emergency breathing system equipment familiarisation training (in pool)	1: 4	
Helicopter Underwater Escape Trainer	1: 4	(Also one instructor to be nominated pool supervisor and a minimum of 2 staff as in-water safety persons. Max. 4 delegates in trainer).

RESOURCES

C.2 Trainer/Delegate Ratio (continued)

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

Firefighting & Self Rescue

Theory	1: 16
Extinguishers	
• Theory & Demonstration	1 : 16
• Practical Extinguishers	1 : 4
Practical self rescue	
• Group 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) Dry evacuation into a heliraft on water from a helicopter trainer.

(b) Escape from a partially submerged helicopter trainer through an exit which is under water.

(c) Escape from a capsized helicopter trainer and use of a lifejacket.

(d) Evacuate from a helicopter trainer following an emergency dry landing.

(e) Operation of emergency exits and push out windows of a type currently found on helicopters operating offshore.

(f) Donning of an aviation lifejacket.

(g) Operation of an aviation liferaft.

(h) The donning of a permanent buoyancy life jacket.

(i) The use of a helicopter lifting strop and winching to a simulated rescue aircraft.

(j) The boarding of a marine life raft from the water.

(k) In-water procedures, including individual and group survival technique, followed by rescue by one of the recognised methods available offshore.

(l) As a passenger TEMPSC mustering, boarding and strapping in (the craft then to be lowered and released).

(m) Swing rope transfers in both directions between a simulated boat deck and a simulated fixed installation deck

RESOURCES

C.3 Facilities (continued)

Practical (continued)

(n) The use of portable fire extinguishers against the following:
- Class B contained spill
- Class A fire

(o) 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.

RESOURCES

C.4 Equipment

1. Equipment, of a type found on offshore oil and gas installations and helicopters involved in offshore operations, required to meet the needs of the training programme.

    (a) Aviation and marine lifejackets
    (b) Aviation liferaft and ancillary equipment
    (c) Marine liferaft and ancillary equipment
    (d) TEMPSC and ancillary equipment
    (e) TEMPSC means of lowering, launching and recovery
    (f) Tertiary Escape Systems (video/slide presentation)
    (g) Helicopter rescue strop
    (h) Boat transfer simulator
    (i) Portable Extinguishers - water, foam CO_2 and dry chemical
    (j) H2S detectors
    (k) Water fire hose reel
    (l) Fire blanket
    (m) Smoke hoods
    (n) Helicopter Underwater Escape Trainer (HUET) Note: See Appendix 3

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 & FOT Modules

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 daily 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".

(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 medical certificate from the hospital, clinic, or clinical agents registered under Thai government, and :

b) Undergoes an appropriate screening by the trainer or medical officer inside the training establishment area.

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

Guidance and advice on this standard is available by contacting:

Technical Petroleum Training Institute (TPTI)
Energy Complex Building B
555/2, 11th Floor, Vibhavadi-Rangisit,
Chatuchak, Bangkok 10900 Thailand

Tel: 66 29365184
Fax: 66 29365187
E-mail: admin@tpti.org

Appendix 1.

GUIDANCE TO THE TRAINER

Basic Offshore Safety Training

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 20 hours 25 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.

Content	Optimum Contact Time (hrs)
1. Registration and Safety	Not included
2. Safety Induction	3 hrs
3. Helicopter Safety & Escape	4hrs 30min
4. Sea Survival	6hrs 30min
5. Boat Transfer	1hr 30min
5. Firefighting & Self-Rescue	4hrs 25min
6. Assessment of Safety Induction	30 min
Total Optimum Contact Time	**20 hours 25 mins (1,225 mins)**

Instructor's Guide – BOST (Registration & Safety)

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

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	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)

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Safety Induction 1 Pg. 11	**Industry & Installation Overview**	• Overview of offshore oil and gas activities. • 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		Safety Induction 2	Visual Aids	30 mins

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Safety Induction 2 Pg. 11	**Offshore Hazards Introduction**	• Definitions - hazard - risk - control measure	E		Safety Induction 1	Visual Aids	10 mins
		• Accident Statistics - comparison with other industries • Environmental impact / statistics			Safety Induction 2	Acc/incident figures	
	Offshore 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

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Offshore Hazards (cont.)	• Chemical Hazards - drilling chemicals - reservoir fluids/gases (inc. H2S and narcotic effects of hydrocarbon gas) - confined space entry - process chemicals - solvents • Electrical Hazards - maintenance of electrical equipment - faulty electrical equipment • Gravity Hazards - working under suspended loads - working at heights - slips & trips	E E		Safety Induction 1		
	Consequences	Accidents & incidents				examples	

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Safety Induction 3 Pg. 11	**Managing offshore safety**	• 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	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
A.4 Safety Induction 4 Pg. 11	**Controlling Hazards**	• Hierarchy of control • Determining risks (inc. to environment) and implementing control measures e.g. - reservoir/ pipe work isolation - B.O.P. - training on handling tubulars - guarding of machinery - MSDS's / chemical & dust protection - electrical isolation - fall protection etc.			Safety Induction 1		

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Safety Induction 5 Pg. 12	**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 (SMS)	E		Safety Induction 3 .		15 mins

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	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 - goals for prevention / protection & emergency response - emergency response planning - performance standards	E		Safety Induction 3 Safety Induction 3		
	The Regulator	• Role of the regulator - structure - scope - activities - powers of the regulator					
	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)

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Safety Induction 6 Pg. 12	**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 15 mins

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	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 • Your involvement in safety - safety observation systems - PTW - toolbox talks - safety meetings - emergency drills & exercises - additional emergency response duties - getting involved what to do when not satisfied e.g. immediate supervisor/OIM	E		Safety Induction 7	Examples of common PPE STOP/START/TOFS etc. Examples of permits Installation emergency organisation chart	10 mins 30 mins

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

Instructor's Guide – BOST (Safety Induction)

Ref TPTI Std	Subject	Key Topics	Th	P	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					Question papers/ question bank	
	Assessment	Formal assessment of knowledge					30mins

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

Total 3 hours 30 min
(180 minutes) + 30min

assessment

Instructor's Guide – BOST (Helicopter Safety & Escape)

Ref TPTI Std	Subject	Key Topics	Th	P	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	10 mins

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

Instructor's Guide – BOST (Helicopter Safety & Escape)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Helicopter Safety & Escape 1 Pg. 14	**Helicopter Travel** Pre-boarding safe boarding in-flight safe disembarkation	• Introduction with a brief overview of helicopter operations • Arrival time • Correct dress • Documentation • Prohibited Articles • Check-in • Lifejacket issue • Checks and donning • Safe boarding • Pre-flight video • Summary - mention pre-flight briefings	E E&D E			Visual aids Briefing Video - not essential	25 mins

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

Instructor's Guide – BOST (Helicopter Safety & Escape)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Helicopter Safety & Escape 2 Pg. 14	**Helicopter Emergencies** In-flight ditching and emergency landing emergency equipment evacuation	• Abnormal conditions (fuel leaks) • Fire – inform crew • Follow crew instructions • Seat belt/ lifejacket • Follow crew instruction • Brace • Escape routes • Emergency equipment • Aviation raft: stowage, operation, entry, vital and secondary actions. • Locate • Release (on-command) • Follow crew instruction • Exits & push out windows - on water, underwater, capsize • Independent action • Survival techniques	E E E E&D E E&D E&D E&D E&D E E&D E E			Visual Aids Lifejacket Seat belt Aviation liferaft Exits	25 mins

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

Instructor's Guide – BOST (Helicopter Safety & Escape)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Practical Helicopter Escape	• Evacuation from a helicopter following an emergency dry landing • Dry evacuation using a nominated exit to a heliraft, operate emergency exit or push out window and carry out vital and secondary actions from a helicopter ditched on water. • Escape through a window which is under water from a partially submerged helicopter: - without operating a push out window - operating a push out window • Escape through a window which is underwater following a helicopter capsize: - without operating a push out window - operating a push out window • Following escape from a capsized helicopter, inflate lifejacket, deploy spray visor (if fitted) & board heliraft **SUMMARY**		E,D&P E,D&P E,D&P E,D&P E,D&P	Helicopter Safety & Escape 10, 11, 12 & 13	Safety Staff Lifejackets Helicopter Underwater Escape Trainer(s) c/w removable exits PPE	210 min

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

Total 4 hours 30 min

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	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

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

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Sea Survival 1 Pg. 16	**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)

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Sea Survival 2 Pg. 17	**TEMPSC** TEMPSC	- Types – freefall/ single/twin Functions and capabilities (e.g. air supply, fire protection, buoyancy, etc) • Lowering and release • Emergency equipment • Mustering • Boarding • Strapping in • As passenger - Muster - Board - Strap	E&D	P	Sea Survival 14 &15	Visual Aids TEMPSC & Equipment Video - Pyrotechnics	90 mins

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

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Sea Survival 3 Pg. 18	**Emergency First Aid**	• First aid arrangements • Raising the alarm • Maintaining safety	E		Sea Survival 17	Visual Aids	
		• Emergency actions/ behaviour - ABC/ recovery position - bleeding/burns (immediate actions) - chemical contact	E&D	P		Mannequin (eg. Ambu-Man/ Resusci Annie)	120 mins
		• What not to do		P			
i	**First Aid Actions in TEMPSC Liferaft**	• Airway • CPR • Bleeding • Exposure to elements (heat & cold)	E&D E&D	P		Video (Hypothermia)	

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

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	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

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

Instructor's Guide – BOST (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Rescue by Helicopter	• Crew control - winchman • Methods of lift - hi-line • Single lift • Double lift • Body posture • Aircraft entry		E E,D E,D,P E,D, E,D,P E,D,P	Sea Survival 16	Helicopter strops Winch	30 mins
	In-water procedures	• 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 • Methods of rescue - Standby Vessel • FRC • net • basket • ladder		E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E	Sea Survival 15	Pool Lifejackets Marine raft & ancillary equipment Rescue facility (optional)	60 mins
	Summary						10 mins

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

Total 6.5 hours
(390 minutes)

Instructor's Guide – BOST (Boat Transfer)

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

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

Instructor's Guide – BOST (Boat Transfer)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A. 4 Boat Emergencies 2 Pg. 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	▪ Swing rope transfers in both directions between a simulated boat deck and a simulated fixed installation deck.			Boat Transfer 17 & 18		25 mins
	Summary						5 mins

Total Time 1 hr 30 min
(90 minutes)

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

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

Ref TPTI Std	Subject	Key Topics	Th	P	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

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

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

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
A.4 Firefighting & Self Rescue 1 Pg. 19	**Fire onboard an offshore installation**					Visual Aids	25 mins
	Nature of Fire	• Triangle of combustion • Fire spread relate - conduction, directly to convection, triangle of radiation combustion Extinguishing media - water, dry powder, foam, co_2,	E				
	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)

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

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Fixed Systems Onboard Response Hydrogen Sulphide	• 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, CO_2, 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. • The hazards of H2S, methods of detection and the actions to take if it is discovered	E E&D			Visual aids **Note**: More detailed information on fire equipment and procedures specific to an installation will be included in installation safety briefings. Visual aids H2S detectors	10 min

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

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

Ref TPTI Std	Subject	Key Topics	Th	P	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, CO_2 - 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 E	D&P D E,D,P P	Firefighting & Self Rescue 19	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	E	D			
	Fire Blanket	• Use on class B fire by training staff	E	D			

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

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

Ref TPTI Std	Subject	Key Topics	Th	P	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) P - Practice (by delegate)

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

Ref TPTI Std	Subject	Key Topics	Th	P	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 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	E&D			Visual Aids	20 mins
	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)

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

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Self Rescue Practical Self Rescue **Summary**	• 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 **Note**: More detailed information on escape equipment and procedures specific to an installation will be included in installation safety briefings.	E	D&P	Firefighting & Self Rescue 20 Firefighting & Self Rescue 21 Firefighting & Self Rescue 22	Cosmetic smoke generator Smoke hoods Facility/Prop Torches First Aid/Resuscitation equipment	10 mins 80 mins 10 mins

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

Total 4hrs 25min
(265 minutes)

Appendix 2.

GUIDANCE TO THE TRAINER

Further Offshore Training

The intention of the following guidance is that it be used as a reference tool by training staff in the development and provision of the exercises indicated on pages 32-33. Resources and key topics listed should not be seen as either definitive or exhaustive when being used for lesson preparation.

The optimum 'contact time' for this training is seen as 6 hours 5 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.

When this module is part of a longer training programme 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.

Content	**Optimum Contact Time**
1. Registration and Safety	Not included
2. Course Introduction	10 min
3. Helicopter Safety & Escape	3 hrs 20 min
4. Sea Survival	4 hrs
5. Firefighting & Self Rescue	2 hrs 45 min

Note : Assessment of 3 –5 above is included in the above times

Total Optimum Contact Time	**10 hours 15 minutes**	**(615 minutes)**

Instructor's Guide – FOT (Registration & Safety)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Registration **Safety**	• Medical Fitness • CR • Training Provider Registration • Training Provider Health & Safety Policy • TPTI customer service statement • Fire Alarm/Emergency Actions • First Aid • Site Plan of training facility	E E			Visual Aids Medical Statement CR Registration Forms Training Provider documentation TPTI customer service statement	Not included in course training time total

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

Instructor's Guide – FOT (Course Introduction)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Course Introduction	• Aim (what the training programme is designed to do) • Learning Outcomes (what is expected of delegates) • Timetable/Programme (how delegates can achieve what is expected of them) • Certificate (when and what certificate will be issued) • Staff (who will be involved with the delegates)	E			Visual Aid	10 mins

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

Instructor's Guide – FOT (Practical Helicopter Escape/Survival & Rescue)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
B.4 Helicopter Safety & Escape 1 Pg. 25	**Practical Helicopter Escape**	• Delegates to don lifejacket and to be familiarised with emergency equipment prior to first exercise		E,D & P	Helicopter Safety & Escape 1	Staff Safety Visual Aids Lifejackets Heliraft Helicopter Underwater Escape Trainer (c/w exit mechanisms) PPE	190 mins

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

Instructor's Guide – FOT (Practical Helicopter Escape/Survival & Rescue)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Surface Evacuation	• Dry evacuation from a helicopter ditched on water using a nominated exit to a heliraft; operating an emergency exit/push out window.		E,D & P	Helicopter Safety & Escape 2 & 3a	Staff Safety Lifejackets Heliraft Helicopter Underwater Escape Trainer PPE	
	Partial Submersions	• Escape through a window which is under water from a partially submerged helicopter - without operating a push out window - with operating a push out window		E,D & P	Helicopter Safety & Escape 3b, 3c		
	Capsize	• Escape through an escape exit which is under water from a capsized helicopter - with operating a push out window		E,D & P	Helicopter Safety & Escape 4		
	Survival & Rescue	• Inflate lifejacket & deploy spray visor (if fitted)		E,D & P			
	Summary	• Practise individual and group in-water survival procedures - swimming, HELP, towing, chain, huddle/circle etc.		E,D & P			
		• Boarding an aviation liferaft from the water		E,D, &P			
		• Rescue by one of the recognised means available offshore.		E			10 mins

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

TOTAL 3 hrs 20 min
(200 minutes)

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	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

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

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
B.4 Sea Survival 1 Pg. 26	**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	20 mins

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

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
B.4 Sea Survival 2 Pg. 27	**TEMPSC** TEMPSC	- Types – freefall/ single/twin Functions and capabilities (e.g. air supply, fire protection, buoyancy, etc) • Lowering and release • Emergency equipment • Mustering • Boarding • Strapping in • As passenger - Muster - Board - Strap	E&D	 P	Sea Survival 14 &15	Visual Aids TEMPSC & Equipment Video - Pyrotechnics	40 mins

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

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
B.4 Sea Survival 3 Pg. 28	**Emergency First Aid**	• First aid arrangements • Raising the alarm • Maintaining safety • Emergency actions/ behaviour - ABC/ recovery position - bleeding/burns (immediate actions) - chemical contact • What not to do	E E&D	 P		Visual Aids Mannequin (eg. Ambu-Man/ Resusci Annie)	 30 mins
	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)

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	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

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

Instructor's Guide – FOT (Sea Survival)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
	Rescue by Helicopter	• Crew control - winchman • Methods of lift - hi-line • Single lift • Double lift • Body posture • Aircraft entry		E E,D E,D,P E,D, E,D,P E,D,P	Sea Survival 16	Helicopter strops Winch	30 mins
	In-water procedures	• 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 • Methods of rescue - Standby Vessel • FRC • net • basket • ladder		E,D,P E,D,P E,D,P E,D,P E,D,P E,D,P E	Sea Survival 15	Pool Lifejackets Marine raft & ancillary equipment Rescue facility (optional)	60 mins
	Summary						10 mins

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

Total 4 hours
(240 minutes)

Instructor's Guide – FOT (Firefighting & Self Rescue)

Ref TPTI Std	Subject	Key Topics	Th	P	Learning Outcome	Resource	Time
B.4 Firefighting & Self Rescue 1 Pg. 28	Hydrogen Sulphide	• The hazards of H2S, methods of detection and the actions to take if it is discovered	Th			Visual aids H2S detectors	10 mins
	Portable and hand held firefighting equipment Fire Extinguishers Small bore Hosereels Fire Blanket	• raising alarm • operate and use of each type of extinguisher on appropriate fire (Class A & B) • operate and use hosereel on Class A fire • operate and use on a Class B fire		E,D,P E,D,P E,D*	Firefighting & Self Rescue 6	Extinguishers (Dry powder, water, CO_2, Foam) Hosereel Fire Blanket	65 mins
	Self Rescue Self Rescue Techniques Smoke hoods Practical Self Rescue	• with smoke hood • issue smoke hood • Delegates to practise self rescue using smoke hood when, - operating in restricted visibility (cosmetic smoke) - visibility is completely obscured.		E,D* E,D E,D & P	Firefighting & Self Rescue 7 8	Fuels and props as appropriate First Aid Smoke hoods Cosmetic smoke generator Torches First Aid	80 mins
	Summary	• Delegates to practise small group escape using smoke hood when visibility is completely obscured			9		10 mins

E - Explanation (by training staff), D – Demonstration(by training staff), P – Practise (by delegate)

Total 2 hours 45 min (165 minutes)

NOTES:-

1. 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

2. Although not a requirement of the standard, delegates may operate a small bore hose reel and/or fire blanket if sufficient time is available.

Appendix 3.

GUIDANCE ON HELICOPTER UNDERWATER ESCAPE TRAINER

This standard does not specify a particular manufacturer of Helicopter Underwater Escape Trainer (HUET) nor does it give detailed design specifications as it is felt that this may restrict development and innovation. However, listed below are the criteria that a HUET has to meet in order to deliver safe and effective training in line with this standard.

a) It can be lowered on to the surface of the water, and then subsequently lowered below the water, both in an upright position and capsized.

b) In an emergency it can be retrieved to the surface and if necessary to the side of the pool with the delegates still inside.

c) It has realistic seatbelt fastenings and a system for releasing delegates in an emergency should the buckle fail to open.

d) The body of the HUET rotates with the seats, so that delegates can locate their exit before capsize, i.e. not just the seats rotating within a fixed body.

e) There is a means of stopping the rotation in an emergency (usually a brake).

f) The dimensions of push out windows should be not less than 480mm x 430mm and not greater than 686mm x 609mm and should be fitted with a simulated seal and pull tag.

Note: These windows should be capable of being removed externally by the in water safety staff, in an emergency.
These windows should not be dislodged during normal HUET operations e.g. force of water during capsize

g) If the HUET is also used for the exercise involving opening emergency exits (doors) then the operating mechanism should be similar to that on the real helicopters (note: the push out windows detailed in f) above should be used for escape during the submersion and inversion exercises).

h) There is sufficient room within the HUET for an instructor/assessor as well as the delegates (note a maximum of 4 delegates for the submersion and inversion exercises although there can be more seats).

Note: This information will be utilised when auditing HUET provision.