

KEMENTERIAN PERHUBUNGAN REPUBLIK INDONESIA  
DIREKTORAT JENDERAL PERHUBUNGAN LAUT



MINISTRY OF TRANSPORTATION OF THE REPUBLIC OF INDONESIA  
DIRECTORATE GENERAL OF SEA TRANSPORTATION

## SERTIFIKAT KETERAMPILAN CERTIFICATE OF PROFICIENCY

Nomor Seri / Serial No.

**CP3882881**

Nomor Sertifikat / Certificate No.

**6211948146370420**

Dengan ini dinyatakan bahwa  
This is to certify that

Nama  
Name

**ARMAN HIDAYAT**

Tempat dan tanggal lahir  
Place and date of birth

**MAKASSAR, 24 September 1999**

telah menyelesaikan pelatihan dan lulus evaluasi :  
has completed approved training and passed the assessment of

### BASIC TRAINING FOR LIQUEFIED GAS TANKER CARGO OPERATIONS

yang dilaksanakan oleh PIP Makassar  
which has held by

Makassar

at 7 February 2020 to 20 February 2020

Sesuai ketentuan STCW 1978 beserta dengan amendemennya, Peraturan Chapter V, Section A-V/1-2-1 STCW 2010  
in accordance with the provisions of STCW 1978 as amended, Regulation Chapter V, Section A-V/1-2-1 STCW 2010  
yang telah mendapat pengesahan dari Direktorat Jenderal Perhubungan Laut selaku Administrasi.  
which has been approved by the Directorate General of Sea Transportation as Administration.

Tandatangan Pemilik  
Signature of the Holder



PIP Makassar



Makassar 09 May 2020

An. Direktur Jenderal Perhubungan Laut  
O.b. Director General of Sea Transportation  
Ketua/Direktur/Kepala  
Principal/Director/Head



Capt. SUKIRNO, M.M.Tr., M.Mar.

valid for 5 (five) years commenced from the date of issuance

# BASIC TRAINING FOR LIQUEFIED GAS TANKER CARGO OPERATIONS

## Subject Area

Based on Reg. V/1-2 and STCW 2010 Code Section A-V/1-2-1

### Contribute to the Safe Operation of a Liquefied Gas Tanker

Basic knowledge of liquefied gas tankers

- 1.1.1 Types of liquefied gas tankers
- 1.1.2 General arrangement and construction

Basic knowledge of cargo operation

- 1.2.1 Piping systems and valves
- 1.2.2 Cargo handling equipment
- 1.2.3 Loading, unloading and care in transit
- 1.2.4 Emergency shutdown (ESD) system
- 1.2.5 Tank cleaning, purging, gas-freeing and inerting

Basic knowledge of the physical properties of liquefied gases

- 1.3.1 Properties and characteristics
- 1.3.2 Pressure and temperature, including vapour pressure/temperature relationship
- 1.3.3 Types of electrostatic charge generation
- 1.3.4 Chemical symbols

Knowledge and understanding of tanker safety culture and safety management

#### Precaution to Prevent Hazard

Basic knowledge of the hazards associated with tanker operation

- 1.1.1 Health hazard
- 1.1.2 Environmental hazards
- 1.1.3 Reactivity hazards
- 1.1.4 Corrosion hazards
- 1.1.5 Explosion and flammability hazards
- 1.1.6 Sources of ignition
- 1.1.7 Electrostatic hazards
- 1.1.8 Toxicity hazards
- 1.1.9 Vapour leaks and clouds
- 1.1.10 Extremely low temperatures
- 1.1.11 Pressure hazards

Basic knowledge of hazards controls

- 2.1 Inerting, drying and monitoring techniques
- 2.2 Anti-static measures
- 2.3 Ventilation
- 2.4 Segregation

2.2.5 Cargo inhibition

2.2.6 Importance of cargo compatibility

2.2.7 Atmospheric control

2.2.8 Gas testing

2.3 Understanding of information on a Material Safety Data Sheet (MSDS)

#### 3. Apply Occupation health and Safety Precautions and measures

3.1 Function and proper use of gas-measuring instruments and similar equipment

3.2 Proper use of safety equipment and protective devices

3.3 Basic knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to liquefied gas tankers

3.4 Basic knowledge of first aid with reference to Material Safety Data Sheet (MSDS)

#### 4. Carry out Fire-Fighting Operation

4.1 Tanker fire organization and action to be taken

4.2 Special hazards associated with cargo handling and transportation of liquefied gases in bulk

4.3 Fire-fighting agents used to extinguish gas fires

4.4 Fixed fire-fighting foam system operation

4.5 Portable fire-fighting foam operations

4.6 Fixed dry chemical system operations

4.7 Basic knowledge of spill containment in relation to fire-fighting operations

#### 5. Respond to Emergencies

5.1 Basic knowledge of emergency procedures

#### 6. Take Precaution to Prevent pollution of the environment from the release of Liquefied Gases

6.1 Basic knowledge of the effects of pollution on human and marine life

6.2 Basic knowledge of shipboard procedures to prevent pollution

6.3 Basic knowledge of measures to be taken in the event of spillage

#### 7. Assessment and Evaluation