

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.

Nomor Sertifikat / Certificate No.

6200117433370321

CP4282329

Dengan ini dinyatakan bahwa This is to certify that

Nama

ZAENALARIFIN

Name Tempat dan tanggal lahir

TULIS BATANG 19 December 1979

Place and date of birth

telah menyelesaikan pelatihan dan lulus evaluasi:

has completed approved training and passed the assessment of

### BASIC TRAINING FOR LIQUEFIED GAS TANKER CARGO OPERATIONS Revalidation

yang dilaksanakan oleh: PIP Semarang

which has held by

di Semarang

at: 16 December 2015 to 22 December 2015

Sesual ketentuan STCW 1978: beserta dengan amandemennya, Peraturan: Chapter V; Section: A-V/1-2-1 STCW 2010 in accordance with the provisions of STCW 1978 as amanded; 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** Semarang

### Semarang , 25 March 2021

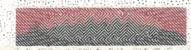
An, Direktur Jenderal Perhubungan Laut O.b. Direktor General of Sea-Transportation

POLITEKNIj Ketua Direktur/Kepala LMU PELAYARA (policial / Director/Head SEMARANG

SEMAKANG

MRANGAN SON

Dr. Capt. MASHUDI ROFIK, M.Sc



Sertifikat ini berlaku untuk 5 (lima) tahun sejak tanggal diterbitkan

This Certificate is 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

1.	Contribute	to	the	Safe	Operation	of	a	Liquefied	Gas
	Tanker				•				

- 1.1 Basic knowledge of liquefied gas tankers
  - 1.1.1 Types of liquefied gas tankers
  - 1.1.2 General arrangement and constribution
- 1.2 Basic knowledge of cargo operation
  - 1.2.1 Piping systems and values
  - 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, parging, gas-freeing and inerting
  - 1.3 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 relantionship
    - 1.3.3 Types of elestroctatic charge eneration
    - 1.3.4 Chemical symbols
  - 1.4 Knowladge and understanding of tanker safety culture and safety management

#### 2. Take Precaution to Prevent Hazard

- 2.1 Basic knowledge of the hazards associated with tanker operation
  - 2.1.1 Health hazard
  - 2.1.2 Environmental hazards
  - 2.1.3 Reactivity hazards
  - 2.1.4 Corrosion hazards
  - 2.1.5 Explosion and flammability hazards
  - 2.1.6 Sources of ognition
  - 2.1.7 Electrostatic hazards
  - 2.1.8 Toxycity hazards
  - 2.1.9 Vapour leaks and clouds
  - 2.1.10 Extremely low temperaturs
  - 2.1.11 Pressure hazards
- 2.2 Basic knowledge of hazards controls
  - 2.2.1 Inerting, drying and monitoring techniques
  - 2.2.2 Anti-static measures
  - 2.2.3 Ventilation
  - 2.2.4 Sugregation
  - 2.2.5 Cargo inhibition

- 2.2.6 Importance of cargo compatibility
- 2.2.7 Athmosperic 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 Fuction 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 prosedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to liquefied gas tamkers
- 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 spili containment in relation to firefighting operations

### 5. Respond to Emergencies

5.1 Basic knowledge of emergracy 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