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.*
CP 1731485

Nomor Sertifikat / *Certificate No.*
6202005018280116

Dengan ini dinyatakan bahwa
This is to certify that

Nama / *Name* :: **TRIBUNANG DARMADI**

Tempat dan tanggal lahir / *Place and date of birth* : BEKASI , 11 July 1994

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

OPERATIONAL USE OF ECDIS TRAINING PROGRAMME

yang dilaksanakan oleh : Sekolah Tinggi Ilmu Pelayaran - Jakarta
which has held by

di : Jakarta
at : 03 October 2016 to 07 October 2016

Sesuai ketentuan STCW 1978 beserta dengan amandemennya, Peraturan : Chapter II Section A-II/1, A-II/2 STCW 2010
in accordance with the provisions of STCW 1978 as amanded, Regulation *Chapter II Section A-II/1, A-II/2 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.

Jakarta , 21 November 2016

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

Tandatangan Pemilik
Signature of the Holder

Capt. WEKU FREDERIK KARUNTU, M.M.

Sertifikat ini berlaku untuk 5 (lima) tahun sejak tanggal diterbitkan
This Certificate is valid for 5 (five) years commenced from the date of issuance

ELECTRONICS CHART DISPLAY AND INFORMATION SYSTEM (ECDIS)
Subject Area
Based on STCW 1978 as amended
Chapter II section A-II/1, A-II/2 and IMO Model Course 1.27

I. Elements of ECDIS
- I.1. Course introduction & familiarization plan
- I.2. Purpose of ECDIS
- I.3. Value to navigation
- I.4. Correct & incorrect use
- I.5. Work station start, stop & layout
- I.6. Vessel position
- I.7. Position source
- I.8. Basic navigation
- I.9. Heading & drift vectors
  - Ex.1. Simulator exercise – open sea (basic integrated navigation)
- I.10. Understanding chart data
- I.11. Chart quality & accuracy
- I.12. Chart Organization

II. Watchkeeping with ECDIS
- II.1. Sensors
- II.2. Ports & data feeds
- II.3. Chart selection
- II.4. Chart information
- II.5. Changing the settings
- II.6. Chart scaling
- II.7. Information layers
  - Ex.2 Simulator Exercise – coastal waters (chart display settings)
- II.8. System & position alarms
- II.9. Depth & contour alarms

III. ECDIS Route Planning and Monitoring
- III.1. Vessel maneuvering characteristics
- III.2. Route planning by table
- III.3. Route planning by chart
- III.4. Track limits
- III.5. Checking plan for safety
  - Ex.3. Simulator exercise – coastal & restricted waters (navigation alarms & route scheduling)
- III.6. Additional Navigational Information
- III.7. Route Schedule
- III.8. User charts in route planning

IV. ECDIS Targets, Charts & System
- IV.1. ARPA / Radar overlay
- IV.2. AIS functions
- IV.3. Procuring & installing chart data
- IV.4. Installing chart corrections
  - Ex.4. Simulator exercise – waters (advanced integrated navigation with ECDIS)
- IV.5. System reset & backup
- IV.6. Archiving ECDIS data and data logging

V. ECDIS Responsibility & Assessment
- V.1. Responsibility
- V.2. Effective navigation with ECDIS
  - Ev.1. Written evaluation
  - Ev.2. Simulator exercise – coastal & restricted waters (underway ECDIS navigation assessment)