



भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS
समुद्रीय प्रशासन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF MARITIME ADMINISTRATION, MUMBAI

F.No.20/1/2020-O/o TRG-DGS (C.No.1865)

Date: 23rd September 2026

DGMA Training Circular No.63 of 2026

SUBJECT: GUIDELINES FOR ETO PREPARATORY COURSE

References

- DGMA EAC Branch Circular No. 49 of 2026 dated 15 August 2026 - Preparatory courses for MEO and ETO grade of CoC examinations.
- DGS Order No. 05 of 2016 dated 01.11.2016 - Guidelines and Procedures for Conduct of Modular, Simulator and Post-Sea Competency Courses.
- DGS Circular No. 23 of 2020 dated 08.06.2020 - Quality Standards System of Maritime Training Institutes.

- The Directorate General of Maritime Administration (DGMA) introduced an EAC Branch Circular No. 49 of 2026 which mandated a Preparatory Course for candidates appearing for the Electro-Technical Officer (ETO) Certificate of Competency (CoC) examination, with effect from 01 January 2027. The implementation plan has been detailed in the Circular.
- The DGMA hereby prescribes the course specific guidelines for the approval of maritime training institutes desirous of conducting the preparatory course referred in the above paragraph. The guidelines are annexed to this circular as **Annexure A**.
- All MTIs who plan to conduct the ETO Preparatory Course shall obtain prior approval of the DGMA and comply with the enclosed Guidelines. The MTIs who are already having a valid approval for the conduct of courses categorized as 'A' & 'B' in the Annexure A, shall have to apply to the Training Branch with the applicable fee and an undertaking specified in the **Annexure C** for a permission to conduct the ETO preparatory course at the earliest with a condition that the mandatory inspection for

वीं मंजिल, बीटा बिल्डिंग, आई थिंक टेक्नो कैंपस, कांजुर गाँव रोड, कांजुरमार्ग (पूर्व), मुंबई - 400042

9th Floor, Beta Building, I-Think Techno Campus, Kanjur Village Road, Kanjurmarg (E), Mumbai - 400042.

फोन/Tel No.: +91-22-2575 2040/1/2/3 फ़ैक्स/Fax.: +91-22-25752029/35 ई-मेल/Email: dgship-dgs@nic.in वेबसाइट/Website: www.dgma.gov.in

the course approval shall be completed by following the regular procedure prescribed by the Training Branch including an inspection by the jurisdictional MMD.

4. The processing fee for approval of the ETO Preparatory Course shall be ₹ 75000/- The course ID for the ETO Preparatory course shall be 3218.
5. All Mercantile Marine Departments are advised to take note of the above and provide necessary guidance to the MTIs within their jurisdiction for an early implementation of the above requirements, enabling commencement of the said course at the earliest.
6. This Circular shall come into force with immediate effect from the date of issue.
7. This issues with the approval of the Director General of Maritime Administration.



(Mugilrajan D.)
Engineer & Ship Surveyor-cum DDG (Tech.)
Training Branch, DGMA Mumbai

To

1. All Maritime Training Institutes.
2. Principal Officers, MMD, Mumbai/Chennai/Kolkata/Kochi/Kandla.
3. Shipping Masters, Mumbai/Kolkata/Chennai.
4. Nautical Wing, / Engineering Wing, DGMA, Mumbai.
5. Hindi Cell (to translate in Hindi and upload on website).
6. INSA / FOSMA / MASSA / ICCSA / MUI / IMEI / CMMI / NUSI.
7. IT & E-Gov, DGMA, with a request to upload.
8. Sr. PS to DG(MA), for information.
9. Sr. PS to Addl. DG(MA), for information.

वी मंजिल, बीटा बिल्डिंग, आई थिंक टेक्नो कैंपस, कांजुर गाँव रोड, कांजुरमार्ग (पूर्व), मुंबई - 400042

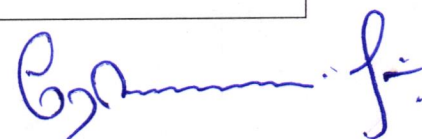
9th Floor, Beta Building, I-Think Techno Campus, Kanjur Village Road, Kanjurmarg (E), Mumbai - 400042.

फोन/Tel No.: +91-22-2575 2040/1/2/3 फ़ैक्स/Fax.: +91-22-25752029/35 ई-मेल/Email: dgship-dgs@nic.in वेबसाइट/Website: www.dgma.gov.in

GUIDELINES FOR THE CONDUCT OF PREPARATORY COURSE FOR ELECTRO-TECHNICAL OFFICER (ETO)

Contents

Annexure A	1
1. Aim.....	2
2. Objectives.....	2
2.1 Scope	2
2.2 Eligibility Criteria for Maritime Training Institute.....	2
3. Qualification and Eligibility of Candidates.....	3
3.1 Entry standards (to be verified by the MTI)	3
3.2 Required attendance and conduct	4
3.3 Course intake limitations	4
4. Infrastructure Requirements.....	4
4.1 Premises.....	4
4.2 Classrooms.....	4
4.3 Library-cum-reading room	5
5. Course Details	5
5.1 Duration of the course	5
5.2 Course outline and course syllabus.....	5
6. Faculty Requirements.....	5
6.1 Qualifications and experience of Course-in-Charge.....	5
6.2 Qualifications and experience of faculty members.....	5
6.3 Visiting faculty members.....	6
6.4 Instructors	6
6.5 Training of Trainers.....	6
6.6 Age limit for faculty members.....	6
6.7 Faculty strength	6
6.8 Publications	7
7. Holidays	7
8. Quality Standards	7
9. Assessment.....	7
10. Inspection and Disciplinary Action for Deficiencies.....	8
11. Cost of Inspections	8
12. Fees to Government.....	8
13. Communication to DGMA and INDOS	8
Annexure-B	9
Annexure C	11



Guidelines for ETO Preparatory course – Course ID 3218

1. Aim

The aim of the Preparatory Course is to prepare candidates for the Electro-Technical Officer (ETO) Certificate of Competency examination and to strengthen the knowledge, understanding, proficiency and practical competence required to perform the duties of an Electro-Technical Officer on ships powered by main propulsion machinery of 750 kW or more, in accordance to the Reg.III/6 of the STCW Convention.

2. Objectives

The objectives of the course are to:

- a. synergize the gap between shipboard experience with the standards of competence specified in the STCW Code;
- b. develop the practical skills and competence required for effective performance of electro-technical duties on board ships;
- c. provide structured preparation for the written and oral assessments;
- d. identify and address deficiencies in the candidate's knowledge, understanding and proficiency through appropriate training and assessment; and
- e. improve the candidate's overall preparedness and thereby the performance in the ETO Class-IV Certificate of Competency examination.

2.1 Scope

These Guidelines shall apply to Maritime Training Institutes (MTIs) approved or seeking approval by DGMA to conduct the Electro-Technical Officer (ETO) Preparatory Course.

The course shall focus on the operational-level competencies prescribed under Regulation III/6 of the STCW Convention, 1978, as amended, and Section A-III/6 and Table A-III/6 of the STCW Code, covering the relevant areas of:

- a. Electrical, Electronic and Control Engineering at the Operational Level;
- b. Maintenance and Repair at the Operational Level; and
- c. Controlling the Operation of the Ship and Care for Persons on Board at the Operational Level.

The course shall provide structured classroom instruction, practical training and examination-oriented preparation, with emphasis on consolidating and applying the knowledge, understanding and proficiency required at the Electro-Technical Officer (ETO) level.

2.2 Eligibility Criteria for Maritime Training Institute

These Guidelines shall apply to the following categories of Maritime Training Institutes (MTIs) intending to obtain approval from DGMA to conduct the Electro-Technical Officer (ETO) Preparatory Course:

- A. MTIs conducting Pre-Sea ETO Courses** - MTIs conducting the four-month Pre-Sea Electro-Technical Officer (ETO) course may apply to DGMA for approval to conduct the ETO Preparatory Course, subject to fulfilment of the requirements prescribed in these Guidelines. Such MTIs shall also satisfy the applicable CIP grading/assessment requirements and shall have been awarded an A1 or A2 grade, as applicable.
- B. MTIs conducting Post-Sea High Voltage Courses** - MTIs already approved by DGMA to conduct the "High Voltage Safety and Switch Gear (Management Level)" course for Electro-Technical Officers may apply to DGMA for approval to conduct the ETO Preparatory Course, subject to fulfilment of the requirements prescribed in these Guidelines.
- C. Other Eligible MTIs** - MTIs not falling under Category A or Category B above may also apply for approval to conduct the ETO Preparatory Course, provided that such MTI conducts DGMA-approved maritime training courses.

Common Requirements for All Categories

All MTIs applying under category A, B or C shall:

1. comply with all applicable requirements relating to infrastructure, faculty, training facilities, course delivery, quality assurance, assessment, inspection, records, reporting, and other requirements prescribed in these Guidelines, and
2. any other requirements that may be prescribed by DGMA from time to time.

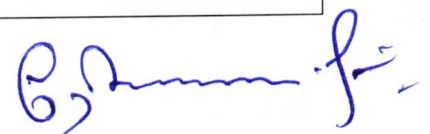
Eligibility to apply under any of the above categories shall not confer any automatic right to approval, and no MTI shall commence or conduct the MEO Class-IV Preparatory Course unless a permission based on the undertaking submitted as per the format specified in Annexure C is granted, to the MTIs belonging to the Category A & B. This is subject to the completion of the inspection process within the six-month time line from the date of application. All other MTIs have to follow the approval process of the DGMA for any new course.

3. Qualification and Eligibility of Candidates

3.1 Entry standards (to be verified by the MTI)

Qualifying Sea Service: Candidates shall have completed the qualifying sea service required for eligibility to appear for the ETO Certificate of Competency examination, as prescribed by the Administration. The qualifying sea service shall be duly supported by the prescribed documentary evidence.

Successful completion of the Preparatory Course shall be a prerequisite for eligibility to appear for the Electro-Technical Officer (ETO) Certificate of Competency examination for the above categories of



candidates.

The detailed eligibility criteria for attending the course are at DGMA Circular 49 of 2026, Part B (VI).

3.2 Required attendance and conduct

DGMA mandates a minimum attendance of 90% for all post-sea maritime competency and preparatory courses exceeding five (5) days, unless a higher attendance requirement is specified for a particular course.

Where a candidate's attendance is less than 90%, the candidate shall not be eligible for issuance of the Course Completion Certificate and shall be required to undergo the entire course afresh before being considered for successful completion of the course.

3.3 Course intake limitations

The intake of candidates in a batch shall be within the capacity approved by DGMA and shall not exceed 40 candidates, subject to adequate supervision and internal assessment, and shall additionally be commensurate with the classroom carpet area available at the institute (see paragraph 4.2).

4. Infrastructure Requirements

The MTI shall provide infrastructure and facilities adequate for conducting the Electro-Technical Officer (ETO) Preparatory Course, in accordance with DGS Order No. 05 of 2016 dated 01.11.2016, as applicable to competency and preparatory courses, including in particular:

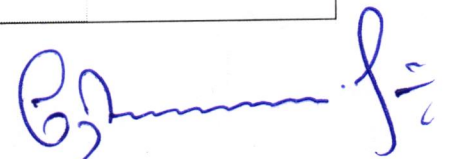
4.1 Premises

Premises held on a lease of not less than three years, with a further renewal period of three years, or owned by the institute, of pucca construction, with air-conditioning where the ambient classroom temperature is liable to exceed 30°C and heating arrangements where it is liable to fall below 15°C, and with toilet facilities in the ratio of not less than one unit per 40 candidates.

4.2 Classrooms

Classrooms shall provide a minimum carpet area commensurate with the approved intake, not exceeding three candidates per desk, on the following scale prescribed under DGS Order No. 05 of 2016:

Approved batch intake	Minimum classroom carpet area
20 candidates	30 sq. m
24 candidates	36 sq. m
40 candidates	50 sq. m



4.3 Library-cum-reading room

The MTI shall maintain a dedicated library-cum-reading room of not less than 36 sq. m carpet area , with not less than three workstations having internet connectivity and standard office/productivity software, stocked with the updated publications listed at Annexure B as a minimum.

5. Course Details

5.1 Duration of the course

The course shall be conducted entirely through in-person, classroom-based training over a period of four (4) weeks, comprising 20 working days and 120 contact hours, in accordance with Annexure-I to DGMA EAC Branch Circular No. 49 of 2026 dated 15 August 2026. The course shall commence on the first working day of every month.

5.2 Course outline and course syllabus

The course framework and syllabus for the ETO Preparatory Course, are detailed in the DGMA EAC Branch Circular No. 49 of 2026..

6. Faculty Requirements

6.1 Qualifications and experience of Course-in-Charge

The Course-in-Charge shall be in the permanent employment of the applicant institute and shall possess a Certificate of Competency, issued or recognised by the Government of India, as Chief Engineer Officer (MEO Class-I), with:

- a) minimum five years' sea service; and
- b) at least one year of service as Chief Engineer or Second Engineer; and
- c) minimum three years' teaching experience in pre-sea and/or post-sea training courses.

The Course-in-Charge is responsible for assessment and examination, shall have successfully completed the Assessment, Examination and Certification of Seafarers (AECS) course.

6.2 Qualifications and experience of faculty members

Faculty members shall possess qualifications and experience appropriate to the subjects taught, having regard to the competencies examined under the Electro-Technical Officer (ETO) Certificate of Competency examination function papers, namely Electrical, Electronic and Control Engineering at the Operational Level, and Maintenance and Repair at the Operational Level. For the relevant ETO subjects, the prescribed qualifications shall include:

- a) MEO Class I CoC — for Marine Electrical Engineering, Marine Electronics, Automation and Control Engineering, High Voltage Technology, Instrumentation and Control Systems,

- b) Electrical Maintenance and Troubleshooting, and Written and Oral Examination Preparation subjects; and
- c) MEO Class-I CoC/Master Mariner (FG) CoC ---- for Shipboard Safety, Environmental Protection and Maritime Regulations subjects.

Faculty members shall have a minimum of five years' relevant sea-going experience and a minimum of one year's teaching experience in pre-sea and/or post-sea training courses.

6.3 Visiting faculty members

The qualification and experience of visiting faculty shall be the same as prescribed for the corresponding regular faculty member.

6.4 Instructors

Where the MTI engages instructors, in addition to the faculty members, to assist conduct of practical and workshop sessions, such instructors shall have the following qualification and experience:

- a) Certificate of Competency (CoC) as an Electro-Technical Officer (ETO), or
- b) Retired Indian Navy Personnel with hands-on experience in electrical systems, power distribution networks, or
- c) Bachelor's Degree / Diploma in Electrical Engineering / Marine Engineering with experience in marine electrical workshops, commercial shipyards with verifiable expertise in the overhaul, testing, and maintenance of marine alternators, switchboards, and navigation equipment.

6.5 Training of Trainers

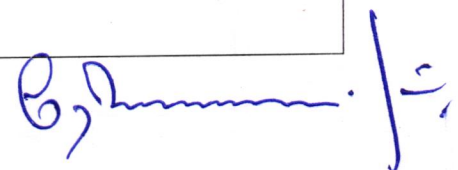
All full-time faculty members and visiting faculty, including the Course-in-Charge, are required to have completed the 'Training of Trainers and Assessors (TOTA)' course, or the Vertical Integration Course for Trainers (VICT), consistent with the training-of-trainers requirement for full-time faculty prescribed under DGS Order No. 05 of 2016.

6.6 Age limit for faculty members

The maximum age for full-time faculty members, including the Course-in-Charge, and visiting faculty shall be as prescribed in the applicable DGMA Circulars, Orders and Guidelines, as amended from time to time.

The MTI shall ensure that all faculty members engaged for the approved course meet the applicable age and eligibility requirements in force at the time of engagement.

6.7 Faculty strength



The institute shall have not less than three faculty members, including the Course-in-Charge, with at least 50% of the total faculty strength engaged on a full-time basis, consistent with the minimum full-time-delivery requirement prescribed under DGS Order No. 05 of 2016.

6.8 Publications

The institute shall maintain a dedicated library-cum-reading room (paragraph 4.3) with updated publications relevant to the Electro-Technical Officer (ETO) Preparatory Course. The indicative list of required publications is at **Annexure B**.

7. Holidays

- a. Sundays shall be holidays.
- b. Independence Day and Republic Day shall be compulsory holidays.
- c. All Government holidays applicable to the State in which the institute is situated shall normally be observed.

In view of the prescribed 20-working-day course duration, the MTI shall ensure that any holiday falling during the course is compensated by scheduling an additional working day, as necessary, to ensure that the prescribed 120 contact hours are fully completed before the candidate is permitted to undergo the prescribed examination/assessment.

The MTI shall plan the course schedule accordingly and ensure that the prescribed training hours and course coverage are completed in full notwithstanding any holidays falling during the course.

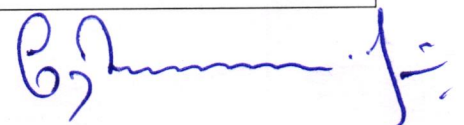
8. Quality Standards

The MTI shall comply with the requirements of the quality-standards system applicable to Maritime Training Institutes, in accordance with DGS Order No. 05 of 2016 dated 01.11.2016 and DGS Circular No. 23 of 2020 dated 08.06.2020 ("Quality Standards System of Maritime Training Institutes"), as amended or updated from time to time.

Every MTI shall establish and maintain a quality-management system conforming to the latest applicable ISO standard, or an approved equivalent, within six months of the commencement of the first DGMA-approved batch of the course, and shall ensure its effective implementation and continual compliance. The Electro-Technical Officer (ETO) Preparatory Course shall be brought within the scope of the MTI's established quality system, with documented procedures for course delivery, attendance, assessment, verification of candidate eligibility, maintenance of records and other processes associated with the conduct of the course.

9. Assessment

Towards the end of the course, the institute shall conduct a final assessment comprising written and oral components, based on the approved course syllabus and the competencies prescribed for the Electro-



Technical Officer (ETO) Preparatory Course. The assessment shall cover the subjects and areas dealt with during the course and shall be designed to assess the candidate's knowledge, understanding and application of the relevant electrical, electronic and control engineering concepts and competencies required at the ETO level.

The written assessment shall evaluate the candidate's theoretical knowledge and understanding of the prescribed subjects, while the oral assessment shall assess the candidate's ability to explain, apply and demonstrate an adequate understanding of the competencies covered during the course. The final assessment shall be conducted by the institute in accordance with the approved assessment methodology and applicable DGMA requirements.

The institute shall maintain proper records of the assessment conducted, including the results and performance of each candidate. A candidate who does not successfully complete the prescribed final assessment shall be required to reappear and successfully complete the assessment before issuance of the Course Completion Certificate.

10. Inspection and Disciplinary Action for Deficiencies

Inspection of the course and disciplinary action for deficiencies shall be in accordance with DGS Order No. 05 of 2016 dated 01.11.2016. Deficiencies observed during inspection are classified as major or minor in accordance with the said Order, and withdrawal of approval — whether temporary, course-specific, institute-wide, or with immediate effect — shall follow the show-cause procedure prescribed therein, the Director General being the competent authority for such withdrawal.

11. Cost of Inspections

All costs of inspections, whether scheduled or unscheduled, shall be borne by the concerned institute.

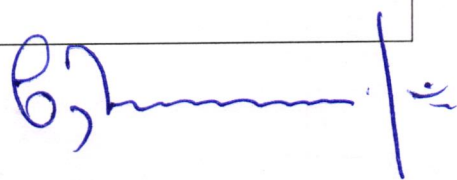
12. Fees to Government

Fees payable to Government shall be as per DGS Order No. 05 of 2016 dated 01.11.2016, including the requirement to remit an annual contribution equivalent to 1% of the institute's total fees collected in the preceding financial year (subject to a minimum of Rs. 10,000/-) on or before 31 May each year, failing which penal interest at 18% per annum shall apply and continued default beyond 31 July may attract suspension of approval, in addition to the processing fee specified at paragraph 5 of the covering circular.

13. Communication to DGMA and INDOS

The institute shall communicate mandatory information to DGMA including

- electronic data of the candidate admitted on the e-Governance of candidates admitted, within the timeline specified by the DGMA



Indicative List of Publications and Reference Material*Marine electrical engineering and electro-technology*

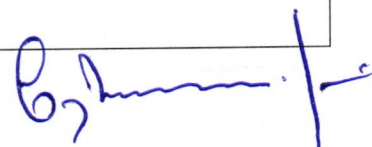
- Reeds Vol. 6: Basic Electrotechnology for Marine Engineers (Adlard Coles/Bloomsbury).
- Reeds Vol. 7: Advanced Electrotechnology for Marine Engineers — Christopher Lavers / Edmund G.R. Kraal (Adlard Coles/Bloomsbury).
- Marine Electrical Technology — G.O. Watson / H.D. McGeorge.
- Marine Electrical Practice — H.D. McGeorge.
- D.T. Hall, Practical Marine Electrical Knowledge, Witherby & Co Ltd, 1999.
- J. Bird, Electrical Circuit Theory and Technology, Elsevier, 2002.
- Ch.A. Gross, Electric Machines, CRC Press/Taylor & Francis Group, 2007.
- C.I. Hubert and W.A. Triebel, Operation, Testing and Preventive Maintenance of Electrical Power Apparatus, Prentice Hall, 2002.

Marine electronics, instrumentation and automation

- Reeds Vol. 15: Electronics, Navigational Aids and Radio Theory for Electrotechnical Officers (Adlard Coles/Bloomsbury).
- Reeds Vol. 10: Instrumentation and Control Systems (Adlard Coles/Bloomsbury).
- Programmable Logic Controllers: Principles and Applications — John W. Webb / Ronald A. Reis.
- General Engineering Knowledge for Marine Engineers and ETOs — H.D. McGeorge.
- Leslie Jackson, Instrumentation and Control Systems, Thomas Reed Publications Ltd, 1992.
- W. Bolton, Programmable Logic Controllers, Newnes.
- Jan Axelson, The Microcontroller Idea Book: Circuits, Programs & Applications, Lakeview Research.
- P. Horowitz and W. Hill, The Art of Electronics, Cambridge University Press, 1989.

High voltage and power systems

- High Voltage Engineering — reference text on generation, transmission and safety of high-voltage systems (e.g., C.L. Wadhwa, High Voltage Engineering).
- IEEE/IMarEST technical guidance on high-voltage marine electrical installations, as updated from time to time.



- IEC 60079-series, Explosive Atmospheres.
- IEC 60092-series, Electrical Installations in Ships.
- J. Cadick, Electrical Safety Handbook, 3rd ed., McGraw Hill, 2005.
- M. Barnes, Practical Variable Speed Drives and Power Electronics, Elsevier, 2003.

Marine engineering practice and workshop

- Reeds Workshop Technology.
- Engineering Drawings for Marine Engineers.
- Z. Górski, Construction and Operation of Marine Pumps, Trademar, Gdynia, 2010.
- Z. Górski, Construction and Operation of Marine Hydraulic Machinery, Trademar, Gdynia, 2008.
- Z. Górski, Construction and Working of Marine Heat Exchangers, Fundacja Rozwoju Akademii Morskiej w Gdyni, 2007.

Ship safety, environmental protection and regulatory framework

- SOLAS — Consolidated Edition (IMO).
- MARPOL — Consolidated Edition (IMO).
- International Safety Management (ISM) Code (IMO).
- STCW Convention and Code — Consolidated Edition (IMO).
- International Life-Saving Appliance (LSA) Code, 2010 Edition (IMO).
- International Code for Fire Safety Systems (FSS Code) (IMO).
- Maritime and Coastguard Agency (MCA), Code of Safe Working Practices for Merchant Seamen, Consolidated Edition, 2009.
- IMO Model Course 7.08 — Electro-Technical Officer (course-design reference)

DECLARATION

"I, _____, the Principal of the MTI, '_____',
'MTI No: _____ hereby state that the MTI has an approval by the DGMA for the conduct of the
following courses, basis which it is requested to consider grant of an interim approval for commencing the
MEO Class IV preparatory course w.e.f. _____.

List of courses for which the MTI has a valid approval is as under and the CIP grading of the MTI is ____
for the pre-sea and ____ for the post sea competency courses.

List of Courses in Category A or Category B:

The MTI shall present before the jurisdictional MMD _____ for the inspection that is mandated
for formal approval of the MEO Class IV preparatory course and complete the inspection latest by
DD/MM/YYYY, failing which the MTI shall not conduct any further courses beyond six months from the
date of this undertaking.

Name: _____

Designation: _____ FIN No.: _____

Dated: _____ at _____

