

SPECIFIC CRITERIA FOR ASSESSMENT:

INFORMATION TO BE USED IN

CONJUNCTION WITH

OR AS

A SUPPLEMENT TO COAST GUARD-ACCEPTED

TRAINING RECORD BOOKS

ENCLOSURE [3]

**EXPANDING THE CRITERIA TO EFFECTIVELY ASSESS THE TASKS, DUTIES,
AND SKILLS OF CANDIDATES PROVIDED TRAINING IN APPROVED OR
ACCEPTED COURSES TO OBTAIN A MERCHANT MARINERS LICENSE**

1. Each program of training is required to use a Training Record Book (TRB) to document the progress and success of each individual during the period of training. The TRB is to document the tasks, duties and skills required of a licensed officer in charge of a navigational watch or engineer officer in charge of an engine room watch.
2. The IMO model training record books provide the tasks and criteria for satisfactory performance of training and/or assessment.
3. Throughout the IMO model TRBs the criteria has been provided for qualified instructors and assessors to expand upon and to develop their own specific criteria for assessment in determining the competency of the trainee.
4. However, there is concern for the potential lack of consistency as dozens of assessors strive to create their own specific criteria for assessment.
5. One method to employ in overcoming this potential deficiency, is to have each training organization develop a specific criteria for assessment to reflect the goals of training, particularly those specific to a particular training program.
6. The specific criteria for assessment would be forwarded to the vessel upon which the trainees would be assigned.
7. Assessors and ship board supervisors, through their operational experience, would be able to witness and thereby determine if the trainee were able to effectively demonstrate their ability and skills in completing the objectives of the TRB while aboard ship.
8. Specific criteria for assessment will need to be established prior to any assessment. The following example of expanded criteria should provide sufficient guidance for developing additional areas of assessment.

Figure A represents the tasks and criteria for satisfactory performance of the Function and Competence 1, presented in the IMO model TRB for Engineer Officer in Charge of an Engine Room Watch, tasks 1.2, 1.3 and 1.4

Figure A

Function: Electrical, electronic and control engineering at the operational level

Competence: Operate alternators, generators and control systems

Knowledge, understanding and proficiency: - Generating plant:

- Appropriate basic electrical knowledge and skills.
- Preparing, starting, coupling and changing over alternators or generators.
- Location of common faults and action to prevent damage.

Controls systems:

- Location of common faults and action to prevent damage.

Criteria for evaluating competence:

- Operations are planned and carried out in accordance with established rules and procedures to ensure safety of operations.

The above statements provide a basis upon which an engineer can be deemed as competent for the task. However, in order to appropriately evaluate the performance of the trainee, the stipulated criteria needs to be expanded upon. Additional evaluation criteria should be developed by an experienced and qualified assessor into a set of specific criteria to determine (in this example) the “appropriate basic electrical knowledge and skills; the preparation for starting, coupling and changing over alternators (or generators).

The following statements represent one conceptual expansion and application of the specific criteria for assessment as previously stipulated in the IMO model TRB.

Figure B

Knowledge, understanding and proficiency: - Generating plant:

(Assessor is to initial each item as completed, noting order of performance as an indication of appropriate planning on the part of the trainee.)

Pre-start inspection - Steam turbine and alternator:

- Inspects alternator for loose cable connections, brush rigging and loose items that may damage unit during start up.
- Inspects couplings between turbine/reduction gear and alternator for readiness.
- Inspects governor unit, reduction gear casing, and bearing housings for indications of lubrication leaks.
- Inspects manual overspeed trip for excessive wear.
- Determines level of lube in sump and adds lube oil as necessary
-
- Manually trips and resets overspeed trip to determine if mechanism operates without binding.

Pre-start inspection - Auxiliary condenser and equipment:

- Inspects auxiliary circulator pump and its piping for leaks and cracks.

- Inspects that all required valves are open to auxiliary circulator as required.
- Inspects auxiliary condensate pump and its piping for leaks and cracks.
- Inspects for visible level of condensate in hot well.
- Inspects that all required valves are open to auxiliary condensate pump as required.
- Inspects auxiliary circulator and condensate pump motor controllers for readiness and determines reasons if tagged/locked out has yet to be corrected.

Prepares turbo-generator for start-up

Begins raising vacuum:

- Starts auxiliary circulator.
- Vents off condenser heads and observes stability of circulated water pressure.
- Starts auxiliary condensate pump.
- Adjusts opening of recirculating valve to maintain visible level of condensate in hot well.
- Returns to operating level and applies gland seal steam to turbine rotor.
- Admits operating steam to air ejectors, adjusting supply pressure as necessary.
- Returns below to determine visible level in hot well, adjusting recirculating valve as necessary.

Rolls over turbo-generator - (vacuum has reached 18-22 inches):

- Starts lube oil supply to unit (obtains assistance if pump is hand driven)
- Set throttle valve
- Slowly opens throttle valve to gradually increase speed.
- Allows unit to idle for even warming
- Applies lube oil and alternator cooling water as necessary
- Conducts inspection below and adjusts condensate recirculating valve as necessary.

Paralleling alternator with operating unit

- Adjusts voltage
- Turns on synchroscope and observes direction and speed of rotation.
- Adjusts speed and direction of rotation.
- Closes oncoming unit breaker to stop synchroscope at 12 o'clock
- Divides load evenly between on-line and in-coming units, observing available switch board meters.