

SATISFACTORY MARINE ENGINEERING EXPERIENCE

Marine design activities require numerical or other analysis (as opposed to review). The majority of these activities will require the regular application of fundamental engineering principles and knowledge of international, state and classification society regulations relating to ship design and associated machinery installation. Please refer to the document "Satisfactory Engineering Experience" for a description of other aspects of experience which are considered as qualifying an individual towards registration as a professional engineer.

Design Activities

Examples of Marine Engineering design activities can include the following:

- Mission analysis and impact on vessel design, performance requirements, preliminary selection of propulsion and auxiliary machinery;
- Detailed design of HVAC and exhaust systems;
- Detailed design of machinery control systems;
- Detailed design of shipboard piping and pumping systems;
- Detailed design related to heat exchangers;
- Selection and matching of main machinery prime movers;
- Design of shafting systems and main machinery seating, alignment specifications, calculation of natural frequencies of vibration;
- Detailed design of shipboard electrical installations;
- Detailed design of modifications to shipboard structures or systems;
- Design of noise control features including materials selection, isolation and damping, preparation of test criteria and analysis and evaluation of test results.

Marine Engineering Support Activities

Marine Engineering support activities involve engineering concepts, but do not necessarily require technical or numerical analysis.

- Conducting machinery trials or tests;
- Scheduling construction or major overhaul activities;
- Performing formal technical investigations into component or system failures;
- Estimating and cost control relating to construction or modification activities;
- Technical review of Non Destructive Testing or health monitoring data;
- Writing and evaluation of technical proposals;
- Technical quantitative review of engineering designs by others;
- On-site quality assurance activities relating to installation of or repair of major equipment and systems;
- Production design of systems where detailed design has been accomplished.