

Specification for Class of

MECHANICAL ENGINEER 2

Abolished Initially Effective January 13, 2006

Abolished Final Effective February 10, 2006

Definition: Performs professional mechanical engineering in office or field.

Typical Work

Prepares rough sketches, designs, specifications, and working drawings for minor and major building projects including steam generating plants and heating, air conditioning, ventilation, refrigeration, plumbing, sewage collection, water supply and purification, drainage systems;

In vessel engineering, performs the following work in accordance with the regulatory requirements of the United States Coast Guard and the American Bureau of Shipping: prepares rough sketches, designs, calculations, specifications, and working drawings for minor and major ferry vessel projects; included are propulsion diesel engines, hydraulic steering systems, heating, ventilation and air conditioning (HVAC), refrigeration, various piping systems, sewage collection and transfer systems, compressed gas systems, rotating machinery, winches, and mechanical systems such as rescue boat launching systems and life raft launchers;

Checks drawings and makes cost estimates of mechanical systems;

Serves as Job Captain on major projects involving building mechanical or electrical engineering; checks preliminary designs and final drawings; writes advertisements for bids; handles bid openings; prepares forms for financing projects; writes contracts; makes detailed inspections of projects during construction and after completion;

Makes independent surveys covering installation, repair, or recommended improvements to mechanical systems;

Supervises engineers, engineering aides, or job inspectors, as directed;

Performs other work as required.

Knowledge and Abilities

Knowledge of: theory, principles, and practices of mechanical engineering, particularly as related to building construction; engineering drafting procedures and equipment; fundamentals of electrical and structural engineering; effectiveness and efficiency of various air conditioning and heating systems; water and waste-disposal systems, appurtenances to electrical systems, and hardware and other appurtenances adding to convenience, comfort, efficiency, and safety of complex buildings; geometry, calculus, and engineering formulas; fire and building codes.

Ability to: use sound judgment on difficult engineering problems; write specifications for mechanical and electrical equipment; understand and interpret written and oral directions, specifications, plans, and drawings; deal tactfully with architects, engineers, inspectors, and State officials; serve as resident inspector on number of jobs simultaneously; travel frequently to all parts of State.

Minimum Qualifications

A Bachelor's degree involving major study in mechanical engineering.

AND

One year of professional mechanical engineering experience.

Registration as engineer-in-training may be substituted for education.

Revised May 1989

General revision (added to Typical Work duties assigned in the field of vessel engineering)