

Codes and standards for engineering research papers example

[Business](#), [Industries](#)



A code can be defined as a law or regulation that specifies minimum standards to protect public health and safety like for example the codes of construction of buildings. A standard on the other hand can be defined as a set of technical definitions and guidelines that function as a set of instructions for manufacturers, designers, operators, or users of equipment. Codes and standards teach engineers of how best to meet health, environmental, safety and societal responsibilities (American Society for Mechanical engineers, 1984). It has been argued that many health and safety related problems can be avoided through the full compliance of the codes and standards that have been developed. The design, construction and operational flaws continue to lead to serious fatalities, serious property loss and disabilities each year hence the need of having codes and standards in place (Khan & Raouf, 2006). Codes and standards are important especially considering the engineering industry's increasing severe processing conditions, increasing complex operations of new facilities and the aging of existing ones.

Some of the engineering codes and standards include: Performance Test codes – The American Association of Mechanical Engineers (ASME, 1984) these codes are aimed at providing rules and procedures for the planning, execution and reporting of a test of performance. Performance tests are used in engineering evaluation and their results indicate how well equipment performs its functions. These codes are used by the owners of the equipment, suppliers of the equipment suppliers and test engineers.

Boiler and pressure vessel code- This is a standard that provides rules for the fabrication, design and regular inspection of boilers and pressure vessels.

The design and fabrication of these pressure components according to this standard will ensure long and useful service and the protection of human lives and property.

Tank Inspection, Repair, alteration and Reconstruction code- This code specifies the minimum standards for the inspection of equipment, their repair or reconstruction. This code factors in the health and safety of the engineers and that of the people around.

Standard for the Installation of Oil-Burning Equipment- this standard is the industry benchmark for the correct installation of liquid fuel burning appliances in residential, commercial and industry occupancies. It is the most widely used standard for engineers working with on the design or installation of liquid fuel-burning appliances and their fuel supply.

Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines- This standard governs the installation of stationary engines fueled by gaseous or liquid fuel for the use with fire pumps, emergency refrigerators among many others.

Boiler and Combustion Systems Hazards Code- The National Fire Protection Association (NFPA, 2008) indicates that this code contributes to the safety operation and the prevention of explosions and implosions in boilers, pulverized fuel systems and heat recovery steam generators. It addresses the installation, operation maintenance and the training of boilers and pulverized fuel systems.

The National Society for Professional engineers stipulates the code of ethics for engineers. Engineering is a profession that directly impacts the quality of life of people and hence engineers are expected to exhibit highest standards

with regards to honesty and integrity. Engineers must adhere to the principles of this code of ethics.

Works cited

American Society of Mechanical Engineers. (1984). An introduction to ASME codes and standards for mechanical engineering faculty and students. New York, N. Y: The Society

Khan, W. A., & Raouf, A. (2006). Standards for engineering design and manufacturing. Boca Raton, FL: Taylor & Francis.

National Fire Protection Association. & National Fire Protection Association. (2008). NFPA 70E: Standard for electrical safety in the workplace. Quincy, Mass.: NFPA.