

Republic of the Philippines
DEPARTMENT OF LABOR AND EMPLOYMENT
Intramuros, Manila

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DEPARTMENT ORDER NO. 71-04 BY W
Series of 2004

Pursuant to Article 162 of the Presidential Decree No. 442, otherwise known as the Labor Code of the Philippines, as amended, the following Rule on Steam Turbine is hereby promulgated and issued as follows:

Rule 1190
Steam Turbine

1191: Definition of Terms:

1. Steam Turbine - refers to a prime mover, specifically a heat engine, usually consisting of curved vanes on a central rotating spindle actuated by the reaction, impulse or both, of a steam current subjected to pressure.
2. Prime Mover - refers to an engine or motor operated by steam, gas, air, electricity, liquid or gasoline, fuel, liquids in motion or other forms of energy and whose main function is to drive or operate, either directly or indirectly, other mechanical and electrical equipment.
3. Major Repair - refers to any repair/replacement of any major steam turbine components specific to:
 - a. Replacement of rotating blades
 - b. Repair/replacement of stationary blades
4. Revision or modification - refers to alteration of existing design specifically:
 - a. Upgrade of capacity
 - b. Replacement of new and different design turbine.

1191.01: Steam Turbine Power Rating:

Turbine - generator units and the mechanical drive turbines, are rated in kilowatts (kw).

1192: Coverage:

1. Industrial Power Installation
2. Auxiliary Power Installation
3. Power Plant Installation
4. Commercial Power Installation

1193: General Provisions:

1193.01: The Secretary of Labor and Employment or his/her duly authorized representative shall issue permit to operate all steam turbines installed and/or operated in the Philippines after complying with the following requirements:

- a. All applications and installation plans shall be filed with the Regional Office having jurisdiction over the workplace or worksite in five (5) sets in white or blue print duly signed and sealed by a professional mechanical engineer and duly signed by the owner.
- b. Manufacturers data sheets
- c. Working drawings
- d. Foundation design
- e. Operation and maintenance manual
- f. Location plans

1193.02: Any major repair as defined in this Rule on steam turbine shall be reported to the Regional Director or his/her authorized representative having jurisdiction over the workplace or worksite at least 7 days before the repair and shall not operate the same without securing a permit to operate. In case an emergency major repair is to be undertaken, the owner shall immediately report or notify the Regional Office concerned of the repair and shall not operate the same without securing a permit to operate.

1193.03: Any major repair, revision or modification of the steam turbine as defined in this Rule shall be applied with the Regional Office having jurisdiction over the workplace or worksite as a new installation.

1193.04: Transfer of any steam turbine from its original location to another location within the same facility or elsewhere shall be reported to the Regional Office having jurisdiction over the workplace or worksite and shall not be operated without the new permit.

1193.05: Change of ownership of a steam turbine shall be reported to the Regional Office having jurisdiction over the workplace or worksite by the new owner not later than seven (7) days after the sale or transfer of ownership. The permit to operate shall remain valid unless revoked by the Secretary or his/her duly authorized representative.

1193.06: The minimum personnel requirement in the operation of a steam turbine shall be in accordance with Section 34 of Republic Act No. 8495 ("The Philippine Mechanical Engineering Act of 1998").

1193.07: Standards Requirements:

The application and plans for steam turbine installations for purposes of all phases of construction, testing and inspection, shall be in accordance with the latest revision of the following codes which are hereby adopted as part of this Rules.

1. ASME Test Code for Steam Turbine
2. The Philippine Mechanical Code (PMC)
3. Philippine Electrical Code (PEC)
4. National Building Code (NBC)
5. National Structural Code of the Philippines (NSCP)
6. Fire Code of the Philippines
7. Occupational Safety and Health Standards (OSHS)
8. Other applicable Standards

1193.08: Steam Turbine Records:

1. Every steam turbine shall include a certificate indicating the technical specifications used by the manufacturer including the design standards and dimensions and the maker's nameplate affixed on the steam turbine.

2. Every steam turbine owner shall have a maintenance registry/logbook which shall show the details and dates of all repairs, modifications, preventive maintenance undertaken, number of hours of operation and other similar data.
3. The permit to operate steam turbine including the cleared installation plans and application shall be kept on file in the premises and made available during the course of inspection.

1193.09: Inspection:

1. The Regional Director or his/her duly authorized representative having jurisdiction over the workplace or worksite shall conduct technical safety inspection of the steam turbine accompanied by the representative of the owner and/or the supervising plant mechanical engineer in any of the following phases of work:
 - a. During the construction phase of the foundation and installation of the steam turbine;
 - b. Before being placed into operation; and
 - c. Before being placed into operation after major repair, modification and/or transfer.
2. The Notice of Inspection for steam turbine shall be included in the boiler Notice of Inspection.
3. The conduct of inspection of steam turbine shall be performed simultaneously with the annual inspection of boiler.
4. The owner/operator shall prepare the following:
 - a. Operation and maintenance registry/logbook;
 - b. Application and installation plans cleared by the Regional Office; and
 - c. Permit to operate steam turbine issued by the Regional Office.
5. The following shall be inspected:
 - 5.1 Structural parts and foundation
 - 5.2 Parts in contact with steam/water
 - 5.3 Control devices

1193.10: Applicable Non-Destructive Testing as may be required by the labor inspector based on his/her assessment after visual inspection shall be performed only by a Department of Labor and Employment accredited Third Party Organization on non-destructive testing.

1194: Steam Turbine Room:

1194.01: Steam Turbine Room/Building (New Installation):

The provisions on this subject shall be in accordance with the following:

- a. National Building Code (NBC)
- b. National Structural Code of the Philippines (NSCP)
- c. Philippine Electrical Code (PEC)
- d. Philippine Mechanical Code (PMC)
- e. Fire Code of the Philippines
- f. Occupational Safety and Health Standards (OSHS)

1194.02: Steam Turbine Foundation Requirements:

The provisions on this subject shall be in accordance with the following:

- a. National Building Code (NBC)
- b. National Structural Code of the Philippines (NSCP)
- c. Philippine Mechanical Code (PMC)

1194.03: Machine Guarding:

All moving parts of the turbine, transmission equipment and all dangerous part of the driven machinery shall be effectively guarded in accordance with the provisions of Rule 1200 of the Occupational Safety and Health Standards (OSHS), Article 33, Chapter 3 of the Philippine Mechanical Code and Philippine Electrical Code.

1194.04: Personal Protective Equipment and Devices:

This subject shall be in accordance with the provisions of Rule 1080 of the OSHS, as amended and Philippine Mechanical Code.

1194.05: Fire Protection and Control:

This subject shall be in accordance with the provisions of the Fire Code of the Philippines (PD 1185), Rule 1940 of the OSHS, as amended and Philippine Mechanical Code.

1194.06: Anti-Pollution Control:

This subject shall be in accordance with the requirements of the Department of Environment and Natural Resources (DENR) and other government agencies concerned.

1194.07: Safety Signages:

Refer to Table II (Standard Colors of Signs for Safety Instructions and Warnings in Building Premises) of the OSHS, as amended.

1195: Requirements in the Preparation of Steam Turbine Application for Installation:

The provisions on this subject shall be in accordance with Chapter I - GENERAL of the Philippine Mechanical Code.

This Department Order shall take effect within fifteen (15) days upon its publication in two (2) newspapers of general circulation.

Manila, Philippines, on 29th day of December 2004.


PATRICIA A. STO. TOMAS
Secretary