

# LEGAL OPERATION FOR MACHINERY: DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH (DOSHA) APPROVAL

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Factories and Machineries Act (FMA) was introduced and came into force in 1967, to provide for the control of factories concerning matters relating to safety, health, and welfare of persons at work and to provide control on registration and inspection of machinery.

According to Factories and Machinery Act 1967, some machines need to apply for the Department of Occupational Safety and Health (DOSHA) approval such as lifts, escalators, dumbwaiters, sandblasting machines, hoisting machines, petroleum pipelines and storage facilities, unfired pressure vessels (UPV) and steam boilers.

These machines need different kinds of approval from DOSHA to operating legally, such as design approval, permission to install (PTI), permission to operate (PTO) and certificate of fitness (CF).

## **Machinery and Respective Submission Required for DOSHA Approval:**

### **A. Lifts, Escalators and Dumbwaiters**

- Design approval submission

### **B. Sandblasting Machines**

- Permission to install (PTI) submission
- Permission to operate (PTO) submission
- Certificate of fitness (CF) submission

### **C. Hoisting Machines**

- Design approval submission
- Certificate of fitness (CF) submission

#### ❖ Exemption:

Design approval submission is not required for monorail crane with safe working load of 4 tons and below, provided that the girder is of I or H beam of standard properties.

In addition, the following hoisting machines are exempted from obtaining design approval and certificate of fitness:

- 1) Boring rig
- 2) Drilling rig
- 3) Piling machine mounted on crawler track only
- 4) Winch for towing vehicle only
- 5) Dock leveler
- 6) Manipulator
- 7) Gangway tower
- 8) Vertical conveyor
- 9) Tail lift
- 10) Automatic Storage and Retrieval System (ASRS)
- 11) Monkey hoist with maximum lifting load of 80kg and maximum lifting height of 9 meters only
- 12) Air or pneumatic hoist with safe working load of 500kg and below only

#### D. Petroleum Pipelines and Storage Facilities

For petroleum pipelines, submissions needed are:

- Permission to install (PTI) petroleum pipelines submission
- Permission to operate (PTO) petroleum pipelines submission

For petroleum storage facilities, submissions needed are:

- Permission to install (PTI) liquefied petroleum gas bulk storage facility and gas fuel pipeline system to combustors submission
- Petroleum equipment approval submission

#### E. Unfired Pressure Vessels (UPV)

- Design approval submission
- Certificate of fitness (CF) submission
  - ❖ Examples:
    1. Air container
    2. Steriliser
    3. LPG storage tank
    4. Heat exchanger
    5. Pressure vessels at the petrochemical plants

#### F. Steam Boilers

- Design approval submission
- Certificate of fitness (CF) submission
  - ❖ Examples:
    - 1) Autoclave
    - 2) Electric steam boiler
    - 3) Water tube steam boiler
    - 4) Fire tube steam boiler
    - 5) Recovery Steam Generator (HRSG)
    - 6) Hot water boiler
    - 7) Thermal oil heater

#### Summary of The Submission Required for Different Types of Machinery:

Machine	Type of Submission			
	Design Approval	Permission to Install (PTI)	Permission to Operate (PTO)	Certificate of Fitness (CF)
A. Lifts, Escalators and Dumbwaiters	√			
B. Sand Blasting Machine		√	√	√
C. Hoisting Machine	√			√
D. Petroleum Pipelines and Storage Facilities		√	√	
E. Unfired Pressure Vessels (UPV)	√			√
F. Steam Boilers	√			√

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**References:**

1. Approval and Authorisation. (2020, February). Department of Occupational Safety and Health. Retrieved from <http://www.dosh.gov.my/index.php/about-us/main-services/enforcement/approval-and-authorisation>