MCN401: Industrial Safety Engineering

Module 3_Lecture #4

Relevant Indian Standards and the National Building Code provisions on construction safety

1) SP70:2001- Handbook on construction safety practices

This Handbook on Construction Safety Practices has been prepared for site engineers, project managers and engineers-in-charge of buildings and civil works projects. It is based on the Indian Standards on the subject and is written in a readable style for easy reference by users.

Users should be conversant with technical as well as administrative/legal aspects of safety, the former stem out of the standards and the latter from labour laws, contract document and judicial pronouncements. This Handbook deals with only the technical aspects of safety in construction.

2) NBC 2016 (National Building Code of India)-

- Part 4: Fire and Life Safety
- Part 7: Construction management, Practices and Safety (IS SP7-NBC (2016))

Part 4 at a glance



- Classification of buildings based on occupancy, from fire safety point of view
- Demarcation of fire zone
- Types of building construction
- Openings in fire resistant walls and floors
- Electrical installations
- Escape lighting and exit signage
- Air conditioning, ventilation and smoke control
- Heating
- Glazing
- · Surface interior finishes
- · Fire Command Centre (FCC)

- · General exit requirements
- · Occupant load
- Egress components
- Exit access
- Exit
- Exit discharge
- Compartmentation
- Smoke control
- Gas supply
- Hazardous areas, gaseous, oil storage yard, etc
- Fire Officer
- · Fire drills and fire orders

- Requirements for firefighting installations (refer Table 7)
- Maintenance of firefighting installation and systems

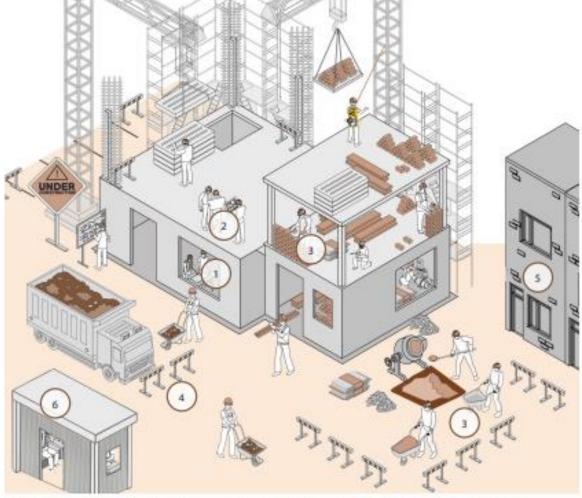
Additional occupancy wise requirements

Additional fire safety requirements for high rise building, atrium, commercial kitchen, car parking facilities, metro stations, metro trainways and measures for venting in industrial buildings, are also covered in this Part of NBC 2016.



All buildings shall satisfy minimum requirements for safety of life from fire, smoke, fumes or panic arising from these or similar causes.

Part 7 at a glance



- Construction management (time, cost, quality, health and safety)
- Construction planning and site management
- 3) Construction practices
- 4) Safety in construction
- Repairs, retrofitting and strengthening of buildings
- Habitat and welfare requirements for workers

Standards relating to construction project management functions and construction practices are also refered in this Section.



For more details on Part 7, please refer to NBC 2016

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3) Safety, Health and Environment Handbook 2019

This Hand book in conjunction of emergency action plan intend to define minimum requirement of safety, health and environmental management system to be implemented on in CPWD works to maintain high standards of SHE at construction sites. . It is intended to be used by engineers, architects and contractors during planning and execution stages.

| Civil | |
|-----------------|--|
| Engineering | |
| Construction | |
| IS 875:1987 | Structural safety of building: Loading Standards Part 1-5 |
| IS 1905:1987 | Structural safety of buildings : Masonry Walls |
| IS 4014:1967 | Code of practice for steel tubular scaffolding - 2 parts |
| IS 4138 :1977 | Safety code for working in compressed air (first revision) |
| IS 4912:1978 | Safety requirements for floor and wall openings, railings and toe boards (first revision) |
| IS 7293:1974 | Safety code for working with construction machinery |
| IS 7969:1975 | Safety code for handling and storage of building materials |
| IS 9944:1992 IS | Recommendations on safe working load for natural and man- |
| | made fibre rope slings |
| 11972:1987 | Code of practise safety for protective barriers in and around building |
| IS 7293:1974 | Safety code for working with construction machinery |
| IS 7969:1975 | Safety code for handling and storage of building materials |