

## **21. FIRE EXTINGUISHERS & OTHER APPLIANCES OF FIRE FIGHTING**

### **21.1 FIRE EXTINGUISHERS & OTHER MEANS OF PREVENTION AND PROTECTION**

21.1.1 Every contractor shall have a fire protection and prevention plan developed and implemented keeping in view the following:

- i) The specific work practices requiring fire control measures;
- ii) Response measures to be taken in case of fire;
- iii) Equipment required;
- iv) Personnel requirements and responsibilities;
- v) Schedules of daily and weekly inspection;
- vi) Open flames and fires are prohibited in all underground construction;
- vii) Readily visible signs to be posted in the fire prone/inflammable/explosive areas prohibiting smoking use of open flames and other hot work.
- viii) A system of Permit-to-Work.

27.1.2 For the protection of the workers from the outbreak of fire, the contractor shall Provide, maintain and regularly inspect the Fire extinguishing equipment, which shall be sufficiently provided to extinguish any probable fire;

<b>Suitability of portable fire extinguishers</b>			
<b>Class of fire</b>	<b>Type of extinguisher</b>		
	<b>Water</b>	<b>DCP</b>	<b>CO<sub>2</sub></b>
<b>A</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>B</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
<b>C</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
<b>D</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
<b>Electrical</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>

27.1.3 Ensure availability of an adequate supply of water at ample pressure;

27.1.4 Make available

- i. Adequate number of trained persons required to operate the fire extinguishing equipment;

- ii. Properly maintain Fire extinguishing equipment and inspect them at regular intervals of not less than once in a year by the responsible person and a record of such inspections maintained;
- 27.1.5 Portable fire extinguishers provided in the operator's cabin of earthmoving machinery, material handling systems, construction equipment etc. shall be regularly inspected, maintained and replenished/refilled;
- 27.1.6 The operators and the helpers of such equipment shall be trained in the methods operating the equipment and fighting the fire effectively;
- 27.1.7 All combustion engine power equipment shall be so located that the exhausts are well away from combustible material;
- 27.1.8 No smoking shall be allowed at or in the vicinity of operations, which constitute fire hazards and shall be conspicuously posted with No smoking or open flame **signs**;
- 27.1.9 In the flammable environment as described in IS: 9570, the electrical fittings and equipment shall be of flame proof type conforming to IS: 2206 & IS: 2148;
- 27.1.10 Arrangements shall be made to contain sparks generated during welding, cutting or other operations and spark shall not be allowed to fall down on combustible material kept below; All means of exit shall be kept free of obstruction at all times;
- 27.1.11 Appropriate type of fire extinguishers according to IS: 5698 shall be kept in fully charged condition at the places which have potential risk of fire;
- 27.1.12 The contractor shall educate his or his sub-contractors' men working in the vicinity of fire risk, on how to operate these equipment and know in particular circumstances which type of extinguishers is to be used;
- 27.1.13 The contractor shall take full responsibility for the upkeep and replenishment/refilling of the fixed and portable fire extinguishers.

