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Government of India
Ministry of Railways
(Railway Board)

No. 2000/Tele/TE/6

New Delhi, dated 16.04.2002.

General Manager,
South Central Railway,
Secunderabad.

General Manager/CORE
Allahabad.

Sub:- Fire accident in Cable Store at Vijaywada - RE Depot.
- Preventive Measures Regarding
Ref:- Boards letter no. 90/Sec(Spl.)/75/14 dt. 13/3/91

The Committee set up to enquire into the causes of the above accident has concluded that fire might have occurred due to partially dry uncut grass catching fire due to throwing of a live cigarette or bidi butt, carelessly by passerby's into the boundary wall from outside.

To avoid the occurrence of such accidents, Board vide above referred letter, had issued instructions on Measures to be taken to Prevent Accidents in Cable Storage Yards.(Copy enclosed). You are requested to ensure compliance of instructions contained therein to avoid reoccurence of such incidences/fire accidents in future.

Necessary action may be taken accordingly under advice to this office.

(Yog Raj) 16/4
Director/Tele

DA/- As above

Copy to:-

1. General Managers/All Indian Railways and Production Units, MTP/ Kolkata (except SC Railway and CORE/Allahabad) - to ensure compliance of the above instructions under advice to this office.
2. IG/RS /Railway Board – for information please

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No.90/Sec(Spl)/75/14 New Delhi, dt: 28 .3.91.

The General Managers,
All Indian Railways and
Production Units.

Sub: Fire Accidents in Cable Storage Yards - Fire Preventive Measures regarding.

Ref: Board's wireless message of even number dt: 3.12.1990.

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In a recent major fire accident in one of the Cable Storage Yards, large number of Cable Drums were completelydestroyed. Prima facie, it appears that no fire preventive measures were observed and no fire fighting equipments were provided at the yard.

In this regard the following guide-lines are issued for implementation, which can be further supplemented according to thelocal needs, duly reviewing the existing Security and Fire Protection arrangements.

(1) Cable drums should not be dumped haphazardly. They should be formed in rows in small lots with gaps around not less than 2 to 3 meters with the idea in the case of fire, there is time to prevent the fire spreading to adjacent stacks and time is available for rolling out the other drums. Good paving of the area is essential for such rolling to be done. Fire Protection arrangements may be made as for group 'G' Industrial Buildings HH, Class A of the enclosure. Similar care should also be taken while stacking other combustible materials whether indoor or outdoor.

(2) The area should be cleared of vegetation.

(3) Dismantled planks of the drums and other packing materials should be removed from the yard, forthwith..

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(4) None should be allowed to raise open fire either for the purpose of cooking or warming up during the nights.

(5) Officers and Supervisory officials concerned should be on constant vigil and conduct surprise night checks.

(6) 'No smoking' should be observed in the yard and Board, should be exhibited.

(7) Fire buckets and fire drums filled with water and fire extinguishers in sufficient quantity shall be provided in consultation with ASC/Fire of the Railways/Production Units. Adequate storage reserve for water should be ensured.

(8) If the stocking is a long standing arrangement required number of fire hydrants connected to a near-by overhead tank, with hose pipes and branch pipes, shall be provided.

(9) RPF officials during their visits should also keep an eye on the above arrangements and bring it to the notice of the concerned officials where the above arrangements and instructions are not adhered to.

(10) Fire equipments have to be provided as per the scale mentioned in the enclosures. As far as possible, Halon (1211) type of fire extinguisher, which is found useful in almost all types of fire, of equivalent capacity, may replace other type of fire extinguishers so as to avoid different type of fire extinguishers at a particular location and confusion in operation.

(P.R. Goundan)
Executive Director
Telecom/Development
Railway Board.

(M.B. Kaushal)
Executive Director &
Inspector General/RPF,
Railway Board.

Copy to Telecom Branch, Railway Board with 5 spare copies with reference to their file No. 90/Tele/TC/10.

RECOMMENDED SCALE OF EQUIPMENT TO BE INSTALLED

Class A

LH Occupancy	-	One 9 litre water expelling extinguisher for every 600 sq.m of floor area or part there of with minimum of two extinguishers per compartment or floor of the building. The extinguishers should be so located as to be available within 25 metre radius.
OH Occupancy	-	Two 9 litre water expelling extinguishers for every 600 Sq.m with minimum of 4 extinguishers per compartment/floor. The extinguishers should be so located as to be available with 15 metre radius.
HH Occupancy	-	Provision as per OH occupancy, plus one 50 litre Soda Acid extinguisher for every 100 sq.m of floor area or part there of.
Special Hazard (SH) Occupancy	-	One 5 kg capacity carbon dioxid or 205 kg capacity Halon 1211 extinguisher for every 100 sq.m of floor area or part there of with minimum of two extinguishers should be so located as to be available within 10 metre radius.

Class B

LH Occupancy	-	One 9 litre foam extinguisher, Chemical/ Mechanical for every 600 sq.m. of floor area or par there of with minimum of two extinguishers per compartment or floor. The extinguishers should be so located as to be available within 25 metre radius.
OH occupancy	-	Two 9 litre foam extinguishers, Chemical Mechnical type, or 5 kg capacity dry powder extinguisher (or one of each type) for every 600 sq.m area with minimum of four extinguishers per compartment. Extinguishers should be available with 15 metre radius.
HH Occupancy	-	Provisions as per OH, plus one 50 m litre foam type extinguisher for every 100 sq.m or par there of or one 150 litre foam extinghisher for every 300 sq.m of floor area or part there of.

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Class C

LH Occupancy - 2 kg dry powder extinguisher or 2.5 halon 1211 for every 20 sq.m of floor area or part there of with extinguisher available within 15 metre radius.

OH Occupancy - One 10 kg dry powder extinguisher or 7 kg carbon dioxide extinguisher or 2.5 kg Halon-1211 extinghisher for 100 sq.m of floor area or part there of with minimum of two extinguishers of the same type for every compartment; Extinguisher should be available within a radius of 15 metre.

HH Occupancy - Two nos. of 10 kg dry powder extinguishers 9kg C■ 2 extinguishers or 5 kg Halon 1211 extinguishers for every 100 sq.m of floor area or part thereof, subject of a minimum of three extinguishers of same type per room or compartment. Extinguisher should be available within a radius of 10 metre.

Class D

HH Occupancy - One 10kg dry.powder extinguisher with special dry powder for metal fires for every 100 sq.m of floor areaor par there of, with minimum of two extinguishers per compartment/room. Extinguishers should be available within a radius of 10 metre.

NOTE-1 - The recommendations are minimum for a specific area. In case, the area is more than specified higher capacity extinguishers can be used based on these minimum requirements, that is proportionately higher capacity can be used.

NOTE 2 - In case of Dry Powder/CO_2/Halon type equivalent lower capacities can also be used.

1. Occupancies classified as per National Buildin_ Code, Part IV - Fire Protection Provisions are given below together with nature of fire hazard and type of fire risk alon_ with typical examples.
(LH - Low Hazard)

OH - Ordinary Hazard;

HH - High Hazard;

SH - Special Hazard.

Class of Occupancy	Type of Occupancy	Natur of occupancy	Class of Fire Risk	Typical Examples
Group A	Residential Buildings	LH	Class A	Lodging Houses, Private Dwellings, Dormitories, Apartment Houses, Flats, Hotels, etc.
		LH	Class C	Small Kitchens having LPG Connection/ Electrical Heaters, etc.
		OH	Class A	Multistoreyed Buildings, High Risk Buildings, Five Star Hotels, etc.
Group B	Educational Buildings.	LH	Class A	Tutorials, Vocational Training Institute, Evening Colleges, Commercial Institutes.
		OH	Class A	Schools, Colleges, etc.
Group C	Institutional Buildings	OH	Class A	Hospitals, Sanatoria, Homes for aged, Orphanage jails, etc.

Class of Occupancy	Type of Occupancy	Nature of Occupancy	Class of Fire Risk	Typical Examples
Group D	Assembly Buildings D-1	HH	Class A	Theatres, Assembly Halls, Exhibition Halls, Museums, Restaurants, Places of Worship, Club Rooms, Dance Halls, etc. having seating Capacity of over 1000 Persons.
	D-2	OH	Class A	Theatres, Assembly Halls, Exhibition Halls, Museums, Restaurants, Places of Worship, Club Rooms, Dance Halls, etc.; having seating capacity less than 1000 persons.
	D-3	OH	Class A	- As above - but having accommodation for more than 300 persons, but less than 1000 persons, with no permanent seating arrangement.
	D-4 D-5	LH	Class A	- As above - but having accommodation less than 300 and those not covered under D-1 to D-3.
Group E	Business Buildings			
	E-1	SH	Class A	Offices, Banks, Record Rooms, Archieves, Libraries, Data Processing Centres, Museums, etc.
	E-2	OH	Class B	Laboratories, Research Establishments, Test Houses, etc.
	E-3	SH	Class A	Computer Installations
Group F	Mercantile Buildings	OH	Class A	Shops, Stores, Markets, Departmental Stores, Underground shopping centres, etc.
Group G	Industrial Building	LH	Class A	Small Printing Presses.
		OH	Class A	Corrugated Carton Mfg.units, Paper cane units, packing Case Mfg. Units, Cotton waste Mfg. Units.
		HH	Class A	Large Timber Yards, Saw Mills, Godowns and Ware Houses storing combustible materials; cold storages, freight depots, etc.

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Class of Occupancy	Type of Occupancy	Nature of Occupancy	Class of Fire Risk	Typical Examples
Group G	Industrial Buildings	LH	Class B	Demonstration Chemical Plants, Small chemical processing plants, pilet plants, etc.
		OH	Class B	Workshops, Painting shops, Large kitchens, Industrial Canteens, Generator Rooms, Heat Treatment shops, Tread Rubber Mfg.Units, Petrol Bunks, Tubes & Flaps units, etc.
		HH	Class B	Petroleum Processing Units, Chemical Plants, Industrial Alcohol Plants, Effluent Treatment Plants, etc.
		LH OH HH	Class C Class C Class C	Fertilizer Plants, Petrochemical Plants, etc.
		HH	Class D	All processes involving use of combustible materials, reactive metals & alloys, including their storage.
Group H	Storage Buildings	OH	Class B	Flamable liquid stores, storage in Drums and Cans in open, paints and varnishes godown.
		HH	Class B	Tank Farms, Chemical & Petroleum bulk storage depots, Large service stations, Truck and Marine Terminals, underground LDO/Furnace Oil storage yards, etc.
		OH	Class C	LPG Distribution godowns/offices, Distribution storage godowns/offices of O_2, N_2, H_2, Argon and other Industrial Gases.

Class of Occupancy	Type of Occupancy	Nature of Occupancy	Class of Fire Risk	Typical Examples
		HH	Class C	Storage and handling of gas cylinders in bulk. gas plants. gas holders, horton spheres, etc.
Group I	Hazardous Buildings	-	-	Buildings used for storage, handling, manufacture and processing of highly combustible materials.(Risks involved in terms of class of fire and intensity of fire has to be assessed/to be consulted, Environmental factors and Mutual aid facilities to be taken into account before deciding on the Fire Safety Requirements).

/ on case to case basis and statutory authorities