

FIRE FIGHTING



Presented By:
STC/NBQ



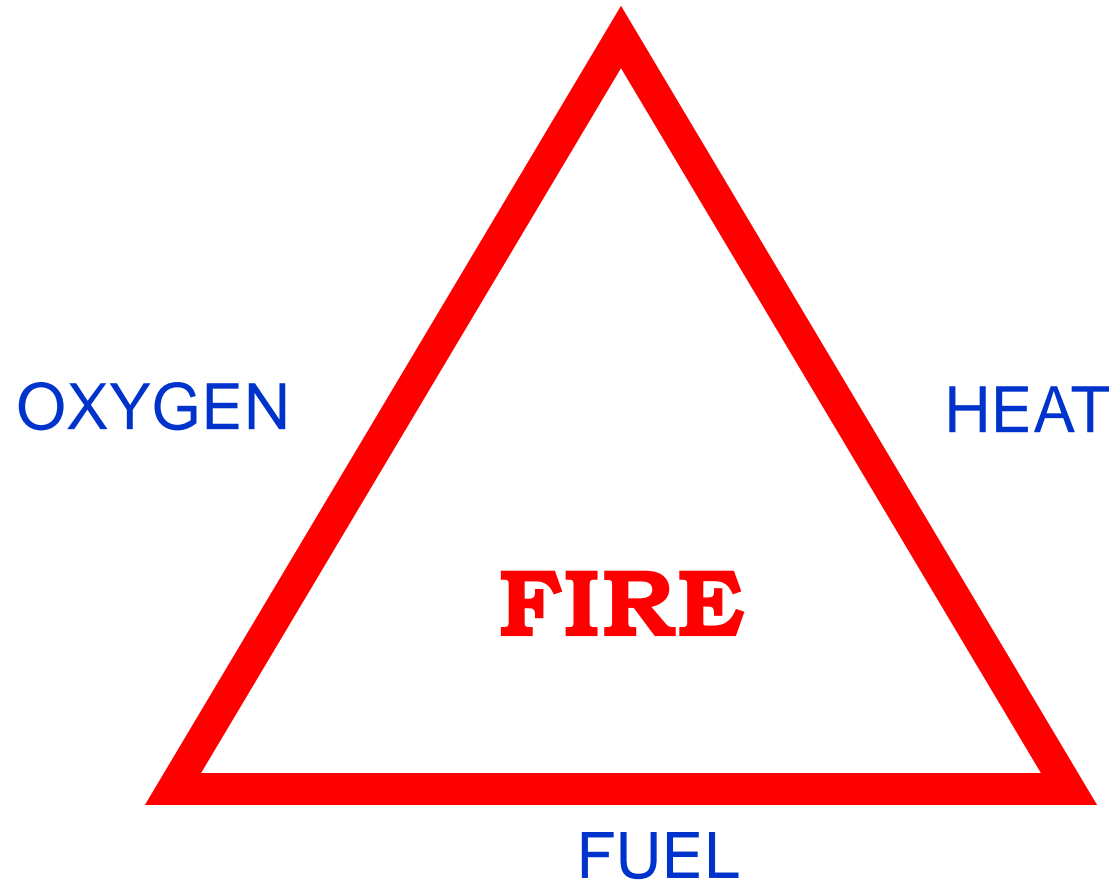
FIRE

- A fire is a chemical reaction requiring three essential ingredients viz- a combustible substance (Fuel), heat and oxygen





TRIANGLE OF FIRE



CLASSIFICATION OF FIRE

- CLASS – A - CARBONACEOUS FIRE
- CLASS – B - LIQUID / GASEOUS FIRE
- CLASS – C - ELECTRICAL FIRE
- CLASS – D - METALLIC FIRE.



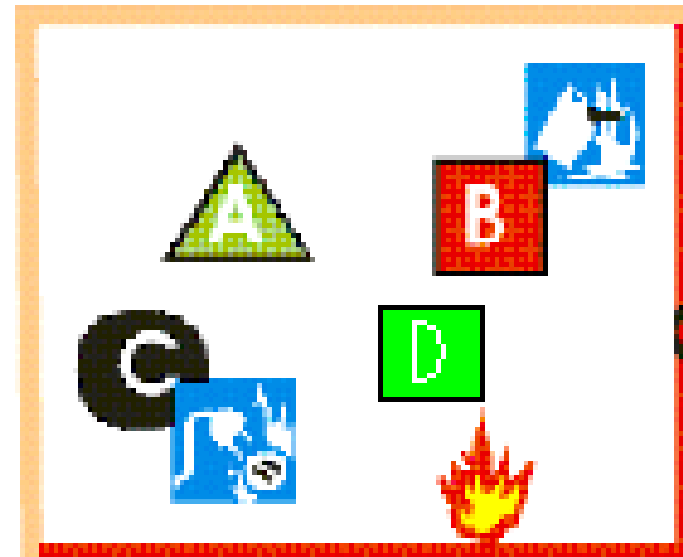
METHODS OF EXTINGUISHING

- Starvation
- Smothering
- Cooling.



USE OF FIRE EXTINGUISHERS

- **CLASS – A** – WATER TYPE, SODA ACID, DCP
- **CLASS – B** – FOAM, CTC, CBM, CO₂, DCP
- **CLASS – C** – CTC, CBM, CO₂, DCP
- **CLASS – D** – DCP.



● ● ● | **DRY CHEMICALS POWDER**

TYPE –

- GAS CARTRIDGE TYPE
- STORED PRESSURE TYPE



SIZE

○ 2 LBS TO 30 LBS



METHOD OF OPERATION

- REMOVE THE SAFETY CLIP
- WITHDRAW THE NOZZLE
- PRESS THE SQUEEZE GRIP
(IF AVAILABLE)
- DIRECT THE NOZZLE
TOWARDS THE BASE OF THE
FLAME
- DEPRESS THE PLUNGER
- MOVE THE NOZZLE IN A
FAST SWEEPING MOTION.



METHOD OF OPERATION



Pull the pin



and hold



Aim the nozzle



squeeze handle



until fire is out

RECHARGING

- ENSURE DISCHARGE TUBE, HOSE, AND NOZZLE ARE CLEARED
- SCREW IN THE CO₂ CARTRIDGE
- OPEN THE NEW POWDER CONTAINER, IMMEDIATELY TRANSFER IN TO EXTINGUISHER AND CLOSE THE CAP
- WHILE REFILLING USE MASK.





Testing

- TESTED BY WEIGHING ONCE IN THREE MONTHS
- RECHARGE IF THE LOSS OF WEIGHT EXCEEDS 10 %
- HYDRAULIC PRESSURE TEST TO BE CARRIED OUT AT 30 KG/CM²
- IN CASE OF EXTERNAL CORROSION HT AFTER 5 YEARS OR ELSE AT 10 YEARS (on first two occasions subsequently after 5 years)
- CHECK HORN, HOSE AND VALVE ASSEMBLY ONCE IN THREE MONTHS.



TYPES OF POWDER

- SODIUM BICARBONATE METALLIC STEARATE
- BORAX – CARBONACEOUS FIRE
- AMMONIUM PHOSPHATE – DO-
- TERNARY EUNECTIC CHLORIDE- METALLIC FIRE
- POTASSIUM SULPHATE.



DISCHARGE PERFORMANCE

Capacity	Min. Period	Max. Period	Range
1 to 2 kg	8 Sec.	10 Sec.	Min. 2 Mtrs.
5 kg	15 Sec.	20 Sec.	Min. 4 Mtrs.
10 kg	23 Sec.	30 Sec.	Min. 6 Mtrs.

DO NOT FIGHT THE FIRE IF -

- ADEQUATE & APPROPRIATE EQUIPMENTS ARE NOT AVAILABLE
- CORRECT TYPE OF FIRE EXTINGUISHER IS NOT AVAILABLE
- TOXIC GAS SURROUNDS THE AREA

(NYLON, FOAM PADDING, IF BURN, RELEASE HYDROGEN CYANIDE, ACROLEIN & AMMONIA IN ADDITION TO CARBON MONO OXIDE)

- INSTINCT DOES NOT ALLOW
- THERE IS NO EXIT BEHIND.



WHEN TO FIGHT FIRE

- EVERY ONE HAS LEFT OR LEAVING THE BUILDING
- THE FIRE DEPARTMENT HAS BEEN CALLED
- FIRE IS SMALL
- FIGHT WHEN SAFE EXIT ROUTE IS AT YOUR BACK
- FIRE EXTINGUISHER IS OF CORRECT TYPE
- FIRE EXTINGUISHER IS SERVICEABLE
- RECEIVED TRAINING



TIPS FOR FIRE SAFETY

- PLACE THE FIRE EXTINGUISHER AT AN EXIT OF A KITCHEN, GARAGE ETC. (NOT NEAR THE STOVE)
- REFILL EVEN IF LITTLE AMOUNT HAS BEEN USED





FIRE- Dos Donts:

a) AVOID

- Smoking or lighting a flame where it is prohibited.
- Throwing of oil soaked jute / cloth carelessly.
- Throwing of bung match stick, bidi / cigarette carelessly.
- Do not overload Electric Circuits in coach
- Do not allow running of Hot Axle Wagon
- Do not keep Explosive Materials along with Combustible Materials.
- Carrying of gas Stoves, Kerosene oil gas Cylinders, kerosene jars, petrol or other inflammable articles in passenger carrying trains, should be restricted.



b) OBEY

- Be speedy but do not get nervous.
- Locate the fire extinguishing substances viz. water bucket with water / sand, fire extinguishers etc.
- Raise Alarm.
- Inform all concerned to assist in extinguishing the fire.
- Segregate / Remove all valuable properties.
- Keep fire extinguisher / water buckets in readiness.
- Arrange to isolate the source of fire if possible.
- Ascertain the type of fire viz. Dry, oil gaseous, electric and use the right type of extinguishers.
- In case of the fire from Electricity, switch “OFF” the source.
- Do not stand against the wind.

TO PREVENT FIRE IN TRAIN

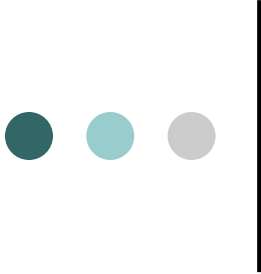
(General instruction need to be follow)

- ❖ Ensure that all stabling rakes should be properly in locked condition.
- ❖ Ensure that there is no dangling/ naked electrical wires in coaches.
- ❖ Ensure to carry any inflammable items in coaches (viz , oil ,gasoline etc)
- ❖ Ensure to detect hot axle,brake binding in time.
- ❖ Ensure to provide adequate nos of fire extinguishers in coaches.
- ❖ Be speedy but do not get nervous.
- ❖ Locate the fire extinguishing substances viz. water, sand, fire extinguishers etc.
- ❖ Segregate/Remove all valuable property.
- ❖ Arrange to isolate the source of fire, if possible.
- ❖ In case of fire, from electricity, switch off the source.
- ❖ Do not stand against the wind.



When a person's clothing catches fire :

- ◆ Approach him holding with nearest available wrap in front of you.
- ◆ Wrap it round him.
- ◆ Lay him on the floor, fire shall be extinguished by smothering the flames.
- ◆ On no account he should rush into the open air.
- ◆ Call for assistance.



Fire caused by petrol or any other Inflammable liquids, Acids or Gases

- ◆ Segregate the affected wagon, coach or area involved.
- ◆ On opening a wagon do not enter immediately. Avoid fumes, which may be dangerous.
- ◆ Use DCP Type Fire Extinguisher and Sand
- ◆ Do not bring naked lights near the site of fire.
- ◆ Inform the nearest Civil Fire station
(Location, Type of fire)



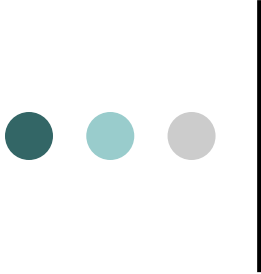
First Aid" to Burn Injuries

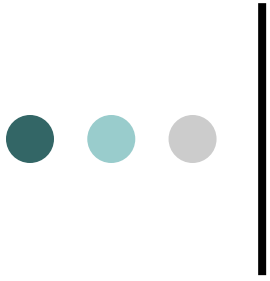
◆ Burns are of three types:

- Heat burn,
- Chemical burn and
- Radiation burn.

◆ The aim of first aid treatment in case of heat burn is to:

- Reduce the local effect of heat,
- Relieve pain,
- Lessen shock,
- Prevent infection,
- Remove the casualty quickly to a hospital,

- 
- ◆ Cool the burnt part as soon as possible, the burnt limb may be placed under running water or cold water
 - ◆ The burnt limb may be immersed in cold water.
 - ◆ Crushed ice may be added to make it still cooler.
 - ◆ The limb may be kept immersed for 5 to 10 minutes.
 - ◆ The burnt surface should be covered with thin sterile dressing before application of cold water.
 - ◆ Prompt removal of heat is most essential and the risk of infection is of lesser importance
 - ◆ Bangles, rings & shoes should be removed from the affected limbs as early as possible.



Thank you