

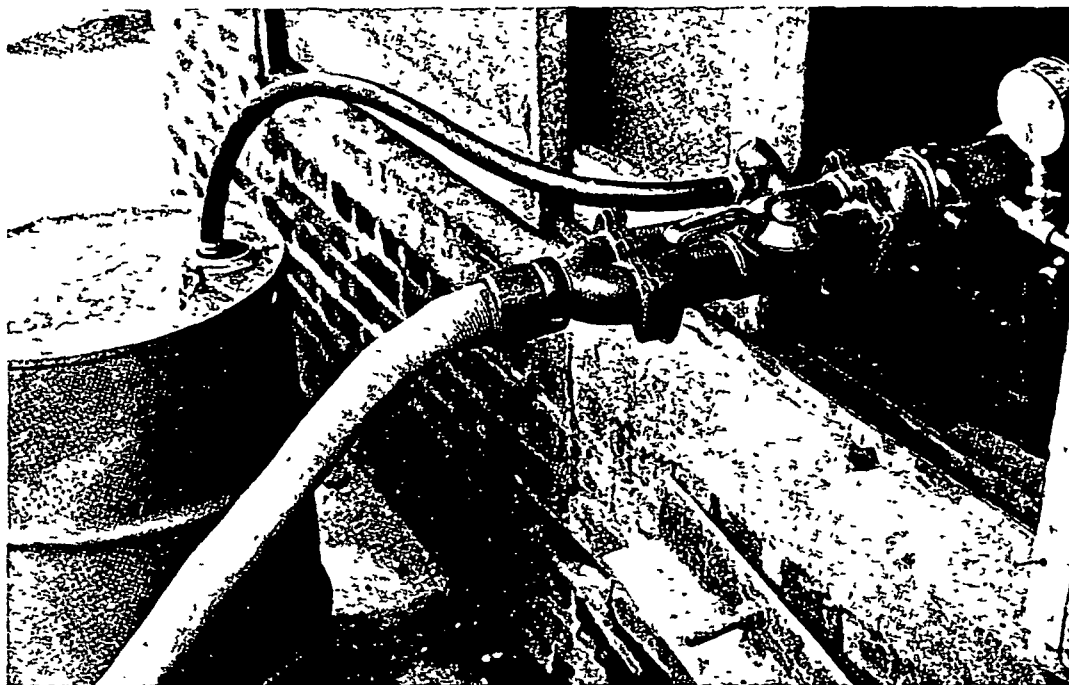


FIG 36-9 — Proportioner permits operator to vary percentage of foam-producing concentrate

are listed by Underwriters' Laboratories, Inc., are siphoned through a proportioner at rates not exceeding 2 per cent by volume.

The reflective white opaque surface formed by the air bubbles and wet-water particles makes this agent a good medium for protection from exposure fires. The cellular structure of the foam also retards heat conduction, thus affording insulation. As the foam blanket absorbs the heat and breaks down, the wet water released from the air bubbles carries the heat away from the protected surface. Mixing wetting agents with other wetting agents or with mechanical or chemical foam is *not recommended* since it may neutralize the effect of the agents and thus destroy the fire-fighting properties.

High expansion foam, using wetting agents in ratios as high as 1000 to 1, has been developed. These foams have a water content ranging from 0.2 to 1.0 oz/cu ft, and are effective in fighting fires in inaccessible places, such as coal mines and building basements.

High expansion foams can also be used in

total flooding systems designed to fill enclosed spaces, such as rooms or buildings. The systems are suitable for hazards involving flammable liquids and ordinary combustibles, if properly designed for the specific hazard and area.

Wet water

The wet water principle can also be used without generating foam. In liquid form, wet water has the same general extinguishing properties as plain water. However, its cooling ability is increased, and there is a greater penetration of porous surfaces because of its reduced surface tension.

Carbon dioxide extinguishing systems

Fixed (local or flood-type) CO₂ systems are often installed for the protection of rooms that contain electrical equipment, flammable liquid or gas processes, dry cleaning machinery, and other exposures where fire can be extinguished by diluting the oxygen content of the air or where water must not be used because of electrical hazard or the nature of the