powder The burning metal should be allowed to cool before disposal is attempted

Another material is "Met-L-X," composed of a sodium chloride base with additives to make it free flowing, increase water repellency, and create the property of heat caking This material is dispensed from a 30 pound dry *powder* extinguisher which is similar in appearance and physical features to the cartridge-operated dry-chemical extinguisher, or from larger wheeled or stationary units

The technique used to extinguish a metal fire with Met-L-X is to open the nozzle of the extinguisher fully and apply a thin layer of Met-L-X over the burning mass from a safe distance, until control is established Then throttle the nozzle to produce a soft heavy stream and completely cover with a heavy layer from close range The heat of the fire causes the Met-L-X to cake, forming a crust that excludes air

"Lith-X" is also a dry powder It is composed of a special graphite base with additives to render it free-flowing so it can be discharged from an extinguisher Lith-X was developed mainly for use on lithium fires, but is effective on other combustible metals Lith-X does not cake or crust when applied over a burning metal It excludes air and conducts heat away from the burning mass, extinguishing the fire

The extinguishing effects of dry powder agents on a given metal depend on the physical form and quantity of the metal involved and on ambient conditions Although dry powders are very effective on combustible metal fires, they all have certain limitations The type, quantity, and form of the metal and the existing physical conditions must be considered when selecting the proper type of dry powder and the method of application

A problem recently developed in fire fighting involves pyrophoric liquids, such as triethylaluminum These liquids ignite spontaneously and the resulting fires cannot be easily extinguished by dry powder or other commonly used agents A special material ("Met-L-Kyl") has been developed, consisting of a bicarbonate base dry chemical and an activated absorbent

The principle of extinguishment involves the combination effect of dry chemical, which extinguishes the flames, and the absorbent which absorbs the remaining fuel and prevents reignition This extinguishing agent has been designed so that it can be discharged from an extinguisher similar to the standard cartridge-operated dry chemical model

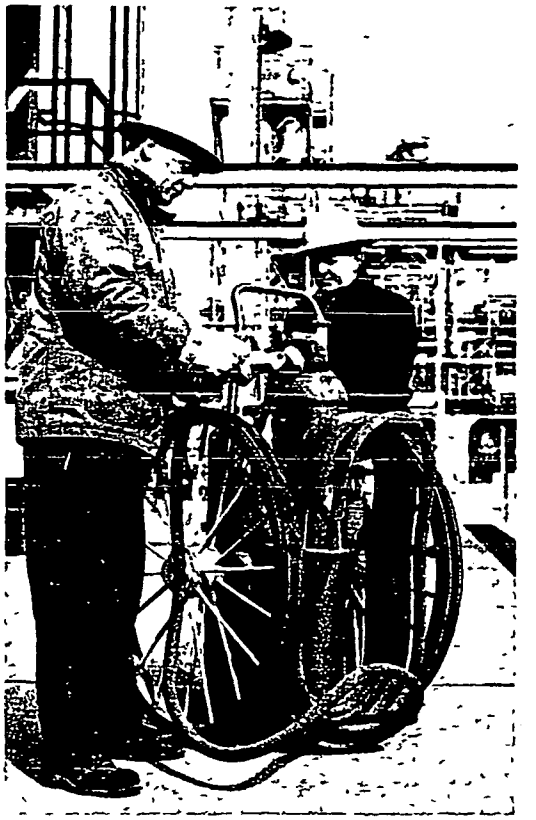

FIG 36-23 – Portable fire extinguishers must supplement a fixed system as they often can prevent a small fire from spreading as well as provide rapid extinguishment in early stages of a fire Here a a dry chemical wheeled-type extinguisher is being inspected

Courtesy Marathon Oil Company

Federal rules on fire extinguishers

Effective June 13, 1962, a Federal Food and Drug Administration ruling requires special labeling on fire extinguishers that produce substances that are highly toxic or toxic when used according to directions