CHAPTER 34

FIRE EXTINGUISHMENT AND CONTROL

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Equipment used to extinguish and control fires is of two types fixed and portable Fixed systems include water equipment automatic sprinklers, hydrants, standpipe hoses, and special pipe systems for dry chemical, carbon dioxide, and foam Special pipe systems are applicable to areas of high fire potential where water may not be effective, such as tanks for storage of flammable liquids and on electrical equipment

Fixed systems, however, must be supplemented by portable fire extinguishers These often can eliminate the action of sprinkler systems because they can prevent a small fire from spreading as well as provide rapid extinguishment in the early stages of a fire (See Fig 34-4)

Water Systems

Water supply and storage

Sprinkler systems need a reliable water supply of ample capacity and pressure for efficient fire extinguishment (Fig 34-2) For example, to supply all sprinklers likely to open in addition to hose streams, a volume as high as 500 to 1,500 gpm may be needed The precise need depends on the occupancy classification Pressure should be high enough to maintain a residual pressure of 15 psi in top-story sprinklers

Water may be supplied from the following sources

1 Public water works underground supply mains
2 Automatically or manually controlled pumps drawing water from lakes, ponds, rivers, surface storage tanks, underground reservoirs, or similar adequate sources
3 Pressure tanks containing two-thirds water and one-third compressed air for

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This chapter was revised by Marshall Petersen based on reviews by selected members of the National Safety Council