

## INDUSTRIAL BUILDINGS AND PLANT LAYOUT

|                                                                                                                                                                                                                                                       |       |
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### Design for Safety

Efficiency and safety in industrial operations can be greatly increased by careful planning of the location, design, and layout of a new plant or of an existing one in which major alterations are to be made. Numerous accidents, occupational diseases, explosions, and fires are preventable if suitable measures are taken right from the earliest planning stages.

#### Buildings, equipment, and processes

Major factors determining the size, shape, and type of buildings and structures are the nature of the processes and materials, maintenance, mechanical handling equipment, and working conditions. These can vary greatly

Catastrophes resulting in large loss of life and heavy property damage often are due to inadequate planning-stage consideration of the physical and chemical properties of dangerous substances and their processing methods.

High hazard processes should be located in small isolated buildings of limited occupancy. Buildings can be designed so that internal explosions will produce minimum damage and minimum broken glass. Lower hazard operations can justify larger units.

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This chapter was revised by Clinton H. Hoch, based upon reviews by selected members of the National Safety Council.