

### B31.3 - Process Piping

Design of chemical and petroleum plants and refineries processing chemicals and hydrocarbons, water and steam. This Code contains rules for piping typically found in petroleum refineries; chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants; and related processing plants and terminals.

This Code prescribes requirements for materials and components, design, fabrication, assembly, erection, examination, inspection, and testing of piping. This Code applies to piping for all fluids including: (1) raw, intermediate, and finished chemicals; (2) petroleum products; (3) gas, steam, air and water; (4) fluidized solids; (5) refrigerants; and (6) cryogenic fluids. Also included is piping which interconnects pieces or stages within a packaged equipment assembly.

### B31.4 - Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids

This Code prescribes requirements for the design, materials, construction, assembly, erection, and testing of piping transporting liquids such as crude oil, condensate, natural gas, natural gas liquids, liquefied petroleum gas, carbon dioxide, liquid alcohol, liquid anhydrous ammonia and liquid petroleum products between producers' lease facilities, tank farms, natural gas processing plants, refineries, stations, ammonia plants, terminals (marine, rail and truck) and other delivery and receiving points.

Piping consists of pipe, flanges, bolting, gaskets, valves, relief devices, fittings and the pressure containing parts of other piping components. It also includes hangers and supports, and other equipment items necessary to prevent overstressing the pressure containing parts. It does not include support structures such as frames of buildings, buildings stanchions or foundations. Requirements for offshore pipelines are found in Chapter IX. Also included within the scope of this Code are:

- (A) Primary and associated auxiliary liquid petroleum and liquid anhydrous ammonia piping at pipeline terminals (marine, rail and truck), tank farms,