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POWDER METALLURGY

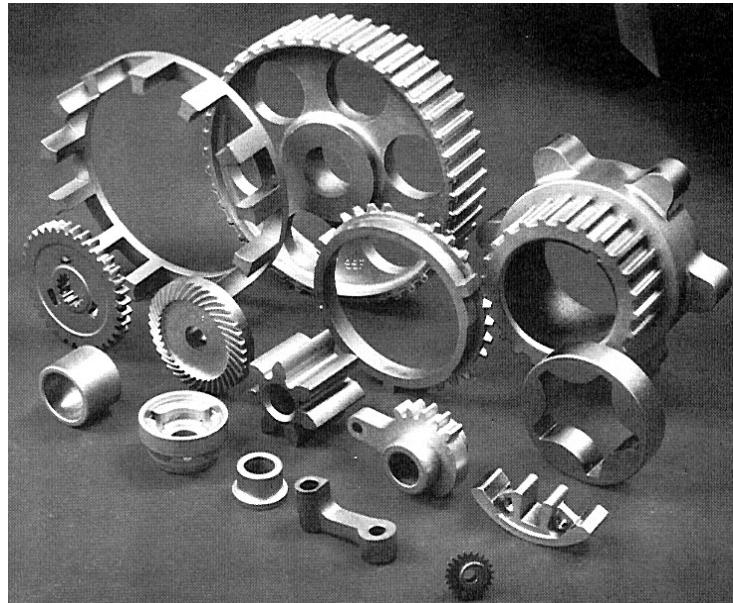
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3.1 OVERVIEW OF POWDER METALLURGY

Definitions

Powder Metallurgy (P/M) is a processing technology in which parts are produced by *compacting* and *sintering* metallic and/or nonmetallic powders. Therefore, P/M is a typical example of an additive manufacturing process. P/M parts can be mass produced to *net shape* or *near net shape*, eliminating or reducing the need for subsequent machining.



A collection of powder metallurgy parts

Although parts as large as 20 kg can be produced by P/M, most products are less than 2 kg. The largest tonnage of metals for P/M is steel and alloys of aluminum. Other P/M materials are copper, nickel, tungsten, ceramic materials, etc.