

Metal Forming Technology

Technological advances in metal forming process- forging, rolling, extrusion, wire drawing and sheet metal forming, design of roll pass and rolling schedules, description of typical cold rolling and hot rolling mill plants computer aided die design for forging, extrusion and wire drawing, automation in metal forming processes, recent development in forming equipment (high speed presses etc) advances in sheet metal forming, sheet metal die design, formability evaluation, unconventional forming process like hydrostatic extrusion, high energy rate forming process, hydro forming of sheets and tubes, power forming, finite element simulation of forming processes.

Text Books

1. Dieter.G.E., "Mechanical Metallurgy", McGraw-Hill Co. SI Edition. 1995. 2. Nagpal. G.R., "Metal Forming Processes", Khanna Pub., New Delhi, 2000. **Reference Books**

1. Kurt Lange "Handbook of Metal Forming". Society of Manufacturing Engineers. Michigan. USA. 1988
2. Avitzur, "Metal Forming - Processes and Analysis", Tata McGraw-Hill Co. New Delhi, 1977.
3. ASM Metals Handbook. Vol.14, "Forming and Forging", Metals Park, Ohio, USA, 1990.
4. Taylor Altan, Soo I.K. Oh, Harold.L.Gegel. "Metal Forming: Fundamentals and Applications", ASM. MetalsPark. Ohio, USA, 1983