

SYLLABUS :-

Expt. No. Titles of Experiments
1 Sieve analysis of molding sand.
2 Estimation of clay content in molding sand.
3 Effects of water / clay (Bentonite) ratio on the molding properties (permeability, green compression strength, hardness) of sand.
4 Influence of bulk density on properties (permeability, green compression strength, hardness) of molding sand.
5 Melting and inoculation of cast iron.
6 Shell molding process.
7 Characterization of metal powders through particle size analysis, flow rate, apparent and tap density, and hydrogen loss measurements.
8 Compaction of copper/iron powder - variation of green density with compaction pressure, height and mass.
9 Sintering of metal powder compacts - sintering characteristics of copper, iron, iron-copper and iron-copper-graphite compacts, determination of densification parameter, sintered density.
10 Studies on microstructures of welded joints - low carbon steel, grey cast iron plates with mild steel filler, spot welded stainless steel plates, arc welded mild steel plates with single and double pass.
11 Microstructure and hardness of MIG welded plain carbon steel and HSLA steel.