



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



Ferrous alloys: Steel is an alloy of iron and carbon. Also addition of small amount of one or more metals like Cr, Ni, Mo etc. imparts special properties to steel.

a) Nichrome: Ni-60% and Cr-12% called Nichrome. It give resistant to chemicals and heat, high melting point and high electrical resistance.

Used for making resistance coils, heating elements in iron box and other electrical appliances.

b) Stainless steel: These are alloy steels containing Cr with other elements such as Ni and Mo. Cr is effective if its content is 16 % or more. Carbon content ranges from 0.3 – 1.5 % stainless steel resists corrosion by atmospheric gases and other chemicals.

Non-Ferrous alloys:

Non-ferrous alloys do not contain iron as the major element. Some of the important non-ferrous alloys have the major element Cu, Al, Ni, Zn, Sn and Pb. The important properties of non-ferrous alloys: high corrosion resistance, strength and workability, good machinability, appearance and colour.

a) Copper alloys: Brass and Bronze

Brass:

Alloy of Cu and Zinc containing more than 5% Zinc.

i) Commercial Brass/French Gold: 90%Cu and 10%Zn; Stronger and harder;

Used for making rivets, screws, jewellery etc.

Bronze:

Alloy of Cu and Tin containing more than 5% Tin

i) Coinage bronze/Common bronze: 89-92% Cu and 11-8% Sn; soft, ductile and durable; Used for making pump, valves, coins, statues etc.