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.

Example : BRASS AND BRONZE

Brass

Composition

Primarily copper (55-95%) and zinc (5-45%}, with copper typically being the larger proportion.

Properties:

- Good electrical conductivity.
- Good machinability.
- Anti-microbial.
- Malleable and ductile.
- Low friction.
- Good conductor of heat and electricity.

Uses:

- Decorative hardware.
- Valves and pipe fittings.
- Musical instruments (e.g., trumpets, trombones).
- Plumbing.

Bronze:

Composition: Primarily copper (88%) and tin (12%), with other elements like aluminum, manganese, or nickel sometimes added.

Properties:

- High strength and durability.
- Excellent corrosion resistance.
- Low friction.
- Ductile and malleable.
- Good electrical and thermal conductivity.

Uses:

- Bearings and bushings.
- Pump valves and gears.
- Marine propellers.
- Sculptures and statues.