

Title: Short-Term Course on ‘Metallurgy for Industry Professionals’

Keywords: Short-Term Courses, Metallurgy Engineering

Write-up:

Many industry professionals are generally get detached from the basic concepts of their qualification due to their routine activities. However, for the efficient delivery in their profession, refreshment of the basic knowledge and the awareness of the advanced technologies are very essential. Now days, industries are facing tough competition in the market, and to maintain their edge, they must adopt new technologies. This is possible only if their manpower is dynamic to learn, and always in touch with the basic concepts in engineering. Therefore, continuous training of the industry manpower is essential.

Many manufacturing industries shall be benefited by the short-term course on ‘Metallurgy for Industry Professionals’. Content of the course is as follows:

- Brief introduction about materials and their properties.
- Important aspects of crystallography.
- Crystal defects, microstructures, and their role in governing the material properties.
- Equilibrium phase-diagrams; Fe-C, Al-Si, Al-Cu systems.
- Physical metallurgy of alloy-steels, cast-irons, non-ferrous alloys (e.g. Al- and Ti-based alloys).
- Concept of TTT, CCT diagrams and microstructure development.
- Brief introduction to iron & steel making and casting technology.
- Case studies on heat-treatment and surface alloying of automotive components.
- Question-Answering / Discussion – for the concept check.

Duration of the course: 4 days.

Participants: Professionals working in forging, steel-making, foundry, automobile etc related industries.