

Manufacturing Engineers/ Plant Engineers/ Process Engineers



Design, integrate, or improve manufacturing systems or related processes. May work with commercial or industrial designers to refine product designs to increase producibility and decrease costs.

Tasks –

- Identify opportunities or implement changes to improve products or reduce costs using knowledge of fabrication processes, tooling and production equipment, assembly methods, quality control standards, or product design, materials and parts.
- Determine root causes of failures using statistical methods and recommend changes in designs, tolerances, or processing methods.
- Provide technical expertise or support related to manufacturing.
- Incorporate new methods and processes to improve existing operations.
- Design, install, or troubleshoot manufacturing equipment.
- Prepare documentation for new manufacturing processes or engineering procedures.
- Apply continuous improvement methods such as lean manufacturing to enhance manufacturing quality, reliability, or cost-effectiveness.
- Investigate or resolve operational problems, such as material use variances or bottlenecks.
- Estimate costs, production times, or staffing requirements for new designs.
- Design layout of equipment or workspaces to achieve maximum efficiency.
- Redesign packaging for manufactured products to minimize raw material use or waste.

Knowledge –

- Engineering and Technology
- Production and Processing
- Design
- Mechanical
- Mathematics
- Computers and Electronics
- Physics
- English Language
- Administration and Management
- Economics and Accounting
- Education and Training
- Chemistry

Abilities –

- Mathematical Reasoning — The ability to choose the right mathematical methods or formulas to solve a problem.
- Near Vision — The ability to see details at close range (within a few feet of the observer).
- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Oral Expression — The ability to communicate information and ideas in speaking so others will understand.
- Originality — The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Fluency of Ideas — The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Visualization — The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Flexibility of Closure — The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
- Written Expression — The ability to communicate information and ideas in writing so others will understand.
- Perceptual Speed — The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.
- Arm-Hand Steadiness — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- Auditory Attention — The ability to focus on a single source of sound in the presence of other distracting sounds.
- Finger Dexterity — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
- Visual Color Discrimination — The ability to match or detect differences between colors, including shades of color and brightness.

Personality Code – REI

Qualification – 4 years degree