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Assignment No-2

Unit 3: Manufacturing Engg & Unit 4: Thermal Engg

Q1) List out different types of lathe machine.

Ans→ The different types of lathe machine are-
1. Speed Lathe
2. Bench Lathe
3. Centre Lathe / Engine Lathe
4. Tool Room Lathe
5. Capstan and Turret Lathe
6. Automatic Lathe
7. Special Lathe.

Q2) What are the various types of a drilling machine? Explain radial drilling machine in detail.

Ans→ The various types of drilling machine are-
1. Portable drilling machine
2. Sensitive drilling machine
3. Upright drilling machine
4. Radial drilling machine
5. Gang drilling machine
6. Multiple spindle drilling machine
7. Automatic drilling machine.
8. Deep hole drilling machine.

- Radial drilling machine.

i) It is largest and most versatile of all drilling m.
ii) It is suitable for heavy duty works.
iii) Holes can be drilled at different locations without moving work pieces.

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Q 11) Disscuss the following terms with example : System, Surrounding & Boundary.

Ans → (1) System -

A System is a region containing energy and/or matter that is separated from its surroundings by arbitarily imposed walls or boundaries. In a thermodynamic analysis, the system is the subject of the investigation.

Eg - The coffee inside a thermas can be called as system.

(2) Boundary -

A boundary is a closed surface surrounding a system through which energy and mass may enter or leave the system.

Eg - The inner container of the thermas keeping the coffee hot inside is called as boundary.

(3) Surroundings -

Everything external to the system is surroundings.

Eg - The cup, dish, biscuits etc outside the thermas can be called as surroundings.

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Q16) Define:-

Ans- a) Thermodynamic equilibrium -

If thermal equilibrium, Mechanical equilibrium and chemical equilibrium; all coexist together then the system is in thermodynamic equilibrium.

b) Enthalpy -

Enthalpy of fluid is defined as algebric sum of internal energy and flow work.

i.e $h = u + Pv$

c) Thermodynamic Cycle -

If system undergoes a series of state changes in such a way that it returns back to its original state then the process is known as thermodynamic cycle.