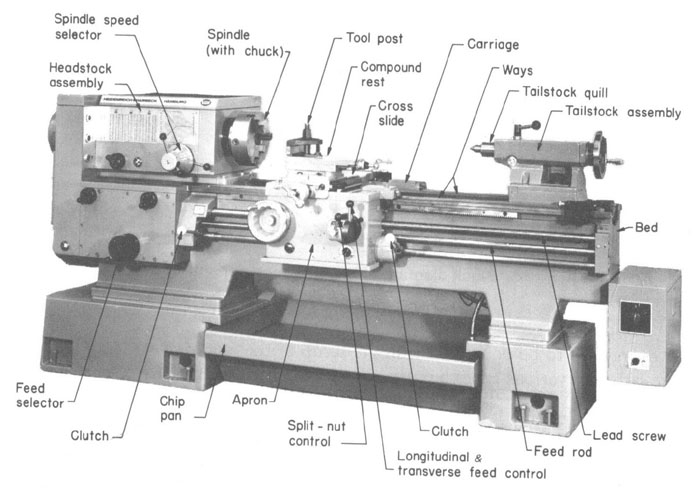
**Introduction to lathe Machine perform straight turning and calculate machining time.**

**Apparatus:**

Lathe machine, stop watch, tachometer, MS rod.

**Figure:**



**Head stock**

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**Tailstock**

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**Lead screw**

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**Feed Rod**

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**Carriage**

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**Half Lock lever**

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**Apron**

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**Observations & Calculations:**

Number of passes=Nt=

Feed Rate=Fr=----------------- (mm\mint)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr.No | Length of rod  L | Initial diameter  Di | Final Diameter  Df | Depth of cut= | RPMs | Cutting Speed  Vi= | Feed  F=Fr\RPM | Machining Time  TM=xNt | Actual Time  Ta | Idler Time  Ta-Tc |
|  | mm | mm | mm | mm |  | mm\mint | mm\rev | mint | mint | mint |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |

**Specimen Calculations**

**Questions**

How straight and Taper turning differ?

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How many linear & rotational axis a lathe machine has?

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Write different types of slideways ?

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What are standard cutting speed, depth of cut and feed for Mild steel?

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**Comments on**

How to reduce idler time

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