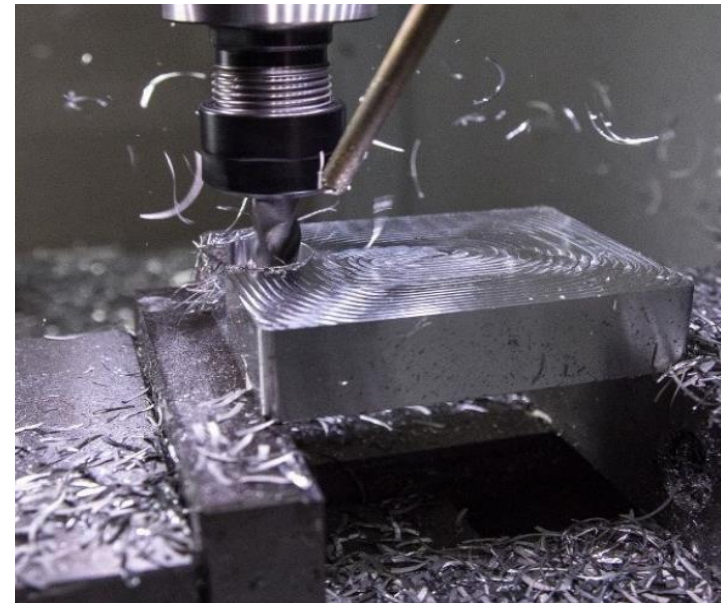




MACHINING



Machining is a manufacturing process that involves removal of unwanted materials using cutting tools from work piece and converting it into the desire shape.

It is a type of **destructive manufacturing process** in which materials are removed in form of **chips** from work piece.



chips

MACHINING PROCESS

WORKPIECE

The Place where machining is done is known as
Machine shop.



Types of Machining

CONVENTIONAL

NON CONVENTIONAL

Non contact between tools and work piece.

(CUTTING, TURNING, BORING,
DRILLING, MILLING, SHAPING Etc.)

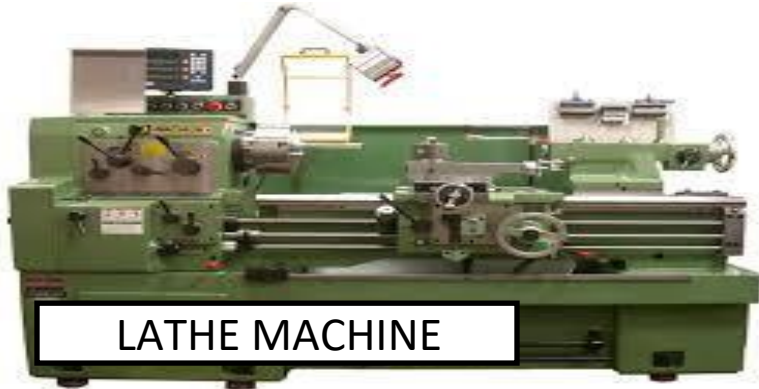
1. Lathe Machine
2. Shaper Machine
3. Milling Machine
4. Drilling Machine
5. Computer Numerical Control (CNC)

ABRASIVE (Finishing)

1. Grinding.
2. Honning.
3. Lapping.

1. Ultrasonic Machining(USM)
2. Electric Discharge Machining (EDM)
3. Electrochemical Machining (ECM)
4. Laser Beam Machining (LBM)
5. Electron Beam Machining (EBM).
6. Water Jet Machining (WJM)
7. Abrasive Jet Machining (AJM).....

Conventional Machine



LATHE MACHINE



SHAPER MACHINE



MILLING MACHINE



CNC



DRILLING MACHINE

ABRASIVE (FINISHING)

HONING



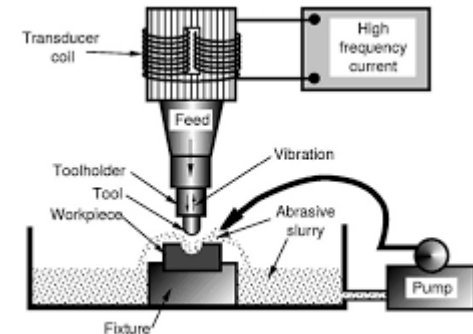
GRINDING



LAPPING

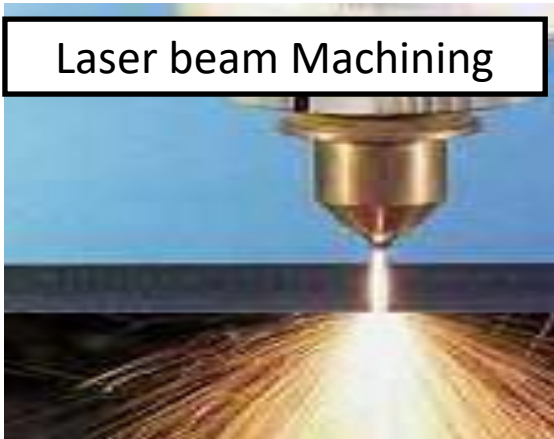
NON CONVENTIONAL MACHINING

Electron Beam Machining



Ultrasonic machining

Laser beam Machining



Electrochemical machining



ABRASIVE JET MACHINING



Water Jet Machining



- Machining aims to
 - i. Fulfill its functional requirement.
 - ii. Improve its performance.
 - iii. Prolong its service.

- Drawback of Machining :
 - i. Loss of material in form of chips.
 - ii. Slow process (low productivity).