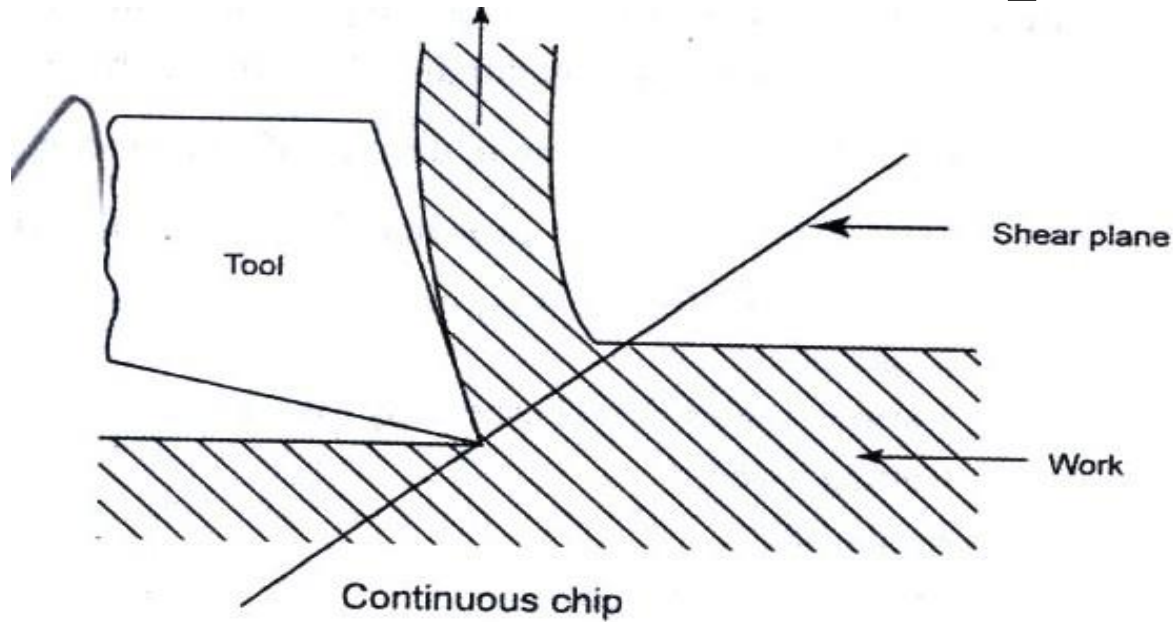


CHIP FORMATION

Types of chips:

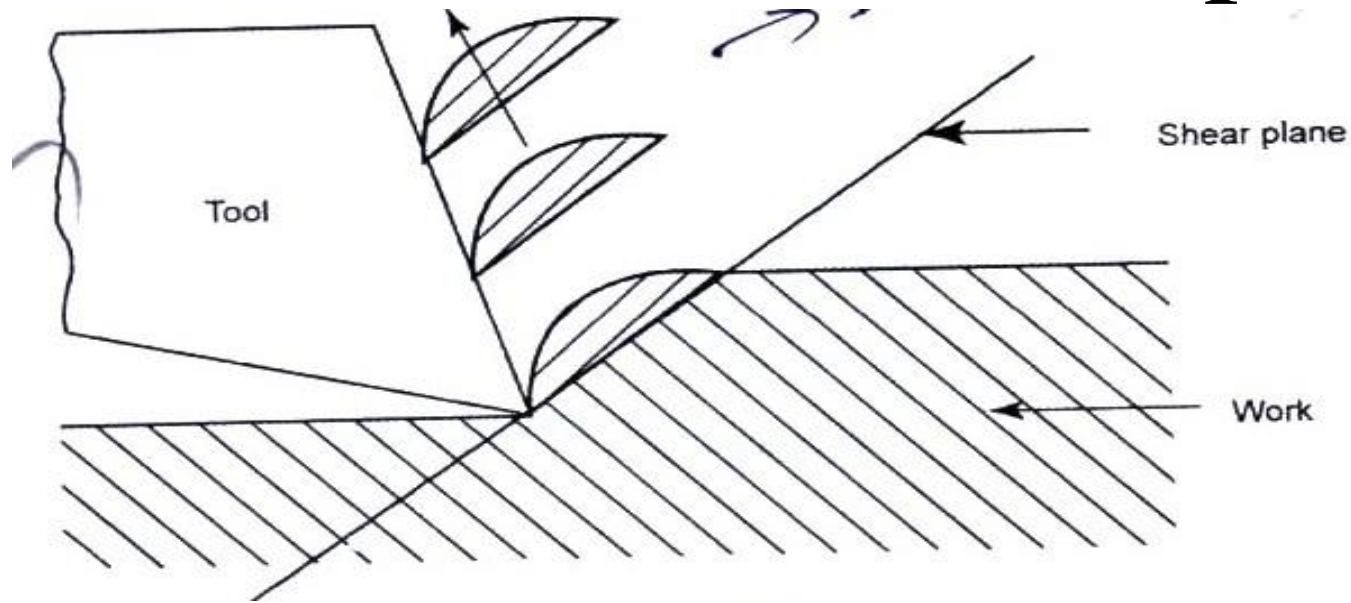
- ✓ Continuous Chip
- ✓ Discontinuous Chip
- ✓ Continuous Chip With Build Up Edge

Continuous Chip



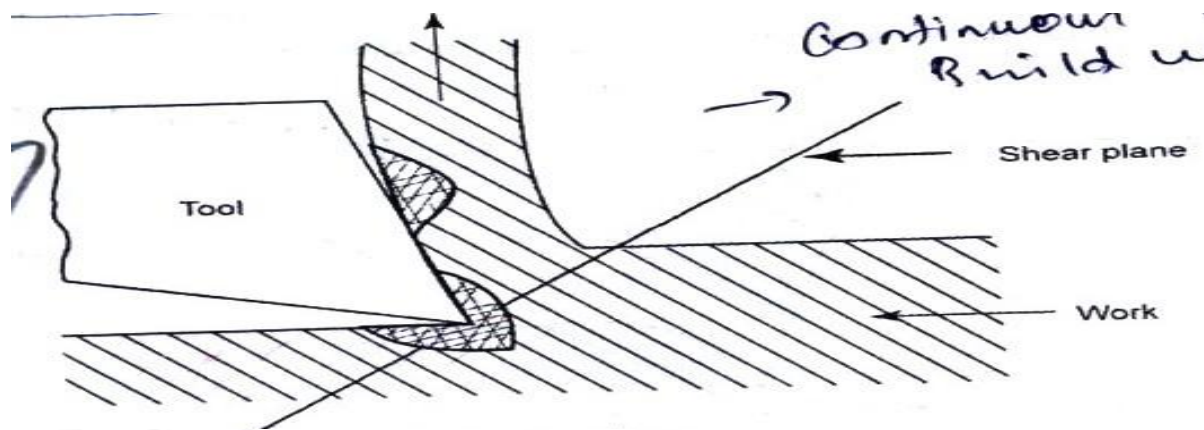
- ❖ Ductile material such as low carbon steel, aluminium, copper etc.
- ❖ Smaller depth of cut.
- ❖ High cutting speed.
- ❖ Large rake angle.
- ❖ Sharp cutting edge.
- ❖ Proper cutting fluid.
- ❖ Low friction between tool face and the chips.

Discontinuous Chip



- ❖ Small rake angle.
- ❖ Coarse feed.
- ❖ Strong adhesion between chips and tool face.
- ❖ Insufficient cutting fluid.
- ❖ Large uncut thickness.

Continuous Chip With Build Up Edge



- ❖ Machining of brittle material.
- ❖ Small rake angle.
- ❖ Higher depth of cut.
- ❖ Low cutting speeds.
- ❖ Excess cutting fluid.
- ❖ Cutting ductile material at very low feeds with small rake angle of the tool.

CHIP BREAKERS

- ✓ During machining, long and continuous chip that are formed at high cutting speed will affect the machining. It will spoil tool, work & machine. These chips are hard, sharp and hot.
- ✓ Chip breakers are used to break the chips into small pieces for easy removal, safety and to prevent damaging the machine and work