

Experiment Details

Machining operation employed was face milling to create a flat plane surface on the workpiece, with constant operating conditions (feed=300mm, speed=1000rpm, depth of cut=0.25).

Destructive tests are carried out on total six milling cutters. Table 1 shows the failure characteristics.

Table 1: Failure Characteristics

Cutter	Time (Cuts)	Failure Modes
1	66	Worn Out
2	63	Worn Out
3	35	Breakage
4	47	Breakage
5	71	Worn Out
6	52	Worn Out + Breakage

Where, 1 cut = 4.4 Mins = 1320mm

Measurement carried out:

1. Wear data
2. Cutting force in three dimensions.
3. Product Quality