MEE2006 Machining Processes and Metrology G1

1.Sketch a three view diagram for a tool signature of 15-15-10-10-15-10 (3 mm).

2.In an orthogonal cutting operation, the rake angle = 5°, chip thickness before the cut = 0.2 mm and width of cut = 4.0 mm. The chip ratio is 0.4. Determine (a) shear angle, (b) friction angle, (c) coefficient of friction

3. A tool life of 110 min is obtained at cutting velocity of 25 m/min and 10 minutes at 65 m/min. Formulate the tool life equation. Determine the cutting speed for a tool life of 200 mins.