"Case Study for Turret End plate on MCH-500"

Customer name : **M/s. , Shanghai in China.**

Case Study No. : TSG-CS-021/TR-008. **(Conducted at customer end.)**

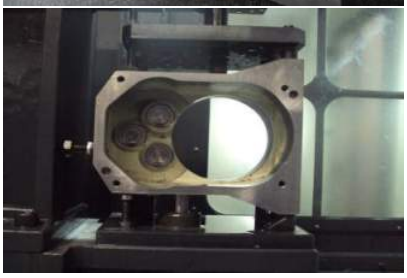
Machine Details : MCH-500, Fanuc 0IM-D System

Main Features : Spindle-BT-40 Taper, 6000 rpm, LM Guide ways for all 3 Axes, Traverse (X, Y&Z) - 800 / 600 / 800 mm, Spindle Power 15/11 kw.

Component Name : 80.3 End Plate 2) 80.3 Main Body.

Component Material : **Cast Iron**

Output



Example of Cutting operations & its Cycle time: (Few opn.only).

Actual cutting parameters and cycle time depends on Component material, Tools, Tool holders and Fixture concept.

Sl. No.	Operation	Tool	Spindle speed (rpm)	Feed (mm/min)	Axial DOC (mm)	Radial DOC (% / mm)	Cutting Time (sec)
1	Face milling	Ø 80 FACE MILL CUTTER	900/800	600/400	2.5/0.1	80%	2.3
2	Drilling	Ø 40 U DRILL	1000	75	-	20	1.2
3	Dowell Hole	Ø 17 H7 REAMER	1100	120	-	0.15	1.9
4	Finish Boring	Ø 140 H6 FINISH BORING TOOL	511	50	-	0.13	2.4
2	Finish Boring	Ø 35 H6 FINISH BORING TOOL	1819	195	-	0.12	1.9
6	Tapping Opn	M12 EMUGE TAP	796	1393	-	1.75	2.1

Achievements:

1. Time taken on machine for complete profile machining is 11.8 min @ 12.2 min.(Cam Time)
2. Customer is satisfied with Machine performance, Accuracy, Surface finish & Cycle time.
3. Surface finish was good within permissible limits, Approx. 0.4 Ra.
4. Critical Bore/Hole Ø140 H6 , Ø35 H6, Ø17 H7 , Ø10 H7 tolerance & Circularity and Ovality should be within 0.010 mm
5. Dowel hole CD observed within 0.015 mm & Thickness 155 mm to be maintaining WRT center bore 0.020 mm.

The objective of the case study is to show the Machine performance, capability, Quality & Surface finish.