

CASE STUDY 64

(HIGH PERFORMANCE NEAT CUTTING OIL FOR DEEP HOLE DRILING)



CUSTOMER DETAILS :

A renowned company from Gujrat is involved in the manufacturing and supply of range of Single Screw Barrel and Twin Screw Barrel. They do BTA Deep hole drilling, Gun Drilling, Honing, CNC turning for barrels used in Injection molding machines for domestic customers.



OBJECTIVES FOR CONDUCTING THE TRIAL

1. To improve tool life
2. To reduce smoke



OPERATING / APPLICATION DETAILS:

1. Machine : HTT make
2. Tank Capacity : 5000 Ltrs
3. Tool make : BOTEK (imported from Geramany)
4. Avg Single Screw barrel length : 4500 mm
5. Dia of Barrel : 30 mm to 250 mm
6. Material : EN 41 B (Alloy steel round bar)

7. Inserts life and cost of insert

- (a) Guide pad comprises of 3 inserts : 1 insert life 20 mtrs
- Avg Cost/insert: Rs 7500
- (b) Peripheral insert : 12 mtrs
- Avg Cost / insert: Rs 4000
- (c) Centre insert : 10 mtr
- Avg Cost/insert: Rs 4000

8. Cycle time : 30 mins

9. Feed rate : 0.15 mm/sec

10. Application : BTA Deep hole drilling

11. Filtration : Cartridge



COMPONENT VIEW



PRODUCT RECOMMENDED: HICUT N 22 HF

TRIAL RESULTS

Parameters	Guide pad insert life	Peripheral insert life	Centre insert life	Feed mm/sec	Avg Cycle Time	Smoke	Chip colour	Job Temp
Inserts cost / Head	Rs 22500 (3 inserts)	Rs 4000	Rs 4000					
Competitor product	20 mtrs	12 mtrs	10 mtrs	0.15	30 mins	Yes	Black	Feels Hot
HICUT N 22 HF	130 mtrs + (no change yet)	18 mtrs	10 mtrs	0.25	20 mins	Comparatively less	Greyish	Warm

- Improvement in tool life and productivity

- Tool cost reduced from 1.5 Lakh/ month to approx. Rs 50 K/month

- Reduce Smoke