

CASE STUDY 55

(NEW GENERATION SYNTHETIC COOLANT FOR GRINDING)



CUSTOMER DETAILS :

One of the quality driven organization in Rajasthan manufacturing a wide range of ultra-precision taper rollers for bearings.



OBJECTIVES FOR CONDUCTING THE TRIAL

- Need to achieve the required finish & performance.
- No EHS issues - Operator & environmental friendly.
- To reduce the cost of oil.
- Import substitute



OPERATING / APPLICATION DETAILS:

- Machine: Modler
- Tank capacity: 6000 litres
- Part: Roller (Bearing) , diameter – 5 to 25mm, length 11 to 50 mm, angle 1.5°C to 8.5°C
- Material: Bearing steel- SAE 52100
- Application: Grinding
- Steps: 03 : (Rough - Semi - Finish) Grinding
- Wheel: For rough rubber bonded (carborundum) & for finish resin bond imported
- Filtration: Magnetic conveyor + paper band
- Initial loading: 6000 litres tank
- Chiller unit: Yes
- Grinding stage: 3 stages
- Depth of grinding & RA :

Particular	Rough Grinding	Finish Grinding
Allowance	300 μ	50 μ
R A Limit	0.8 μ	0.1 μ
R A Achieved	0.7 μ	0.05 μ



COMPONENT VIEW



PRODUCT RECOMMENDED: ISOCOOL 1020 BF

TRIAL RESULTS



Trial evaluation with the period of 5 months



Achieved required Ra



No EHS issues observed - Operator & environmental friendly



Excellent rust protection



On time availability of indigenous product



Direct cost saving ~35%