CASE STUDY 43

(A NEW GENERATION FORGING LUBRICANT FOR FORGING OF AUTOMOTIVE COMPONENTS)

CUSTOMER DETAILS :

One of the leading manufactures in South India, producing steel forgings in raw, semi-machined and fully machined stages. They are manufacturing and supplying components like Axles, flanges, spindles, Hub, cross shafts, Crankshafts, etc. to industries like automotive, oil field and Industrial segment.

OBJECTIVES FOR CONDUCTING THE TRIAL

1. Less scale formation on the die
2. To achieve the required die life: (4600-5000) rods.
3. No die catch up in Flange Component (30% production)
4. Better Surface Finish – (Visual Finish with no wrinkle marks/ cracks)
5. To reduce the overall cpc by 10% compared to existing cpc – 0.30 Rs/part

OPERATING / APPLICATION DETAILS:

1. Press – KB Press (Vononezh, Russia)
2. Load:(1600 T)
3. Part – Flange Housing
4. Material - Steel(30MNVS6),
5. Billet Size – Dia :34 mm , Length : 178 ~ 180 mm
6. Expected Die life : 5000 rods
7. Die temp : After spray – 120 Deg C & after forge reached – 422 Deg C
8. Material : 30MNVS6 & Other steel grades
9. Spray type : Manual spray (Tank with Agitator)
10. Billet Temperature : 1150 Deg C
11. Dilution Ratio : 1:20 ~ 1:25
12. Trial Period: 1 week – Continuous monitoring done by HPPL Team

COMPONENT VIEW

PRODUCT RECOMMENDED: HILUBRIC FW 02 M

TRIAL RESULTS

- Less die catch up as compared to earlier & good ejection after forging.
- Less scales observed compared to the existing product
- Average die life achieved 4800 numbers (similar to the existing product)
- CPC achieved: 0.28 Rs/part
- Better visual finish observed with no wrinkle marks and cracks (Quality check 2 times/shift)