

# CASE STUDY 79

## POLYMER QUENCHANT FOR INDUCTION HARDENING OF SEAL RINGS



### CUSTOMER DETAILS :

Company is manufacturer, designer and supplier of technologically enriched and specially designed mechanical Face Seal/ Floating Seals and special surface treated Products for Construction, Mining, Defence, Transmission, and Agriculture Equipment's.



### OBJECTIVES FOR CONDUCTING THE TRIAL

1. To reduce hardness variation on material face
2. To control distortion issue
3. To eliminate hair crack on face



### OPERATING / APPLICATION DETAILS:

1. Machine Name: Induction Hardening Machine
2. Application: Induction hardening
3. Component: Seal Rings
4. Material: Cast Alloy (SAE52001/100Cr6)
5. HPPL Product: Hiquench P 12
6. Competition Product: XXX C
7. Case depth: 1-2 mm
8. Hardness required: 60-63 BHN for Forged steel & 65-70 BHN for Cast Iron
9. Tank Size: 300 Ltrs
10. Water Source: Corporation Water
11. Concentration: 15%
12. Trial period: 1 Month



### COMPONENT VIEW



**PRODUCT RECOMMENDED: HIQUENCH P 12**

## TRIAL RESULTS



Hardness found to be very much stable as per customer requirement



Distortion issue has been resolved



Hair crack issue has been resolved