

CASE STUDY 14

(OIL LIKE POLYMER)



CUSTOMER DETAILS :

A leading Indian manufacturer & exporter of a wide range of High Tensile Fasteners and customized fasteners.



OBJECTIVES FOR CONDUCTING THE TRIAL

To replace quenching oil with polymer for high alloy steel (34CrNiMo6&42CrMo4).



OPERATING / APPLICATION DETAILS:

- ◆ Part Description: 30 and 38 mm Steel Bar
- ◆ Raw Material: 34CrNiMo6&42CrMo4
- ◆ Mechanical Properties Requirement:
 - As tempered 34/38 HRc
 - As Quench 47HRc Min.
- ◆ Concentration: 14%
- ◆ Bath Temp: 40° C



COMPONENT VIEW



PRODUCT RECOMMENDED: HIQUENCH P50

TRIAL RESULTS



Desired quench hardness achieved for 30mm dia bar: 50-55 HRc



Desired quench hardness achieved for 38mm dia bar: 44-48 HRc.



No crack observed in both the samples



Lower asquench hardness in 38mm dia bar indicates lower chances of cracking.