

CASE STUDY 126

[OIL LIKE POLYMER FOR QUENCHING OF ALLOY STEEL BARS]



CUSTOMER DETAILS:

Leading manufacturer for forged alloy steel bars and wheels in eastern India.



OBJECTIVE FOR TRIAL:

Selecting Polymer quenchant Hiqench P50 for alloy forged steel bars.



OPERATING/ APPLICATION DETAILS:

Part	- Forged Steel Bar & wheels
Material Grade	- 42CrMo4
Hardening Temp.	- 875 °C/ 240 Minutes/ 650 Preheat
Spec Core Hardness	- 310 BHN min as Quench
Quenchant Temp.	- 35 °C/ 12 Min for 140 mm
Agitation	- Pump type 2 nos.
Hardness location	- Throughout
Quenchant Tank Capacity	- 65000 litres

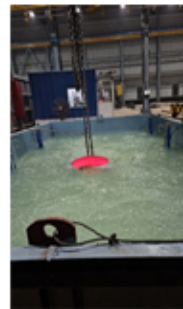
PRODUCT RECOMMENDED: HIQUENCH P50 WITH 14% CONCENTRATION



COMPONENT VIEW:



Furnace loading



Quenching

OBSERVATIONS: Hardness as quench and as tempered condition found within Specified limit.

As tempered Hardness	Brust Test
Spec: 240-280 BHN	Spec: 300KN Min
Result: 260-265 BHN	Result: 400-460 BHN

RESULTS

RESULT FOUND OK IN HIQUENCH P50 FOR ALLOY FORGED BAR AND FORGED WHEEL AT CONCENTRATION OF 14%.