

DECK INDIA ENGINEERING PVT. LTD.

HEAT TREATMENT JOBWORK, EQUIPMENTS, FIXTURES & TESTING

Works :- Sr. No. 671, Kudalwadi, (Chikhali) Behind Telco Pimpri , Pune 412 114

Heat treatment/ Metallurgical Inspection Report

Supplier Name & Location:	Deck India Engineering Pvt Ltd	Report No.	SAMPLE
Customer Name & Location:	SAI INDUSTRIES	Inspection Date:	17/12/2022
Part Name & No:	BALL RACE A101	Material:	SCM435H
Furnace name:	SQF	HT batch No.	SAMPLE
Inward No	SAMPLE	Customer . Ch No	608
Type of HT (CHT/CN/IHT/HT):	CHT	HT batch qty:	1 NOS

HV tester calibration-	Std. block value: 720 HV1	Actual value:718	Error: -(-2 HV1)																		
Test Load: 1 kg	<table border="1"> <caption>Graph Data</caption> <thead> <tr> <th>Distance (mm)</th> <th>Hardness in HV</th> </tr> </thead> <tbody> <tr><td>0.05</td><td>751</td></tr> <tr><td>0.1</td><td>739</td></tr> <tr><td>0.2</td><td>722</td></tr> <tr><td>0.3</td><td>696</td></tr> <tr><td>0.4</td><td>688</td></tr> <tr><td>0.5</td><td>675</td></tr> <tr><td>0.6</td><td>610</td></tr> <tr><td>0.7</td><td>588</td></tr> </tbody> </table>			Distance (mm)	Hardness in HV	0.05	751	0.1	739	0.2	722	0.3	696	0.4	688	0.5	675	0.6	610	0.7	588
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CD cut off : 630 HV																					
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0.8	566																				
Observations:	0.58mm@630 HV1																				

3. Microstructure analysis:

Case microstructure -500X	Core microstructure -500X	GBO-500X

Observations: Case- Fine Tempered martensite , Core-Low carbon martensite, GBO-9micron

HRA tester calibration-	Std. block value: --61.0 HRC	Actual value:--61.0HRC	Error: --(0)
Job Nos.	1	2	
Hardness	62	63	

5. Results:

Parameter	Specification	Observation	Remarks
Case depth	0.5-0.6 mm@630 Hv1	0.58	OK
Case Microstructure	Fine Tempered martensite	Fine Tempered martensite	OK
RA in case	<5 %	<3%	OK
GBO	< 10 μm	9 Micron	OK
Carbides	Not allowed	nil	OK
Core microstructure	Low carbon martensite	Low carbon martensite	OK
Surface Hardness	60-64 HRC	62-63 HRC	OK
Core Hardness:	45-55 HRC	50-52 HRC	OK
MPI test	No crack allowed	Nil	OK

6. Final Remarks: ✓ Lot is accepted / Conditionally accepted/ Lot is rejected

Inspected by: Approved by:

Format No : QF/QA/03

