



For Precision Heat treaters

Specialist in Small Components

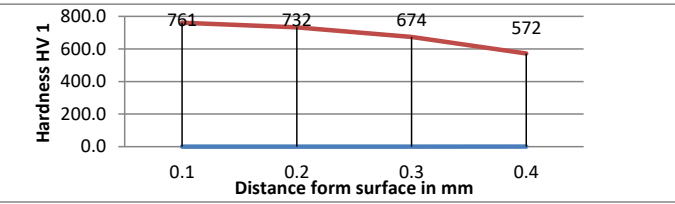
Carburising , Hardening Tempering, Stress Relieving, Solution Annealing , Normalising

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Metallurgical Inspection Report

Heat Treatment done at	MULTITHERM	Report No.	MT/24-25/NOV/CHT/3792
Customer Name & Location:	FRACMET ENGINEERING LLP	Inspection Date:	18-11-2024
Part Name	THRUST WASHER	Material:	MS
Part No.	6683300690	Our Inward No:	
Challan No.	1337	HT batch qty:	535 KGS
Type of HT (CHT/CN/IHT/HT):	Case Hardening & Tempering (CHT)		

1. Case depth measurement:

Hv tester calibration-		Std. block value: 714 ± 11 Hv1	Actual value: 706 Hv1	Error: -(08 Hv1)										
Test Load: 1 kg		 <table><caption>Hardness Data from Graph</caption><thead><tr><th>Distance from surface in mm</th><th>Hardness HV1</th></tr></thead><tbody><tr><td>0.1</td><td>761</td></tr><tr><td>0.2</td><td>732</td></tr><tr><td>0.3</td><td>674</td></tr><tr><td>0.4</td><td>572</td></tr></tbody></table>			Distance from surface in mm	Hardness HV1	0.1	761	0.2	732	0.3	674	0.4	572
Distance from surface in mm	Hardness HV1													
0.1	761													
0.2	732													
0.3	674													
0.4	572													
CD cut off : 550 HV1														
Distance (mm)	HV1													
0.1	761													
0.2	732													
0.3	674													
0.4	572													
0.5	433													
Observations:	0.41 MM @ 550 HV1													

2. Microstructure:

Case microstructure -200 X	Core microstructure -200 X

3. Surface Hardness Analysis:

HV tester calibration-										
Job Nos.	1	2	3	4	5	6	7	8	9	10
Hardness	90	91	90	91	91	90	91	91	90	91

4. Results:

Parameter	Specification	Observation	Remarks
Case depth	0.30-0.50 MM	0.41 MM	OK
Case structure	Fine tempered martensite	Fine tempered martensite	OK
Surface Hardness	600 HV10 MIN (88HR15N MIN.)	90-91 HR15N	OK

5. Final Remarks: ✓Lot is accepted

Inspected by: KASHID.K

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