HIM TEKNOFORGE LIMITED METALLURIGICAL TEST REPORT

PLOT NO.-264-268, SECTOR 1 RAW MATERIAL BILLET FORGING

PITHAMPUR-454775, DISTT-DHAR (M.P.) FROM SUBCONTRACTOR

PHONE/FAX: 07292-252215, 253451,503194 DOC.NO.FM:HT-LB-11

EMAIL: ht@htlp.co.in

|  |  |  |  |
| --- | --- | --- | --- |
| STEEL MILL | M/S S.L.R. | REPORT NO | - |
| CHALLAN NO |  | DATE | 15/02/2018 |
| HEAT NO | 2811 | SECTION SIZE | 90Ø |
| GRADE | 20MnCr5 | NO OF BAR/BILLET |  |
| QTY. | 26.650M.T. | LENGTH RANGE | 4 .00 to 6.00Meter |
| PART NO | ED-7010 | COLOR CODE STRIP |  |

CHEMICAL PROPERTIES

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ELEMENTS | %C | %Mn | %Cr | %Ni | %Mo | %Si | %S | %P |
| MIN. | 0.17 | 1.10 | 1.00 | - | - | 0.10 | 0.020 | - |
| MAX. | 0.22 | 1.40 | 1.30 | - | - | 0.25 | 0.035 | .040 |
| ACTUL | 0.18 | 1.25 | 1.22 | - | - | 0.29 | 0.030 | 0.011 |

PHYSICAL PROPERTIES

|  |  |
| --- | --- |
| INTERNAL SOUNDNES | satisfactory |
| GRAIN FLOW | Symmetrical along with Rolling direction |
| SURFACE HARDNESS | 167BHN |
| UPSETTING TEST | OK |

METALLOGRAPHY

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| GRAIN SIZE (ASTM-E-112): ASTM-7.0 | | | | | |
| INCLUSION  RATING  (ASTM- E-45) |  | A | B | C | D |
| THIN | 2.0/- | 1.0/- | 0.5/- | 1.5/- |
| THICK |  |  |  |  |

JOMINY TRAVERSE

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DIST | J1/16” | J2/16” | J3/16” | J4/16” | J5/16” | J6/16” | J7/16” | J8/16” |  |  |
|  | 44.0 | 43.0 | 42.0 | 39.0 | 36.0 | 33.0 | 31.0 | 30.0 |  |  |

PHYSICAL INSPECTION RESULTS OF BILLETS OR BAR

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SNO | TEST | No. of bar tested | Accepted | Rejected | Remark. |
| 1 | SPARK | 100% | O.K. | Nil |  |
| 2 | METASCOPE | - | - | -Nil |  |
| 3 | NI-SPOT | 100% | O.K. |  |  |
| REMARKS: Accepted.  AUTHORISED SIGN. | | | | | |