


| 4. | Mechanical Properties | IS: 5517-1993, Design 42Cr4 Mo2 (LRS 63mm) | | One Sample Per Heat | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------|---|-----------------|---------------------|-------|--------------|--------------|-----|---|--|---|--|----|------|-------|------|-------|------|-------|------|-------|--------------|--------------|--------------|-----|--------------|-----|--------------|--------------|-----|
| | | Tensile Strength | 900-1050 MPa | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.2% Proof Stress | 650 MPa (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | % Elongation (5.65√A) | 11% (Min.) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Izod Impact | 50 Joules (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BS : 970 PT-1, 1983 GR.709 M40 ('T' Condition) | | One Sample Per Heat | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tensile Strength | 850-1000 N/mm ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yield Strength | 680 N/mm ² (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elongation (5.65√A) | 13% (Min.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Izod | 40 Ft.Lb (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BS: 970 PT-1, 1983 GR.708 M40 ('T' Condition) | | One Sample Per Heat | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tensile Strength | 850-1000 N/mm ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yield Strength | 680 N/mm ² (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elongation (5.65√A) | 13% (Min.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Izod | 40 Ft.Lb (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN-19 ('T' Condition) | | One Sample Per Heat | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tensile Strength | 55 Tonns/Sq.In (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yield Strength | 44 Tonns/Sq.In (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elongation | 18% (Min.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Izod | 40 Ft.Lb (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN-19A ('T' Condition) | | One Sample Per Heat | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tensile Strength | 55 Tonns/Sq.In (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yield Strength | 44 Tonns/Sq.In (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elongation | 18% (Min.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Izod | 40 Ft.Lb (Min) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | Other Tests | i) Macro Etch Test: Acceptance Standard better than or equivalent to C-1, R-1, S-1 for Plate I and Nil for Plate II. (ii) NMIR as per IS:4163-2004 <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">A</th> <th colspan="2">B</th> <th colspan="2">C</th> <th colspan="2">D</th> <th rowspan="2">DS</th> </tr> <tr> <th>Thin</th> <th>Thick</th> <th>Thin</th> <th>Thick</th> <th>Thin</th> <th>Thick</th> <th>Thin</th> <th>Thick</th> </tr> </thead> <tbody> <tr> <td>1.5 (Max)</td> <td>0.5 (Max)</td> <td>1.5 (Max)</td> <td>Nil</td> <td>1.5 (Max)</td> <td>Nil</td> <td>1.5 (Max)</td> <td>0.5 (Max)</td> <td>Nil</td> </tr> </tbody> </table> | | | A | | B | | C | | D | | DS | Thin | Thick | Thin | Thick | Thin | Thick | Thin | Thick | 1.5 (Max) | 0.5 (Max) | 1.5 (Max) | Nil | 1.5 (Max) | Nil | 1.5 (Max) | 0.5 (Max) | Nil |
| A | | B | | C | | D | | DS | | | | | | | | | | | | | | | | | | | | | | |
| Thin | Thick | Thin | Thick | Thin | Thick | Thin | Thick | | | | | | | | | | | | | | | | | | | | | | | |
| 1.5 (Max) | 0.5 (Max) | 1.5 (Max) | Nil | 1.5 (Max) | Nil | 1.5 (Max) | 0.5 (Max) | Nil | | | | | | | | | | | | | | | | | | | | | | |
| 6. | Hardness | 269-331 BHN (as per drawing) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | Packing | The Packing of the Material shall be done in such a manner to avoid corrosion and damage in handling and transit. | | Each Consignment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | Marking | Each Packing shall be legibly marked with manufacturer's identity , Qty, Heat No, OFT Supply order No etc., | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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