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| <br>Pakistan National Accreditation Council | <b>ACCREDITATION<br/>DOCUMENT</b> | <b>F-06/02</b><br><b>Issue Date: 25/05/08</b><br><b>Rev. No: 05</b><br><b>LAB 014</b> |
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**Testing Laboratory**

Accreditation Scope of Process Labs, Pakistan Steel, Bin Qasim, Karachi, Pakistan

Permanent laboratory premises

| Materials/Products tested                             | Types of test/ Properties measured            | Range of measurement  | Minimum detection limit  | Uncertainty of Measurement (where applicable) MU (±)   | Standard specification/ Techniques/ equipment used   |
|---|---|---|--|--|--|
| Plain Carbon Steel                                    | C,Si,Mn,P,S,Al                                | C=0.001 % - 1.27 %<br>Si=0.001 % - 1.79 %<br>Mn=0.001 % - 1.795 %<br>P=0.001 % - 0.0755 %<br>S=0.001 % - 0.0825 %<br>Al=0.001 % - 0.338 % | C = 0.032 %<br>Si = 0.051 %<br>Mn = 0.047 %<br>P = 0.009 %<br>S = 0.009 %<br>Al = 0.0018 % | C = 0.040 %<br>Si = 0.050 %<br>Mn = 0.008 %<br>P = 0.008 %<br>S = 0.050 %<br>Al = 0.020 %  | ASTME-1009/<br>Emission Spectrometer E-963, Rank Hilger (England)/Spectromax (Germany)Model No: 121922                 |
| Iron Ore  | Fe(T)&SiO <sub>2</sub>                        | Fe= 40% - 70 %<br>SiO <sub>2</sub> =0.5% - 10 %   | Fe = 0.1 %<br>SiO <sub>2</sub> = 0.1 %   | Fe = 0.012 %<br>SiO <sub>2</sub> = 0.08 %  | ISO=2597&ISO-2598-1  |
| Cold rolled, Hot rolled and Galvanized sheet, Billets | UTS, Elongation, Yield strength And Bend test | (450 kgf – 5000 kgf)<br>(450 kgf – 20000 kgf)<br>(2600 kgf – 50000 kgf)<br>(100 N – 100000 N)   | 400 kgf<br>400 kgf<br>2500 kgf<br>50 N   | 05 Ton Range 400 kgf – 4000 kgf (0.380 %)<br>20 Ton Range 400 kgf – 3200 kgf ( 0.260 %)<br>50 Ton Range 2500 kgf – 20000 kgf (1.300 %)<br>100 Ton Range 50 KN – 800 KN (0.328 %) | ASTM-A-370/RKM 1000<br>KN Universal Tensile Testing Machine, ZWICK (Germany) UTS Machines 05 Ton,20 Ton & 50Ton (USSR) |
| Refractory Materials                                  | Refractoriness                                | 1500 °C – 1830 °C   | 1500 °C  | 5 °C   | ISO-R-528/<br>Refractoriness Furnace No: 82012, Coppee(France)   |
| Coal/coke   | Inherent moisture,<br>Volatile matter&<br>Ash | 1.0 % – 2.0 %<br>1.0 % - 40 %<br>6 % – 14 %   | 0.10 %<br>0.40 %<br>0.10 %   | 0.08 %<br>0.50 %<br>2.0 %  | ISO-589/562/1171/Carbolite Furnace (Germany)   |

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Date

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Director