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|-------------------------------|---|--------------------|-------------------|
| Laboratory | Omega Consultant Services, Testing Laboratory, 256 A, M.G. Road, Purbasan, Thakurpukur, Kolkata, West Bengal | | |
| Accreditation Standard | ISO/IEC 17025: 2005 | | |
| Field | Chemical Testing | Issue Date | 03.02.2014 |
| Certificate Number | T-2140 | Valid Until | 02.02.2016 |
| Last Amended on | - | Page | 1 of 4 |

| S.No. | Product / Material of Test | Specific Test Performed | Test Method Specification against which tests are performed | Range of Testing / Limits of Detection |
|--------------|-----------------------------------|--------------------------------|--|---|
|--------------|-----------------------------------|--------------------------------|--|---|

I. METALS & ALLOYS

| | | | | |
|-----------|---|-------------|--|-----------------|
| 1. | Ferrous metals (Plain Carbon Steel) | Carbon | IS:228 (Pt. 1) – 1987 Reaffirmed 2002 | 0.05% to 1.00% |
| | | Manganese | IS:228 (Pt. 2) – 1987 Reaffirmed 2002 | 0.10% to 1.50% |
| | | Silicon | IS:228 (Pt. 8) – 1989 Reaffirmed 2004 | 0.05% to 2.00 % |
| | | Sulphur | IS:228 (Pt. 9) – 1989 Reaffirmed 2004 | 0.01% to 0.10 % |
| | | Phosphorous | IS:228 (Pt. 3) – 1987 Reaffirmed 2002 | 0.01% to 0.15 % |
| 2. | Ferrous metals (Low & high alloy steel , Mild Steel, Stainless Steel , Cast iron & pig iron) | Carbon | IS:228 (Pt. 1) – 1987 Reaffirmed 2002 & IS:12308 (Pt.-11)-1991 Reaffirmed 2006 | 0.05% to 4.50% |
| | | Manganese | IS:228 (Pt. 2) – 1987 Reaffirmed 2002 IS:12308 (Pt-10)-1991 Reaffirmed 2006 | 0.10% to 2.00% |
| | | Silicon | IS:228 (Pt. 8) – 1989 Reaffirmed 2004 & IS:12308 (Pt-6)-1991 Reaffirmed 2006 | 0.05% to 2.00 % |

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|--------------------------------|---|--------------------------------|---|---|
| | Ferrous metals (Low & high alloy steel , Mild Steel, Stainless Steel , Cast iron & pig iron) | Sulphur | IS:228 (Pt. 9) – 1989 Reaffirmed 2004 | 0.01% to 0.25 % |
| | | Phosphorous | IS:228 (Pt. 3) – 1987 Reaffirmed 2002 & IS:12308 (Pt-5)-1991 Reaffirmed 2006 | 0.01% to 0.25 % |
| | | Nickel | IS:228 (Pt. 5) – 1987 Reaffirmed 2002 & IS:12308 (Pt-7)-1991 Reaffirmed 2007 | 0.10% to 20.00 % |
| | | Chromium | IS:228 (Pt. 6) – 1987 Reaffirmed 2002 & IS:12308 (Pt-8)-1997 Reaffirmed 2002 | 0.10% to 20.00% |
| II. ORES & MINERALS | | | | |
| 1. | Iron Ore | Iron | IS:1493 -1959 Reaffirmed 2001 | 40% to 70% |
| | | Silica | IS:1493 -1959 Reaffirmed 2001 | 1% to 15 % |
| | | Alumina | IS:1493 -1959 Reaffirmed 2001 SOP-TP-01 | 1% to 10 % |

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III. WATER

| | | | | |
|----|--|--|---|-----------------------|
| 1. | Water (construction/ Industrial) | pH Value | IS 3025 (Part 11)- 1983 Reaffirmed: 2002 | 1 to 14 |
| | | Total Dissolved Solids | IS 3025 (Part 16)- 1984 Reaffirmed: 2002 | 2.0mg/l to2000 mg/l |
| | | Total Suspended Matter | IS 3025 (Part 17)- 1984 Reaffirmed: 2002 | 2.0mg/l to2000 mg/l |
| | | Acidity: Requirement of 0.02(N) NaOH to neutralize 100ml sample of water, using phenolphthalein as an indicator | IS 3025 (Part 22)- 1986 Reaffirmed: 2003 | 0.1 ml to 40 ml |
| | | Alkalinity: Requirement of 0.02(N) H ₂ SO ₄ to neutralize 100 ml sample of water, using mixed indicator | IS 3025 (Part 23)- 1986 Reaffirmed: 2003 | 0.1 ml to 40ml |
| | | Total Organic Matter | IS 3025 (Part 18)- 1984 Reaffirmed: 2002 | 2.0 mg/l to 200 mg/l |
| | | Total inorganic substances | IS 3025 (Part 18)- 1984 Reaffirmed: 2002 | 2.0 mg/l to 3000 mg/l |

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|-------------------------------|---|---|--|---|
| | Water (construction/ Industrial) | Sulphates | IS 3025 (Part 24)- 1986 Reaffirmed: 1992 | 2.0 mg/l to 400 mg/l |
| | | Chlorides | IS 3025 (Part 32)- 1988 Reaffirmed: 1993 | 2.0 mg/l to 2000 mg/l |
| IV. BUILDING MATERIALS | | | | |
| 1. | Cement - OPC | Silica Alumina Iron Oxide Magnesia Calcium Oxide Sulphuric Anhydride Insoluble Residue Loss on ignition Total Chloride | IS: 4032 – 1985 Reaffirmed - 2009 | 10% to 30 % 1% to 15 % 1% to 15 % 0.5% to 15 % 35% to 70 % 0.5% to 5 % 0.5% to 10 % 0.5% to 10 % 0.01% to 2 % |
| 2. | Cement - PPC | Magnesia Sulphuric Anhydride Insoluble Residue Loss on ignition | IS: 4032 – 1985 Reaffirmed - 2009 | 1% to 15 % 0.5% to 5% 5% to 40% 0.5% to 10 % |
| 3. | Cement - PSC | Magnesia (as MgO) Sulphur Trioxide (as SO ₃) Sulphide Sulphur (as S) Insoluble Residue Loss on ignition Total Chloride | IS: 4032 – 1985 Reaffirmed - 2009 | 0.5% to 15 % 0.5% to 5 % 0.1% to 5 % 0.5% to 10% 0.5% to 10% 0.01% to 2% |

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