| JK LAKSHMI<br>CEMENT LTD.         DAYKAYPURAM-307019 Dist. Sirohi., Rajasthan<br>TEST CERTIFICATE FOR JK LAKSHMI 43 – GRADE OPC         LICENCE NO. CM/L-2361143       CT5708         WEEK No       24 |                             |                                                            |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------------------|---------------------|
| CHEMICAL / PHYSICAL<br>REQUIREMENTS                                                                                                                                                                    | SPECIFICATION<br>CLAUSE No. | REQUIREMENT AS PER<br>IS No. 269 – 2015<br>AMENDMENT No. 6 | RESULTS<br>OBTAINED |
| CHEMICAL REQUIREMENTS :<br>(i) Ratio of Percentage of Lime to<br>percentage of silica, alumina and iron oxide<br>CaO – 0.7SO <sub>3</sub>                                                              | <b>5</b><br>5.1             | Not Greater than 1.02<br>And not less than 0.66            | 0.890               |
| <ul> <li>2.8 SiO<sub>2</sub> + 1.2 Al<sub>2</sub>O<sub>3</sub> + 0.65 Fe<sub>2</sub>O<sub>3</sub></li> <li>(ii) Ratio of percentage of alumina to that of iron oxide</li> </ul>                        | 5.1                         | Not less than 0.66                                         | 1.55                |
| (iii) Insoluble residue, percent by mass                                                                                                                                                               | 5.1                         | Not more than 5.0                                          | 2.36                |
| (iv) Magnesia, percent by mass                                                                                                                                                                         | 5.1                         | Not more than 6.0                                          | 2.49                |
| v) Total sulphur calculated as Sulphuric<br>Anhydride (SO <sub>3</sub> ), Percent by mass                                                                                                              | 5.1                         | Not more than 3.5                                          | 2.50                |
| (vi) Total loss on ignition                                                                                                                                                                            | 5.1                         | Not more than 5%                                           | 1.46                |
| (vii) Chloride, percent by mass                                                                                                                                                                        | 5.1                         | Not more than 0.1                                          | 0.031               |
| PHYSICAL REQUIREMENTS :<br>NC<br>(i) FINENESS :<br>SP. SURFACE                                                                                                                                         | <b>6</b><br>6.1             | %<br>Not less than 225 m2/kg                               | <b>27.50</b><br>281 |
| <ul><li>(ii) SOUNDNESS :</li><li>a) Le-chatelier method<br/>Expansion</li></ul>                                                                                                                        | 6.2                         | Not more than 10 mm                                        | 1.00                |
| b) Auto clave test expansion                                                                                                                                                                           |                             | Not more than 0.8%                                         | 0.080               |
| <ul><li>(iii) SETTING TIME</li><li>a) Initial Setting time in Minutes</li></ul>                                                                                                                        | 6.3                         | Not less than 30                                           | 130                 |
| b) Final setting time in Minutes                                                                                                                                                                       |                             | Not more than 600                                          | 170                 |
| (iv) COMPRESIVE STRENGTH<br>72 ± 1 Hours (3 Days)                                                                                                                                                      | 6.4                         | Not less than 23 MPa                                       | 33.0                |
| 168 ± 2 Hours (7 Days)                                                                                                                                                                                 |                             | Not less than 33 MPa                                       | 40.0                |
| 672 ± 4 Hours (28 Days)<br><b>REMARKS :</b> The test results complies with the                                                                                                                         |                             | Not less than 43 MPa<br>* Not more than 58 MPa             | Under Testing       |

**REMARKS :** The test results complies with the requirements of IS:269 – 2015 for 43 grade OPC for all Chemical Requirements and Physical requirements including Compressive Strength Up to 7- days. Test Protocol : IS:4032 and IS:4031.

Note : Results reported above are the average test results of all samples testing during relevant week.

CERTIFIED ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007

HOD (QC)

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