



CERTIFICATE OF CEMENT QUALITY  
QUALITY CONTROL DEP. \ (LAB.)

قسم السيطرة النوعية / (المختبرات)

|                                |   |
|--------------------------------|---|
| Reference number / 2+3+4+5     | Cement type / Portland Cement ( CEM I SR3.5-32.5 R )<br>نوع السمنت / ( سميت بورتلاندي مقاوم للكبريتات -<br>صنف المقاومة 32.5 مقاومة مبكرة عالية ) |
| Factory / Al-Kufa Cement Plant | Sampling date / 1/10/2020 Testing date / 31/10/2020   |

| CHEMICAL ANALYSIS | COMPONENT %       | TEST RESULT | LIMITS *        | CONFORMITY |
|-------------------|-------------------|-------------|-----------------|------------|
|                   | Loss on ignition  | 1.55        | ≤ 4 %           | OK         |
|                   | Insoluble residue | 0.62        | ≤ 1.5 %         | OK         |
|                   | SO <sub>3</sub>   | 2.06        | ≤ 2.5 % for SR. | OK         |
|                   |                   |             | ≤ 2.8 % for OP. |            |
|                   | Chloride content  |             | ≤ 0.10 %        | OK         |
|                   | C <sub>3</sub> A  | 2.07        | ≤ 3.5 % for SR. | OK         |
|                   | MgO               | 3.43        | ≤ 5 %           | OK         |

| PHYSICAL TEST           |         | TEST RESULT | LIMITS *                   | CONFORMITY |
|-------------------------|---------|-------------|----------------------------|------------|
| Compressive Strength    | 2 days  | 14.86       | ≥ 10.0 MN/m <sup>2</sup>   | OK         |
|                         | 28 days | 33.87       | ≥ 32.5 MN/m <sup>2</sup>   | OK         |
| Initial setting time    |         | 105         | ≥ 45 min.                  | OK         |
| Final setting time      |         | 03:02       | ≤ 10 hr.                   | OK         |
| Soundness (Autoclave) % |         | 0.09        | ≤ 0.8                      | OK         |
| Fineness ( Blaine )     | for OP. |             | ≥ 2500 Cm <sup>2</sup> /gm |            |
|                         | for SR. | 3173        | ≥ 2800 Cm <sup>2</sup> /gm | OK         |

\*According to I.Q.S No. 5/2019

Production Manager

Plant Manager  
جميل ابراهيم حسين  
مدير الانتاج

Final Result Acceptable

Quality Manager