GEOMETRICAL VARIATION OF CORROSION PARAMETERS IN A BEAM AND A PILLAR OF REINFORCED CONCRETE CONTAINING CL-

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JOINT fib- RILEM WORKSHOP
MODELLING OF CORRODING CONCRETE STRUCTURES
22-23 November 2010
Madrid, Spain
1. General aspects of the study

2. Results of all the measurements

3. Correlation of corrosion parameters and T

4. Geometrical variation of corrosion parameters
Beam and pillar of this study

Geometrical variation of corrosion parameters

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Measurement instrument: GECOR 8

Confinement

$E_{corr} \ i_{corr} \ Re$

Mapping

$E_{corr} \ \rho \ \text{risk level}$

Geometrical variation of corrosion parameters
Influence of meteorological conditions: T and RH

- After rain or humid weather
- Strong temperature variation during some days

Average of Temperature per Date

Temperature vs time Per Day
Average and measurements vs date: Ecorr

V1 Ecorr vs date

P3 Ecorr vs date

ASTM C-876

<table>
<thead>
<tr>
<th>E referred to Cu/CuSO₄</th>
<th>Corrosion activity probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; -0.20 V CSE</td>
<td>90 % no corrosion</td>
</tr>
<tr>
<td>-0.20 - -0.35</td>
<td>uncertain</td>
</tr>
<tr>
<td>&lt; -0.35</td>
<td>90 % corrosion</td>
</tr>
</tbody>
</table>

Geometrical variation of corrosion parameters

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