ITEM 18555.95 M - CORROSION INHIBITOR FOR STRUCTURAL CONCRETE

DESCRIPTION
The work shall consist of furnishing a corrosion inhibiting admixture to be mixed with portland cement concrete producing a corrosion inhibitor modified concrete. All the provisions of Section 555 shall apply.

MATERIALS
All the provisions of Section 555-2 shall apply. The corrosion inhibitor shall consist of a calcium nitrite solution as approved by the Director, Materials Bureau, containing 30 ±1% calcium nitrite solids by mass and having a mass of 1.27 ± 0.01 kg/L. Calcium nitrite acts as an accelerator. Compatible retarding admixtures may be used, to control set time, as per the manufacturers recommendations and subject to the Regional Materials Engineer's approval.

CONSTRUCTION DETAILS
All the provisions of Section 555-3 shall apply. The corrosion inhibitor shall be added to the mix immediately after air entraining and retarding admixtures have been introduced into the mixer. The corrosion inhibitor shall be added to the concrete as an aqueous solution at a dosage rate as indicated in the contract documents. The water in the solution shall be counted as part of the total mix water.

An automated corrosion inhibitor dispensing system shall be required. The dispensing system shall meet the following requirements:

- Meter accuracy of ±1% (by volume)
- Programmable quantity (liters, nearest tenth)
- System interlocks
- Batching tolerance of ±3% (by volume)
- Print requirements:
  - Project number and/or batch number
  - Date and time
  - Delivered quantity (liters, nearest tenth)

Calibration shall be in accordance with procedures approved by the Director, Materials Bureau.

Verification of corrosion inhibitor inclusion shall be made in two (2) ways. First, the concrete batch tickets shall be checked by the Regional Materials Engineer for the appropriate dosage of corrosion inhibitor in the mix. Second, the Contractor shall provide a calcium nitrite inclusion test kit, approved by the Materials Bureau, to the Engineer. Testing for inclusion of the corrosion inhibitor shall be performed by the Engineer during each placement to ensure the presence of the corrosion inhibitor in the plastic concrete. Concrete which does not have the appropriate dosage as per the batch tickets or does not indicate presence from the inclusion testing shall be rejected.

6/5/98
METHOD OF MEASUREMENT
Measurement will be taken as the number of liters of corrosion inhibitor actually incorporated into the project. This shall be determined by multiplying the number of cubic meters of concrete actually used by the required dosage rate, measured to the nearest liter.

BASIS OF PAYMENT
The unit price bid per liter shall include the cost of furnishing all labor, material and equipment necessary to include a corrosion inhibitor into the concrete. The concrete shall be paid for separately under its appropriate item.

Payment will be made under:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Pay Unit</th>
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</thead>
<tbody>
<tr>
<td>18555.95 M</td>
<td>Corrosion Inhibitor For Structural Concrete</td>
<td>Liters</td>
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