



NITRITE-BASED CORROSION INHIBITORS WITH IMPROVED ANODIC AND
CATHODIC INHIBITING PERFORMANCE

ABSTRACT

A corrosion-inhibiting admixture suitable for addition to hydraulic cement to impart enhanced anodic and cathodic corrosion inhibition, the admixture comprising

- a) a first component consisting of an amount of alkali or alkaline earth metal nitrite effective to inhibit anodic corrosion;
- b) a second component comprising an agent operative to enhance the anodic corrosion inhibition effectiveness of the first component; wherein the first and second components are present in a weight ratio of from 1:0.1 to 1:1; and
- c) a third component consisting of an EO/PO superplasticizer in a weight ratio to the first component of from 1: 0.005 to 1: 0.25;

a cement composition containing the admixture and method of producing a cement composition using the admixture. The admixture provides the surprising benefit of increased protection against cathodic corrosion without harming the level of anodic corrosion inhibition.

FIG. 2