NACE TM0105-2018
Item No. 21247
Revised 2018-12-19
Reaffirmed 2016-11-05
Revised 2012-06-23
Approved Date October 2005

Evaluation of Coatings Containing Conductive Carbon Additives for Use as an Anode on Atmospherically Exposed Reinforced Concrete

ABSTRACT

This standard provides a test method to evaluate coatings containing conductive carbon additives for use as an anode on atmospherically exposed reinforced concrete. These coatings are commonly applied to steel-reinforced concrete surfaces for the purpose of supplying cathodic protection (CP) current to the embedded steel. The coating systems used for this purpose are intended to serve as an anode material and are not intended to provide a protective barrier coating to the concrete. This standard is intended for use by consultants, suppliers, and users of CP systems intended to reduce corrosion of embedded steel in atmospherically exposed reinforced concrete. This standard is expected to be used primarily to qualify coatings containing conductive carbon additives as an anode material, rather than as a quality control procedure.

KEYWORDS

Reinforced concrete, cathodic protection, conductive carbon additive, conductive coating anode, coatings, electrochemical test, TG 045.

ISBN 1-57590-200-1

Foreword

This standard provides a test method to evaluate coatings containing conductive carbon additives for use as an anodes on atmospherically exposed reinforced concrete. Coatings containing conductive carbon additive are commonly applied to steel-reinforced concrete surfaces for the purpose of supplying cathodic protection (CP) current to the embedded steel. The conductive coating systems used for this purpose are intended to serve as an anode material and are not intended to provide a protective barrier coating to the concrete.

This standard is intended for use by consultants, suppliers, and users of CP systems intended to reduce corrosion of embedded steel in atmospherically exposed reinforced concrete. This standard is expected to be used primarily to qualify coatings containing conductive carbon additive as an anode material, rather than as a quality control procedure.

This standard was originally prepared in 2005, revised in 2012, reaffirmed in 2016, and revised in 2018 by NACE Task Group (TG) 045,"Reinforced Concrete: Anode Test Procedures," which is administered by Specific Technology Group (STG) 01, "Reinforced Concrete" and sponsored by STG 05, "Cathodic/Anodic Protection." It is issued by NACE under the auspices of STG 01.

In NACE standards, the terms ***shall, must, should,*** and ***may*** are used in accordance with the definitions of these terms in the NACE Publications Style Manual. The terms ***shall*** and ***must*** are used to state a requirement, and are considered mandatory. The term ***should*** is used to state something good and is recommended, but is not considered mandatory. The term ***may*** is used to state something considered optional.

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