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Determination of Phosphonate Concentration in Water

ABSTRACT

This standard test method is a colorimetric determination of low concentrations of phosphonate residuals in water from oil and gas production, water injection/disposal, and other industrial applications. This standard is maintained by Task Group (TG) 414.

KEYWORDS

Oil and gas, water, phosphonate

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Foreword

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.

This standard test method is a colorimetric determination of low concentrations of phosphonate residuals in water. Organic phosphonates are used as mineral scale and corrosion inhibitors in oil and gas operations, water injection/disposal operations, and other industrial applications. This test method is intended for use by oil and gas operators and service companies to determine residual phosphonate concentrations in waters that are treated with phosphonate inhibitors.

This test method was developed at Rice University under the direction of Dr. Mason Tomson1 with funding from the Gas Research Institute (GRI).

This standard was originally prepared by Task Group (TG) T-1D-52, a component of Unit Committee T-1D, "Corrosion Monitoring and Control of Corrosion Environments in Petroleum Production Operations" in 1999, and it was reaffirmed in 2005 by Specific Technology Group (STG) 31, "Oil and Gas Production—Corrosion and Scale Inhibition." The standard was stabilized in 2018 by TG 414, "Review and Revise as Necessary NACE Standard TM0399-2005." It is issued by NACE International under the auspices of STG 31.

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