

Corrosion Control of Submerged Areas of Permanently Installed Steel Offshore Structures Associated with Petroleum Production

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Foreword

Offshore structures represent large capital investments. Structures are being placed in offshore areas worldwide and are being designed to withstand forces resulting from hurricanes, arctic storms, tidal currents, earthquakes, and ice floes. Moreover, platform structures are currently being placed in deeper waters and, therefore, have become larger, more complex, and more expensive. Control of corrosion on structures is necessary for the economic development of oil and gas production, to provide safe support for working and living areas, and to avoid potential harm to the environment. Corrosion on offshore structures can be divided into three major areas: the submerged zone, the splash zone, and the atmospheric zone. The submerged zone also includes that portion of the structure below the mudline. For the purposes of this standard, offshore structures are stationary structures (platforms or subsea facilities) that are fixed to the sea floor by gravity, pilings, or mooring cables.

This AMPP standard is intended for use by corrosion control personnel concerned with the corrosion of steel fixed offshore platforms associated with petroleum production.

Scope

This standard outlines materials, practices, and methods for control of corrosion for steel fixed structures associated with petroleum production located in offshore areas. The purpose is to facilitate more effective corrosion protection of structures by the presentation of reliable information. This standard does not include procedures for the control of internal corrosion of wells, piping, and associated equipment that may be in use on the structure, nor does it include external protection of these items in the atmospheric zone on the structure.

Rationale

The purpose of this revision is to:

- Update out-of-date references to government bodies or earlier works in progress
- Rearrange or relocate some content for clarity
- Reconsider some international design current designations
- Correct minor editorial errors

In AMPP standards, the terms *shall* and *must* are used to state requirements and are considered mandatory. The term *should* is used to state something that is recommended, but is not considered mandatory. The term *may* is used to state something considered optional.

Section 1: General

- 1.1 This standard provides guidelines for establishing minimum requirements for the control of external corrosion on steel fixed offshore structures associated with petroleum production, and on the external portions of associated oil and gas handling equipment. Fixed structures include platforms, tension leg platforms (TLP), subsea templates, and other similar structures. This standard does not include guidelines for corrosion control of temporarily moored mobile vessels used in petroleum production.
- 1.2 For this standard, corrosion on structures is divided into three zones: the submerged, splash, and atmospheric zones. However, only the submerged zone is addressed in this standard. The atmospheric and splash zones are addressed in NACE SP0108.¹
- 1.3 This standard does not designate guidelines for every specific situation because of the complexity of environmental conditions. In many instances, the problem may have several solutions and, when appropriate, meritorious alternative solutions have been included.
- 1.4 This standard does not include guidelines for corrosion control of the internal portions of wells, piping, and associated equipment that may be installed on or attached to structures. NACE SP0575 gives guidance on internal corrosion control of oil-treating vessels.²