

Guidance for Post-hurricane Structural Inspection of Offshore Structures

Upstream Segment

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Introduction

Recent hurricanes in the Gulf of Mexico have resulted in thousands of above- and below-water structural inspections of offshore structures to determine if they sustained damage. Several of the API standards for offshore structures provide guidance for such “special” inspections, but the guidance is limited and general in nature. This bulletin complements those publications and provides additional guidance specific to structural inspection following hurricanes.

The purpose of this bulletin is to provide guidance for post-hurricane, above- and below-water, structural inspections of fixed and floating structures located in the Gulf of Mexico. The goal of these special inspections is to determine if a structure sustained hurricane-induced damage that affects the safety of personnel working on the structure, the primary structural integrity of the asset, or its ability to perform the purpose for which it was intended. This document should be used in conjunction with the applicable API standards for the structure as well as any structure-specific owner/operator or regulatory requirements.

Guidance for Post-hurricane Structural Inspection of Offshore Structures

1 Scope

This document is applicable to permanent fixed and floating structures in the Gulf of Mexico. In this document, inspection refers to structural inspections only and does not include inspections of production equipment, process piping, electrical and instrumentation or other systems and components of the platform, unless noted otherwise.

Fixed structures include steel jacket or template platforms, towers and compliant towers, caissons, minimum non-jacket and special structures that are fixed to the seafloor. Design of these structures generally follows API 2A-WSD guidelines.

Floating structures include tension leg platforms (TLPs), spars, deep draft caisson vessels, semi-submersibles and any other type of floating or tethered structures. Design of these structures generally follows API 2T, API 2FPS, API 2SK, API 2RD and API 2I guidelines.

Post-hurricane structural inspections are not as comprehensive as, or supplant the need for, regular in-service inspections as may be detailed in the structure's in-service inspection plan (ISIP).

This document describes post-hurricane structural inspection of structures designed in accordance with the following API documents:

- API 2A-LRFD,
- API 2A-WSD,
- API 2FPS,
- API 2I,
- API 2RD,
- API 2SK,
- API 2T,
- API 2TD.

These structures may also be designed and operated in accordance with regulatory and classification society guidelines and these should be applied as required.

2 Acronyms

FMD	flooded member detection
GV	general visual inspection
ISIP	in-service inspection plan
NHC	National Hurricane Center
ROV	remotely operated vehicle
TLP	tension leg platform