

# MSC Guidelines for Industrial Systems

Procedure Number: E1-15

Revision Date: 12/13/2010



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## References:

- a. Title 46 CFR 58.60 (Subchapter F)
  - b. API RP 53 - Recommended Practice for Blowout Prevention Equipment Systems for Drilling Wells
  - c. API RP 14C - Recommended Practice for Analysis, Design, Installation and Testing of Basic Surface Safety Systems for Offshore Production Platforms
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## Contact Information:

If you have any questions or comments concerning this document, please contact the Marine Safety Center by email or phone, referring to the Procedure Number: **E1-15**.

Email: [msc@uscg.mil](mailto:msc@uscg.mil)

Phone: 202-475-3402

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## Responsibilities:

The submitter shall provide sufficient documentation and plans to indicate compliance with the applicable requirements; this includes a complete bill of materials, component technical data sheets, and arrangement plans. The submission shall be made in triplicate.

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## General Guidance:

These guidelines apply to the following industrial systems on a board a Mobile Offshore Drilling Unit (MODU):

- Cementing systems
- Circulation systems, including:
  - 1) Pipes and pumps for mud
  - 2) Shale shakers;
  - 3) Desanders
  - 4) Degassers
- Blow out preventer control systems
- Riser and guideline tensioning systems
- Motion compensation systems
- Bulk material storage and handling systems
- Other pressurized systems designed for the MODU's industrial operations

Additional electrical requirements for these and other systems are contained in 46 CFR Subchapter J. Propulsion and bow thruster motors are not considered industrial systems.

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- Industrial systems must be analyzed by a registered professional engineer (PE). The PE's certification must appear on each diagram and/or analysis submitted. Plans must be submitted in accordance with 46 CFR 50.20-5. (46 CFR 58.60-11)
- Pressure piping in industrial system must be designed in accordance with ANSI B31.3 ASME/ANSI B31.3 - Chemical Plant and Petroleum Refinery.
  - a) Blow out preventer control systems must be designed in accordance with reference (b). (46 CFR 58.60-7)
- Industrial systems must also be designed and analyzed in accordance with the methods described in reference (c). (46 CFR 58.60-9)
- Alternate standards for fittings, material, apparatus, equipment, arrangements, calculations and/or tests required may be accepted if deemed to provide an equivalent level of safety. (46 CFR 58.60-2) Alternate design standards should be submitted for acceptance to the USCG Headquarters Systems Engineering Division (CG-5213) via the MSC.

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## **General Guidance (continued):**

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- ❑ Standards and/or specifications for non-pressurized mechanical or structural systems, and components such as derricks, draw works, and rotary tables which comply with standards not referenced by USCG regulations must be referenced on the plans or in the specifications of the unit. (46 CFR 58.60-11)
  
  - ❑ Industrial systems must not be located in a space that is concealed, or inaccessible to industrial personnel. (46 CFR 58.60-5).
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## **Disclaimer**

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative, you may contact the Marine Safety Center (MSC), the unit responsible for implementing this guidance.

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