

MSC Guidelines for the Review and Documentation of Performance Based Design Submissions

Procedure Number: H2-09

Revision Date: 4/6/2016

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Purpose:

This guide is intended to provide a method to improve consistency in the review of Performance Based Designs (PBD) submissions, and provide a standard for the documentation of the approval of these designs by the Marine Safety Center in the Marine Information System for Safety and Law Enforcement (MISLE).

References:

- a. Navigation and Vessel Inspection Circular (NVIC) 3-01 “Guide to Establish Equivalency to Fire Safety Regulations for Small Passenger Vessels (46 CFR Subchapter K).”
 - b. SOLAS II-2/Regulation 17
 - c. MSC.1/Circ. 1002
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Contact Information:

If you have any questions or comments concerning this document, please contact the Marine Safety Center (MSC) by email or phone. Please refer to the Procedure Number **H2-09**.

Email: MSC@uscg.mil

Phone: 202-795-6730

Website: <http://homeport.uscg.mil/msc>

Responsibilities:

Using applicable portions of references (a) through (c), the submitter shall provide sufficient documentation and plans to indicate compliance with the applicable requirements. The submission shall be made electronically to the above email address or, if paper, in triplicate to the MSC’s address found on the above website. To facilitate plan review, a single point of contact for the project should be identified with the first submission to MSC.

General Guidance:

- In order to provide efficient and responsive service to submitters of PBD, it is recommended that MSC be included early in the design process. At a minimum, MSC expects the following submissions during a PDB project (further detail is provided in reference (a)):

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- a) Concept review submittal. Must include: identification and information on the design team, general information on the project and justification for the PBD
 - b) Preliminary/Qualitative Analysis Report. Must include: Scope, objectives of the PBD, expected casualty scenarios and performance criteria proposal.
 - c) Quantitative Analysis Report. Must include: Final approved performance criteria, quantified casualty scenarios, analysis of trial designs, justification for selected design, and the identification of design features critical to the PBD.
 - d) Design Documentation. Must include: Final design with a discussion of affected regulations, critical assumptions and design features, performance criteria, detailed description of areas included under PDB, and methods employed to maintain the design and associated documentation throughout the life of the vessel.
- Appendix (1) contains the format MSC will use to approve and document the approval of a completed PBD.
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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.

Appendix 1

DOCUMENT OF APPROVAL OF ALTERNATIVE DESIGN AND ARRANGEMENTS FOR FIRE SAFETY

- Subchapter K in accordance with NVIC 3-01**
- SOLAS in accordance with Chapter II-2, Regulation 17**
- Subchapter H according to 46 CFR 70.15**
- Other:** _____

Name of ship:

ON or IMO No.:

Ship type:

OCMI Zone or Port of registry:

Approving Agency/Authority:

1. Scope of the analysis or design, including the critical design assumptions and critical design features:

- 1.1 fire hazard identification;
- 1.2 Summary of justification for selected fire hazards;
- 1.3 Explanation of design fire scenarios;
- 1.4 Summary of results of quantitative analysis;
- 1.5 Critical assumptions;

2. Description of the alternative design and arrangements:

3. Conditions of approval:

4. Listing of affected regulations:

5. Summary of the result of the engineering analysis and basis for approval, including performance criteria and design fire scenarios:

6. Test, inspection and maintenance requirements, including amount and composition of fire load:

7. Location of Approved Drawings and specifications of the alternative design and arrangement: