DATA ITEM DESCRIPTION

Title: HEMP TECHNICAL REPORT FOR MIL-STD-4023 HARDNESS ALLOCATION

Number: DI-EMCS-82012
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AMSC Number: 9606
Limitation: N/A
DTIC Applicable: Yes
GIDEP Applicable: N/A
http://www.dtic.mil/dtic/submit/
Office of Primary Responsibility: DTRA-DS
Applicable Forms: None

Use/relationship: The MIL-STD-4023 Hardness Allocation Procedure Technical Report shall be used to document the Hardness Allocation procedure for protecting military ships from High Altitude Electromagnetic Pulse (HEMP). The Hardness Allocation Report shall include empirical and analytical data generated by the allocation procedure described in detail in Appendix A of MIL-STD-4023.

1. Information to be acquired through these data should include engineering change records, hardware modification records, engineering judgment records service experience records, and other related data.

2. This DID contains the format, content, and intended use information for the data product resulting from the work task described by Appendix A of MIL-STD-4023, and is applicable to the acquisition of military ships.

Requirements:

1. Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as cited in the current issue of the DODISS at the time of the solicitation. Classification of the Technical Report for MIL-STD-4023 Hardness Allocation shall be determined using DTRA Security Classification Guide for DoD Electromagnetic Pulse (EMP) Programs and Activities (U) available by mail request to ATTN: J9/NT-NTSA/Rooney M., Defense Threat Reduction Agency, 8725 John J. Kingman Road, MSC 6201 Fort Belvoir, Virginia 22060-6201 and any relevant system specific classification guides.

2. Format. The Technical Report for MIL-STD-4023 Hardness Allocation shall be in contractor's format.

3. Content. The Technical Report for MIL-STD-4023 Hardness Allocation Procedure shall be presented in the style of the technical report which is recommended in Appendix A of MIL-STD-4023. It shall include the ship Hardness Design Concept, EM shielding barriers, Points of Entry (POE) definitions, and performance requirements. This report shall be updated as data from Appendices B, C and D of MIL-STD-4023 become available to ensure that the ship Hardness Concept and Mission Critical System (MCS) Hardness Margin specifications are met with reasonable confidence. In addition to the written technical report, the data obtained from the testing shall be presented in electronic contractor's format and contain all data described in

Appendix A of MIL-STD-4023. The electronic data format will be described in the written report. Appropriate use of appendices for large amounts of information with a short summary of key facts in the main text is encouraged.

3.1 Introduction Section. This section shall contain a brief overview of the Hardness Allocation Procedure as well as the Ship Hardness Design Concept.

3.2 Technical Content. The Hardness Allocation Report (HAR) shall provide results and technical data developed for each of the seven steps of the Hardness Allocation Procedure as defined in paragraph A.4 and A.5 of Appendix A of MIL-STD-4023. The report outline, as detailed in A.5.7 of Appendix A of MIL-STD-4023 includes:

- A complete schedule of electromagnetic (EM) Barriers and their performance requirements
- A complete schedule of Barrier electrical and mechanical Penetrations and Controlled Apertures with their performance requirements
- Point of Entry (POE) tests and test results
- HEMP Protection Subsystem (HPS) EM Barrier test results
- HPS Immunity test results
- System Verification test results

Hardness Allocation status and test or engineering data required to determine system hardness
3.3 Schedule of Hardness Allocation Report Submittal. The HAR is a living instrument that documents and verifies the Hardness Allocation as the ship engineering design program and production proceeds. There are at least four major submittals as fully defined in paragraph A.5.7.2 of Appendix A of MIL-STD-4023.

The four major submittals include:

1. Initial submittal submitted prior to ship Preliminary Design Review for government approval.
2. Second submittal submitted after initial MCS Immunity testing is complete.
3. Third submittal submitted after the EM Barrier performance verification testing is complete.
4. Fourth submittal submitted after the first System Verification test is complete.

The HAR shall be revised during fleet production upon any Verification test failures and/or any modification of the HEMP protection features of the ship.

End of DI-EMCS-82012