

DATA ITEM DESCRIPTION

Title: Electromagnetic Interference Survey (EMIS) Test Procedures

Number: DI-EMCS-81782

Approval Date: 20090915

AMSC Number: N9087

Limitation:

DTIC Applicable: N/A

GIDEP Applicable: N/A

Office of Primary Responsibility: SH/05H3

Applicable Forms: Use/Relationships: This EMIS for surface ships describes the methods of test, analysis and inspection used by the contractor to verify compliance with the Electromagnetic Environment Effects (E3) interface and performance requirements of shipboard systems. The EMIS provides the means for the government to understand and duplicate verification methods used by the contractor to verify EMC requirements.

This DID contains the format and content preparation instructions for obtaining the data from work tasks described in 5.0 of MIL-STD-1605.

This DID is related to DI-EMCS- 81777

Requirements:

1. Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, or revisions, shall be as cited in the solicitation or contract.

2. Format. The EMIS shall be in contractor format and shall include signature certification by a qualified representative of the executing activity.

3. Content. The EMIS test procedure shall contain:

- a. Ships name, hull number and location during tests.
- b. Executive summary containing a brief description of the test methodology, safety guidance and potential issues in the execution of the test procedures.
- c. List of the systems to be measured, description of the test methods being used, and detailed procedures for each EMC requirement and system being tested
- d. The test equipment to be used including their calibration date and versions of software the test equipment utilizes;
- e. The number of test points required.

3.1 Phase I details shall include the following:

- a. Each Phase I requirement
- b. Photographs or diagrams of the test setup with identification of all components.

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- c. Sample calculations such as conversions of measured level for comparison to applicable limits; as well as sample data sheets.
- d. Model number, power level and frequency of own ship hand held portable transceivers to be utilized for susceptibility testing.
- e. All wireless sensors to be measured below deck and the criteria/noise floor to be used to evaluate potential susceptibility of each system.

3.2. Phase II details shall include the following:

- a. Procedure used for the measurement of Hull Generated IMI
- b. EMI matrix listing all Phase II monitored equipment (receivers) in the left column and all active transmitting systems listed in the upper row with an identification mark placed in the matrix to identify systems that operate in the same or adjacent bands.
- c. A narrative text of test sequence including methods of communication between test director and equipment operators/monitors. The script shall describe sequence of equipment turn on, Identify frequencies and modes of equipment operation and de-energizing sequence.
- d. Data sheets for each operator/monitor that shall identify each mode of operations and EMI identification criteria.
- e. A list of electrical machinery that will be operated while underway during Phase II shall include fuel/lube pumps, cooling fans, fire pumps, motor controllers, air compressors

3.3 The procedure shall include a list of below deck functions to be monitored and shall also identify the following:

- a. Alarm Panels
- b. Tank Level Indicators
- c. Pressure Indicators
- d. Flow Rate Indicators
- e. Interior Voice Communications
- f. Video Monitors
- g. Below Deck Wireless Sensors
- h. Other Suspected Victim Equipment

4. End of DI- EMCS-81782