Special Requirements for Various Categories of Service Suppliers

1. FIRMS ENGAGED IN THICKNESS MEASUREMENTS ON SHIPS

1.1 Extent of engagement – Thickness measurement of structural material of ships

1.2 Supervisor – The responsible supervisor shall be qualified according to a recognized National or International industrial NDT standard (e.g., EN 473 level II or ISO-9712 level II).

1.2 Operators – The Operators carrying out the measurements shall be certified to a recognized National or International industrial standard (e.g., EN 473 level I or ISO-9712 level I) and shall have adequate knowledge of ship structures sufficient to elect a representative position for each measurement.

1.4 Equipment – On coated surfaces, instruments using pulsed echo technique (either with oscilloscope or digital instruments using multiple echoes, single crystal technique) are required. Single echo instruments may be used on uncoated surfaces, which have been cleaned and grinded.

1.5 Procedures – Documented work procedures are at least to contain information on survey preparation, selection and identification of test locations, surface preparation, protective coating preservation, calibration checks, and report preparation and content.

1.6 Verification – The supplier must have the PMDS-Surveyor's verification of each separate job, documented in the report by his signature.

1.7 Reports – Reports are to be submitted in standard industry forms, and they are to indicate at least the following information:

a. The location of measurement
b. The original thickness
c. The measured thickness
d. The amount of diminution.

2. FIRMS ENGAGED IN TIGHTNESS TESTING OF HATCHES WITH ULTRASONIC EQUIPMENT

2.1 Extent of engagement- Ultrasonic tightness testing of hatches

2.2 Operators – The operator is to have the following qualifications:

2.2.1 Have knowledge of different hatch designs, their functioning and sealing features.
2.2.2 Have experience with operation and maintenance of different hatch designs.
2.2.3 Be able to document theoretical and practical training onboard in using ultrasonic equipment specified.

2.3 Equipment – The Ultrasonic Equipment to be used shall be Type Approved by a Recognized Organization. It shall be demonstrated for the PMDS-Surveyor that the Equipment is fit for the purpose of detecting leakages in Hatch Covers.

2.4 Procedures – The supplier shall have documented work procedures which shall include the manual for the ultrasonic equipment specified, its adjustment, its maintenance, and its operation and approval criteria.

3. FIRMS CARRYING OUT IN-WATER SURVEY OF SHIPS

3.1 Extent of engagement– In-Water Survey of Ships

3.2 Training of personnel – The supplier is responsible for the qualification of its divers and the diving equipment utilized when carrying out survey. Knowledge of the following shall be documented:

- 3.2.1 Ship's underwater structure and appendages, tail shaft, propeller, rudder and its bearings
- 3.2.2 Underwater thickness gauging and non-destructive testing in accordance with a recognized National or International industrial NDT standard.
- 3.2.3 Bearing clearance measurements on rudders and tail shaft.
- 3.2.4 Underwater video monitoring with TV-monitors on deck, as well as still picture work.
- 3.2.5 Operation of under-water communication system • Special equipment and tools like hull cleaners, grinders, cutters, etc.

3.3 Plan for training of personnel in the reporting system, minimum Rule requirements for relevant ship types, ship's underwater structure, measuring of bearing clearances, the recognition of corrosion damage, buckling and deteriorated coatings, etc. shall be included.

3.4 Supervisor – The supervisor shall be qualified according to the supplier's general requirements and shall have experience as a diver carrying out surveys.

3.5 Divers carrying out survey – The diver carrying out the survey shall have had experience as an assistant diver carrying out survey (minimum 10 different assignments).

3.6 Equipment – The following shall be available:

- 3.6.1 Closed circuit colour television with sufficient illumination equipment
- 3.6.2 Two-way communication between diver and surface staff
- 3.6.3 Video recording device connected to the closed-circuit television.
- 3.6.4 Still photography camera
- 3.6.5 Equipment for carrying out thickness gauging, non-destructive testing and measurements, e.g., clearances, indents, etc., as relevant to the work to be performed.
- 3.6.6 Equipment for cleaning of the hull

3.7 Procedures and guidelines – The supplier shall have documented operational procedures and guidelines for how to carry out the survey and how to handle the equipment. These shall include:

- 3.7.1 Two-way communication between diver and surface
- 3.7.2 Video recording and closed-circuit television operation
- 3.7.3 Guidance of the diver along the hull to ensure complete coverage of the parts to be surveyed.

3.8 Verification – The supplier must have the PMDS-Surveyor's verification of each separate job, documented in the report by his signature.

4. FIRMS ENGAGED IN SURVEYS AND MAINTENANCE OF FIRE EXTINGUISHING EQUIPMENT AND SYSTEMS

4.1 Extent of engagement – The supplier shall have a professional knowledge of fire theory, firefighting, and fire extinguishing appliances sufficient to carry out the surveys and to make the necessary evaluations of the condition of the equipment.

5. FIRMS ENGAGED IN SERVICE OF INFLATABLE LIFERAFTS, INFLATABLE LIFEJACKETS, HYDROSTATIC RELEASE UNITS, INFLATABLE RESCUE BOATS

5.1 Extent of engagement – Servicing of inflatable life rafts, inflatable lifejackets, hydrostatic release units and/or inflatable rescue boats

1.1 Equipment and premises – IMO Resolution A.761 (18), as amended, gives recommendations on conditions for the approval of servicing stations for inflatable life rafts which shall be observed as relevant.

5.3 Procedures and Instructions – The Supplier shall have documented procedures and instructions for how to carry out the service of equipment. The procedures should include requirements to record the nature and extent of damage to and defects found in equipment during servicing and repair work. This data shall be made available to the PMDS-Surveyors upon request.

5.4 The Supplier shall provide evidence that it has been authorized or licensed to service the particular makes and models of equipment for which approval is sought by the equipment's manufacturer.

5.5 PMDS-Head Office is authorized by the Panama Maritime Authority to recommend an organization and its personnel appropriately trained, to perform the functions of the manufacturer and manufacturer's certified personnel only if manufacturer certified facilities are not available; in this case, a Certification Letter of Recommendation can be issued previous Authorization of the PMDS-Head Office. PMDS forms for the Certification Letter of Recommendation are indicated in section 8, paragraphs 8.11 & 8.11of this Instructive.

6. FIRMS ENGAGED IN THE SERVICING AND TESTING OF RADIO COMMUNICATION EQUIPMENT AND FIRMS OR PERSONS ENGAGED IN SAFETY RADIO SURVEYS (RADIO TECHNICIAN)

6.1 Extent of engagement–Inspection, testing, and/or measurement of radio equipment aboard Ships compliance with SOLAS regulations

6.2 Reference documents – The supplier shall have access to SOLAS-1974, as amended, IMO Resolution A.789 (19): Specification on the Survey and Certification functions of Recognized Organizations acting on behalf of the Administration, ITU Radio Regulations, and IMO Performance Standards as well as relevant parts, if any, of the PMDS-Head Office Guidelines.

6.3 Radio Technician or Radio Inspector – The Inspector shall have an education from a technical school and also have experience as a Radio Inspector and should preferably hold a General Operator's Certificate (GOC). The Inspector carrying out the inspection shall have passed the internal training of the supplier in Radiotelephony, GMDSS, and Initial, Annual and Renewal Safety Radio Surveys, as applicable.

6.4 Equipment

6.4.1 The supplier shall have the major and auxiliary equipment required for correctly performing the inspection. A record of the equipment used shall be kept. The record shall contain information on the manufacturer and type of equipment, and a log of maintenance and calibration.

6.4.2A Standard which is relevant to the radio equipment to be tested shall be available for the equipment and shall be cited in the inspection report.

6.4.3 For equipment employing software in conjunction with testing/examination, this software shall be fully described and verified.

6.5 Minimum required instruments:

6.5.1 Equipment for measuring frequency, voltage, current and resistance.
6.5.2 Equipment for measuring output and reflect effect on VHF and MF/HF
6.5.3 Equipment for measuring modulation on MF/HF and VHF (AM, FM, PM)
6.5.4 Acid tester for checking specific gravity of lead batteries.
6.5.5 Tester for checking of correct output from Free-Float Satellite EPIRB

6.6 Procedures and instructions – The supplier shall have documented procedures and instructions for how to carry out testing and examination of radio equipment. Procedures and instructions for operating each item of the testing/inspection equipment shall also be kept and be available at all times.

7. FIRMS ENGAGED IN SURVEYS AND MAINTENANCE OF SELF -CONTAINED BREATHING APPARATUS

7.1 The supplier shall document and demonstrate that it has knowledge of the equipment and systems sufficient to carry out the inspections and testing of self-contained breathing apparatus to identify standards and to make the necessary evaluation of the condition of the equipment.

8. FIRMS ENGAGED ON INSPECTION AND TESTING OF INVENTORY LIST OF HAZARDOUS MATERIALS

8.1 Extent of engagement – Firms engaged on Inspection and testing of inventory list of hazardous materials.

8.2 The supplier shall have a valid accreditation as an IHM Expert. The laboratory for testing samples should have a valid accreditation for its purposes it.

8.3 Reference documents - the supplier shall have access to 1025 Guidelines for the Development of the Inventory of Hazardous Materials (IHM) developed by IMO through resolution MEPC.269 (68).

8.4 Procedures and instructions – The supplier shall have documented procedures and instructions for how to carry out testing and examination of Hazardous Materials. Procedures and instructions for operating each item of the testing/inspection equipment shall also be kept and be available at all times.

9. FIRMS ENGAGED ON SERVICING OF IMMERSION SUITS, THERMAL PROTECTIVE AIDS, CHEMICAL PROTECTIVE SUITS

9.1 Extent of engagement – Servicing of immersion suits, anti-exposure suits, thermal protective aids, chemical protective suits, for Statutory purposes.

9.2 The supplier shall have adequate knowledge of the applicable international requirements (International Convention on the Safety of Life at Sea (SOLAS), 74/78, as amended, Reg. III/4 and III/6; International Life-Saving Appliance (LSA) Code Ch. II; IMO MSC/Circular 1047 and MSC/Circular 1114); and − be able to document theoretical and practical training in using equipment specified.

9.3 Reference documents - The supplier shall have access to:

9.3.1 IMO International Convention on the Safety of Life at Sea (SOLAS), 74/78, Ch. III, Pt. B, Reg. 20 – Operational readiness, maintenance and inspections.

9.3.2 IMO International Life-Saving Appliance (LSA) Code, Chapter I – Personal Life-Saving Appliances.

9.3.3 IMO MSC/Circular 1114 – Guidelines for Periodic Testing of Immersion Suit and Anti-Exposure Suit Seams and Closures. 9.3.4 IMO MSC/Circular 1047 – Guidelines for Monthly Shipboard Inspection of Immersion Suit and Anti-Exposure Suits by Ships' Crew.

9.4 Procedures and instructions- The supplier shall have documented procedures and instructions for how to carry out the servicing of immersion suits, thermal protective aids and chemical protective suits. Procedures and instructions shall include all items of MMC-144 and shall be kept and be available at all times.

The equipment to be used should contain sufficient and appropriate spares and tools are to be available as applicable.