



Guide for Certification of Oil Spill Recovery Equipment

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Foreword

This Guide has been prepared to provide a framework for the assessment and certification of equipment for oil spill clean up. No representation is made as to the actual performance in a real spill situation. The Bureau makes no warranties regarding the efficacy or adequacy of the equipment beyond those expressly stated in the reports covering witnessed tests. It is expected that all equipment will be operated as recommended by the respective manufacturers.

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Guide for Certification of Oil Spill Recovery Equipment

Section 1 General

1.1 Application

This Guide is applicable to equipment engaged in oil spill recovery and clean-up.

1.2 Scope

All equipment which is in compliance with the requirements of this Guide will be listed in the ABS List of Certified Oil Spill Recovery and Cleanup Equipment along with the design identification number, serial number and date of most recent survey (see 4.3 through 4.5).

1.3 Certification Basis

Certification will be carried out on the basis of a national, international, governmental, industry or manufacturer's published standard. The standard specified by the manufacturer will be noted in the List.

1.4 Registration

1.4.1 Initial Registration

A unique design identification number will be assigned to each equipment design upon satisfactory completion of design review, plant audit, equipment inspection and witnessing of any applicable prototype testing. This number and the manufacturer's serial number are to be indelibly marked on the item and are to be supplied to the Bureau by the manufacturer for publication in the List.

1.4.2 Continuation of Registration

Continued inclusion in the List will depend upon continued compliance with the requirements of this Guide.

1.5 Drawings and data to be submitted

The following drawings and data as applicable are to be submitted for review prior to commencement of audits, inspections and tests:

- a A description of the equipment.
- b Standard to which certification is being requested.
- c Schematic diagram of control, alarm and monitoring system.
- d Arrangement and details of the storage method including location of equipment or any limitations for storage.
- e Wiring diagram and arrangement and details of power supply for heating or dehumidification, if applicable.
- f Manufacturer's specifications, drawings and data for compressors, motors, control, alarm and monitoring system.
- g Arrangements for pressure and vacuum relief in any pressurized system.

- h Details of pressure vessels as required by Section 8, Division I of the ASME Boiler and Pressure Vessel Code, or other applicable standard.
- i Piping system arrangement and details
- j Details of explosion proof and intrinsically safe equipment with copies of certification documents.
- k Operations Manual (see Section 6).

1.6 Design

All equipment is to be designed on the basis of a recognized standard. Sufficient details are to be submitted to permit review to determine compliance with the selected standard.

1.7 Plant Audit

The plant where the item is produced or where the final assembly is carried out is to be audited in accordance with Section 3 to ensure the capability to produce the item under consideration.

1.8 Construction

All equipment is to be constructed using good commercial practice and workmanship.

1.9 Capacity

Capacity noted in the List will be as witnessed during prototype tests conducted in accordance with the specified standard.

1.10 Availability

All certified equipment is to be so constructed and stored as not to require removal from stand-by service for maintenance purposes for a period exceeding two (2) weeks per year.

1.11 Portability

Any piece of equipment which can be handled by two persons may be described as being "portable".

Section 2 Storage

All certified equipment is to be stored in accordance with the following requirements:

2.1 Protection from Seizure

All equipment is to be stored so as to prevent seizing of moving parts. Preservatives which require extensive cleaning of the equipment prior to use are to be avoided.

2.2 Protection from Corrosion

All equipment is to be stored so as to resist rusting or deterioration due to corrosion. Relief devices are to be protected from inadvertent alteration of relief setting.

2.3 Non-metallic Components

Materials sensitive to temperature are to be stored in locations where temperature fluctuations are within the manufacturer's stated limits. Rubberized fabric is to be folded and stored in accordance with the manufacturer's recommendations such that creases formed are not deleterious to the intended purpose, nor would cause deterioration in performance.

2.4 Protection from Biological Attack

Items susceptible to biological attack are to be protected from such attack. Any chemical agents used are to be approved for such use by the cognizant authorities.

2.5 Communication Equipment

Portable radios and other communications equipment are to be kept fully charged. Spare batteries are to be provided.

2.6 Source of Electrical Power

Electrical generators are to be stored so that their prime mover, electrical parts and protective devices are not subjected to excessive moisture or heat.

2.7 Deployment

All equipment is to be so stored that it is capable of being rapidly deployed. Time taken to move the equipment from the storage location to transport is to be minimized.

Section 3 Quality Assurance

Equipment manufacturers have the option of complying with either Option A or Option B as presented below.

3.1 Type Approval (Option A)

The manufacturer is to comply with the provisions of the ABS Type Approval Program. The Type Approval Program contains the following procedures or steps:

- a Application including submission of drawings and supporting data and calculations.
- b Documentation review.

- c Witness of type tests of equipment (if required).
- d Audit of the following quality system elements:
 - 1 Management.
 - 2 Drawing/Documentation Control.
 - 3 Receiving Inspection.
 - 4 Manufacturing/Assembly Inspection.
 - 5 Testing.
 - 6 Identification.
 - 7 Metrology.
 - 8 Record Keeping.

Certification of equipment under the Type Approval Program is subject to a survey of the manufacturer's quality control system on an annual basis. Also see 5.2.

3.2 ISO 9000 Certified Quality System (Option B).

The manufacturer is to maintain a certified quality system in accordance with either ISO 9001 or ISO 9002 as applicable to its operations.

Certification is to be performed by an accredited certifier whose scope of accreditation encompasses oil spill recovery equipment. The accrediting organization is to be acceptable to ABS.

The manufacturer is to maintain evidence of certification and retain audit and survey records available for review upon the request of ABS.

Also see 5.3.

Section 4 Inspections and Surveys

4.1 Witnessing of Prototype Testing

The first item of each design type or a series is to be tested to determine its efficacy. These tests are to be carried out in accordance with the requirements of the specified standards and are to be witnessed by a Bureau Surveyor.

4.2 Inspection of Production Units

Each item produced is to be inspected by the manufacturer, as designated by the quality system required in Section 3, to verify compliance with the approved plans. The design identification number is to be applied to it in the presence of the Inspector.

4.3 Initial Storage Survey

A survey is to be conducted at the initial storage of equipment to verify that manufacturer's recommendations as well as the applicable requirements in Section 2 have been carried out. Marking of the design identification number and serial number is also to be verified. The date of this survey will be published with the initial listing of the equipment as per 1.2.

4.4 Annual Survey

Each item is to be visually examined in its storage location. Moving parts are to be tried by hand to ensure that they are free to move. Electrical parts need not be energized if the Surveyor is satisfied by their condition. Engines are to be started and run for at least fifteen minutes. All annual maintenance recommended by the manufacturer is to be carried out.

4.5 Special Periodic Survey

A Special Periodic Survey is to be carried out every five years. At least the following is to be carried out at each Special Periodic Survey.

- a Folded fabric items are to be laid out and inspected by the manufacturer's representative. They are then to be repackaged to the satisfaction of the manufacturer's representative.
- b Pumps are to be tried out under simulated working conditions for a period of at least one hour.
- c Engines are to be maintained as per manufacturer's recommended schedule. They are to be operated under full load for a period of at least one hour.
- d Electrical equipment is to be megger tested. Any insulation readings below 0.5 megohm are to be corrected.

Section 5 Certificates

5.1 General

Review of design documentation and surveys during and after construction are conducted by the Bureau to verify to itself and to its committees that an item of material, equipment or machinery is in compliance with this Guide and to the satisfaction of the attending Surveyor. All certificates and reports are issued solely for the use of the Bureau, its committees, its clients and other authorized entities.

Upon satisfactory completion of Bureau review of the required drawings and data, inspection of the component (including prototype testing) and audit of plant, as applicable, a certificate will be issued. The certificate will list the standard(s) used as the basis for certification, design identification number, manufacturer's serial number, approved capacity, storage restrictions and quality assurance standard, as applicable.

5.2 Certificate of Type Approval

For manufacturers complying with Option A (see 3.1), a Certificate of Type Approval will be issued upon satisfactory completion of the design review of the drawings and data indicated in 1.5, prototype testing required by 4.1 and plant survey required by 3.1. This certificate will indicate the standards to which certification of the equipment was based along with any limitations.

5.3 Certificate of Equipment Approval

For manufacturers complying with Option B (see 3.2), a Certificate of Equipment Approval will be issued upon satisfactory completion of the design review of the drawings and data indicated in 1.5 and prototype testing required by 4.1. This certificate will indicate the standards to which certification of the equipment was based along with any limitations.

5.4 Certificate of Initial Storage

Upon completion of the Initial Storage Survey in accordance with 4.3, a certificate will be issued listing the equipment along with the design identification numbers and serial numbers. The location and condition of the equipment are to be noted by the Surveyor.

5.5 Certificate of Annual Survey

Upon completion of the Annual Survey, a certificate will be issued to indicate that the requirements of 4.4 have been satisfied.

5.6 Certificate of Special Periodical Survey

Upon completion of the Special Periodical Survey, a certificate will be issued to indicate that the requirements of 4.5 have been satisfied.

Section 6 Operations Manual

All equipment is to be accompanied by an operations manual for the guidance of the operating personnel. As a minimum, the operations manual is to include the following information.

- a** Description of the equipment or system including capacities, ratings or limitations, as applicable.
- b** Diagrammatic rendition of the equipment or system.
- c** Procedures for safe operation of the equipment.
- d** A description of training required by the operating personnel.
- e** Manufacturer's recommended storage procedures and limitations.
- f** Manufacturer's suggested maintenance schedule.
- g** Description of troubleshooting and repair procedures and facilities, including fault finding.
- h** Description of safety features or precautions.