

U.S. Department
of Transportation

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**United States
Coast Guard**

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NVIC 10-82, CH-2
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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 10-82, CHANGE 2

Subj: CH-2 to NVIC 10-82, "Acceptance of Plan Review and Inspection Tasks Performed by the American Bureau of Shipping (ABS) for New Construction or Major Modification of U. S. Flag Vessels".

1. **PURPOSE.** This Circular transmits a change to NVIC 10-82 dated 18 May 1982. The procedures contained in Enclosures (1) and (2) are modified as a result of over 6 years experience in conducting plan review and inspections under the ABS and Coast Guard Memorandum of Understanding dated 27 April 1982.
2. **DIRECTIVES AFFECTED.** The original issue of NVIC 10-82, dated 18 May 1982, and Change 1, dated 30 April 1985, are superseded.
3. **DISCUSSION.**
 - a. The Coast Guard and ABS have for many years jointly studied ways to improve efficiency of plan review and inspection of classed vessels. NVIC 10-82 implemented the provisions of the 27 April 1982 Memorandum of Understanding between the Coast Guard and ABS. The Circular also incorporated the provisions of previous Circulars, and further broadened the cooperative efforts of the Coast Guard and ABS. Change 1 to the NVIC was published on 30 April 1985 and permitted ABS to perform additional plan review and inspection items on behalf of the Coast Guard.
 - b. A principal objective of this Circular is to simplify procedures for the shipbuilding industry and ship owners. To this end, and where reasonable, information, plans, and documents will be exchanged directly between Coast Guard and ABS rather than placing a logistical burden on the marine industry.
 - c. Coast Guard acceptance of ABS plan review and inspection is predicated on the basis that:
 - (1) Such actions are in accordance with applicable international convention requirements, and U.S. laws and regulations;
 - (2) Decisions concerning equivalency to Coast Guard regulations will be made by the Coast Guard; and
 - (3) Resolution of apparent conflicts in or among Coast Guard regulations, federal statutes, and international treaties will be made by the Commandant.

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- d. ABS will advise the submitter at the beginning of plan review by a letter stating that plan review and inspection are being conducted in accordance with this Circular.
 - e. Where the procedures of this Circular are applicable, approvals and inspections performed by ABS will normally be accepted by the Coast Guard as part of the certification process without attendance by Coast Guard personnel. The OGMI should not normally participate in inspections performed by ABS under the provisions of this Circular, except as provided elsewhere in this Circular.
 - f. For modifications or conversions in which a large section of a vessel such as a midbody, is modified, replaced or added, the new construction portion may be considered to fall under the provisions of this Circular. Determination as to the applicability of this Circular to modifications or conversions not involving new sections will be made by either the OGMI or Commandant (G-MVI) as specified in Enclosure (2) of this Circular. Repairs to the existing portions of the vessel are not included.
 - g. When performing plan review or inspection functions on behalf of the Coast Guard, it is understood that ABS will be applying all regulations, interpretations, and policies of the Coast Guard that would normally be applied to U.S. flag vessels. Meeting requirements for class only will not normally fully satisfy requirements for certification by the Coast Guard.
 - h. This Circular applies only to vessels classed by ABS. Therefore, should the vessel owner or shipbuilder terminate the request for ABS classification prior to issuance of class certificates, the Coast Guard may require certain inspections and plan review by Coast Guard personnel. In such cases, the OGMI will determine which approvals and inspections made by ABS are to be accepted by the Coast Guard.
 - i. The Coast Guard recognizes that services which are in addition to classification requirements may be subject to additional fee assessments by ABS.
 - j. The Coast Guard will continue to take steps to establish appropriate liaison with ABS, and to maintain oversight to the degree necessary to fulfill statutory mandates, and provide for consistent and uniform application. The Coast Guard will make every effort to be responsive to ABS in matters of interpretation, policy, or appeal decisions.
 - k. Additional instructions for implementing this Circular are contained in Enclosure (2)
4. APPEALS. Appeals are addressed in 46 CFR Part 1, COMDTINST 16710 Series and further explained in a separate NVIC.
 5. SUMMARY OF CHANGES.
 - a. Enclosure (1).
 - (1) Plan review and inspection responsibilities previously shared by ABS and the Coast Guard have been distributed so that all plan review and inspection will be conducted by either ABS or the Coast Guard. Section 1 contains a revised list of plan review and inspection areas delegated to ABS. Section 2 contains examples of those areas retained by the Coast Guard.

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- (2) Cargo gear has been deleted from the list of delegated plan review and inspection areas since the regulations authorize ABS to perform this function (see 46 CFR 31.37 and 91.37). Lifting gear not classified as cargo gear, including foundations and installation tests, has been added as item 1.b.(21).
- (3) Section 1 plan review and inspection items previously grouped under the heading 'General', have been distributed under the appropriate heading, 'Hull' or 'Machinery'.

b. Enclosure (2).

- (1) Plan review and inspection procedures have been revised to reflect the elimination of shared plan review and inspection, the relocation of ABS World Headquarters and the consolidation of Merchant Marine Technical (mmt) offices into the Marine Safety Center (MSC).
- (2) Plan stamping procedures for plans reviewed by ABS on behalf of the Coast Guard have been added. These procedures were originally contained in an ABS letter to MSC dated 23 March 1987 and are included here for documentation purposes. See paragraph 3.a.(4).
- (3) Coast Guard plan review procedures have been amended to include a requirement to provide ABS with copies of correspondence related to plans reviewed by the Coast Guard. See paragraph 3.b.(5).
- (4) Determining the applicability of this Circular is now the primary responsibility of the OCMI as explained in paragraph 3.b.(3).

6. IMPLEMENTATION. Remove the original issue of NVIC 10-82 and Enclosures (1) and (2), CH-1, and insert NVIC 10-82, CH-2 with Enclosures (1) and (2), CH-2.



- End: (1) Application of Coast Guard Requirements for Certification to ABS Classed Vessels Under Construction
(2) Instructions for Implementation

Non- Standard Distribution:

B:c MLCPAC, MLCLANT (6 extra).

C:e New Orleans (90), Baltimore (45); San Francisco Bay (40); Philadelphia, Port Arthur, Honolulu, Puget Sound (35); Miami, Mobile, Long Beach, Morgan City (25); Hampton Roads, Jacksonville, Portland OR (20); Boston, Portland ME, Charleston, Galveston, Anchorage (15); Cleveland (12); Louisville, Memphis, Paducah, Pittsburgh, St. Louis, Savannah, San Juan, Tampa, Buffalo,

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Chicago, Detroit, Duluth, Milwaukee, San Diego, Juneau, Valdez (10); Guam, Providence, Huntington, Wilmington, Corpus Christi, Toledo (5).

C:m New York (70); Houston (25); St. Ignace (5); Sturgeon Bay (4).

D:l CG Liaison Officer MILSEALIFTCOMD (Code M-4E4), CG Liaison Officer RSPA (DHM-22), CG Liaison Officer JUSMAGPHIL, CC Liaison Officer MARAD (MAR-720.1) (1).

APPLICATION OF COAST GUARD REQUIREMENTS FOR CERTIFICATION
TO ABS CLASSED VESSELS UNDER CONSTRUCTION

As authorized by 46 U.S.C. 3316, the Coast Guard will accept ABS plan review and inspection for compliance with Coast Guard rules and regulations for most classed vessels undergoing new construction or major modification (see Enclosure (2) of this circular for exceptions). On existing tank vessels, ABS plan review and inspection will be accepted for inert gas and crude oil washing systems. Plan review and inspection performed by ABS on behalf of the Coast Guard will replace those actions by the Coast Guard. Areas where ABS solely performs plan review and inspections on behalf of the Coast Guard are listed under Section 1 below. In these areas, Coast Guard involvement consists primarily of liaison with ABS, policy determinations, oversight, and action on appeals. Copies of all ABS review letters and the associated plans will be forwarded to the Coast Guard as explained in Enclosure (2).

Inspection and plan review responsibility for some areas of new construction and major modification will be retained by the Coast Guard. Examples of these areas are listed in Section 2 below. As explained in Enclosure (2), the Coast Guard may on occasion perform plan review and inspection of items listed in Section 1. When plan review and inspection is performed by the Coast Guard, the scope of the review and inspection is for certification purposes only; classification requirements may necessitate separate ABS plan review and survey actions.

Some items in Section 1 and 2 required joint plan review and inspection, under Change 1 of this circular. This procedure was confusing and resulted in unnecessary delays. Following discussions with ABS, the Coast Guard has determined that joint plan review is no longer needed or desired and distributed the shared plan review responsibilities between ABS and the Coast Guard, as shown in this enclosure.

The application of any regulation which requires the approval, judgment, satisfaction, or opinion of the OCMI will remain the sole responsibility of the cognizant OCMI. Nothing in this NVIC is intended to change or modify the authority or responsibilities of the cognizant OCMI.

Interpretation of regulations during plan review is the responsibility of MSC. At the local level, policy determinations and interpretation of regulations are the responsibility of the cognizant OCMI. It is essential that the proper implementation of such local level policies be coordinated between ABS and the Coast Guard. General policy determinations will be made by Commandant (G-MTH for plan review issues or G-MVI for inspection issues) and relayed to MSC and ABS World Headquarters, as appropriate.

Minor items not specifically mentioned in Sections 1 or 2 below, such as design details, will be coordinated between ABS and the Coast Guard through ABS World Headquarters and Commandant (G-MTH or G-MVI). Major items not listed are generally considered to remain the responsibility of the Coast Guard.

1. PLAN APPROVAL AND INSPECTION BY ABS

a. Machinery Items.

- (1) Cargo hose
- (2) Hydrostatic testing; e.g., tanks, boilers, pressure vessels, and piping
- (3) Inert gas Systems (IGS)
- (4) Crude oil washing (COW) systems, including COW manuals
- (5) Turbines
- (6) Internal combustion engines

- (7) Gears
- (8) Electrical generators and motors
- (9) Propellers and propeller shafts and bearings
- (10) Pumps and compressors
- (11) Steering systems, including equipment, controls, power sources, etc.
- (12) Hydraulic cylinders and actuators
- (13) Installation of thermal fluid heaters
- (14) Pressure relief devices (except for general approvals)
- (15) Hot water heaters listed under Underwriters' Laboratories standards UL #174 or UL #1453
- (16) Remote shutdowns and pump controls
- (17) Elevators and dumbwaiters
- (18) LPG and CNG for heating and cooking
- (19) Installation of pressure vessels bearing the ASME "U" or "UM" stamp (except for Class I-L and II-L pressure vessels and pressure vessels containing dangerous substances)
- (20) Installation of boilers
- (21) Finned tube heat exchangers
- (22) Potable water tanks in accordance with Public Health Service standards

b. Hull Items.

- (1) Conventional steel hull structures
- (2) Compartment tightness tests
- (3) Material affidavits for hull structural steel
- (4) Verification of draft marks
- (5) Loading information for tank vessels over 300 feet in length (46 CFR 31.10-32)
- (6) MODUs resting on the sea bed (strength and overturning forces, 46 CFR 174.050)
- (7) Pinnacle grounding condition for Subchapter D (46 CFR 32.63-20) and Subchapter D (46 CFR 151.10-20(b)(2)) barges
- (8) Anchors and anchoring equipment
- (9) Independent fuel or cargo tanks and supports
- (10) Welding.
 - (a) Procedure approvals
 - (b) Performance qualifications
 - (c) Nondestructive testing
 - (d) Heat treatment
- (11) Sea chests and sea valves
- (12) Structural fire protection (including checking 46 CFR Subchapter Q approval certification)
- (13) Air conditioning and ventilation ducting
- (14) Structural adequacy and penetrations of watertight boundaries
- (15) Fixed permanent ballast installations
- (16) Lifeboat/liferaft davit foundations and winch foundations
- (17) Crew accommodations and escape routes
- (18) Pollution prevention systems - including tank outflow calculations and segregated ballast tank systems
- (19) Issuance of SOLAS Safety Construction Certificates
- (20) Construction portfolios for mobile offshore drilling units (46 CFR 107.305) and vessels constructed of high strength steels

- (21) Lifting gear other than cargo gear covered by 46 CFR 31.37 and 91.37 (including associated foundations and installation tests)
- (23) Navigation light placement drawings
- c. Subdivision and Stability. See NVIC 3-84.
- d. Electrical Systems and Equipment
 - (1) Elementary one-line diagrams
 - (2) Cables
 - (3) Storage battery installations
 - (4) Transformers
 - (5) Circuit breaker and switch ratings
 - (6) Overcurrent device setting or rating, and coordination analysis
 - (7) Circuit breaker interrupting capacity
 - (8) Short circuit current computations
 - (9) Electrical plant load analysis
 - (10) Elementary and isometric or deck wiring plans
 - (11) Electrical equipment lists with manufacturers shown
 - (12) Electric power operated lifeboat winches
 - (13) Electrical systems for watertight doors (inspection only)
 - (14) Fire screen door holding systems
 - (15) Lighting system wiring plans (including embarkation decks for lifesaving appliances)
 - (16) Switchboards and switchboard equipment
 - (17) Metering and automatic switchgear
 - (18) Propulsion control and bus transfer switchgear
 - (19) Motor circuits and controllers
 - (20) Electrical industrial systems on mobile offshore drilling units
 - (21) Open cable splices
 - (22) Signaling lights
 - (23) Shore connection boxes
 - (24) Electric oil immersion heaters
 - (25) Submersible motor-driven bilge pumps
 - (26) Engine order telegraphs
 - (27) Shaft speed and thrust indicator systems
 - (28) Rudder angle indicators
 - (29) Steering failure alarm systems
 - (30) Steering gear circuits
 - (31) Steering motor controllers
 - (32) Equipment. (To be reviewed and inspected to referenced standards or military specifications.)
 - (a) Circuit
 - (b) Switches
 - (c) Lighting fixtures
 - (d) Cooking equipment
 - (e) Motor operated appliances
 - (f) Water coolers
 - (g) Air heaters

- (h) Busways
- (i) Outlet and junction boxes

- (33) General alarm systems
- (34) Plan review of electrical equipment in hazardous locations under 46 CFR 111.105
- (35) Sound powered telephones
- (36) Inspection of electrical installations in hazardous locations

e. Pining.

(1) Pining Systems

- (a) Systems conveying oil (fuel, cargo, lubricating, or heat transfer oil)
- (b) Steam
- (c) Combustion exhaust
- (d) Safety and relief valve escape
- (e) Boiler feed and blowoff
- (f) Bilge
- (g) Ballast (except semi-submersible mobile offshore drilling units)
- (h) Tank vent and overflow
- (i) Sounding
- (j) Overboard discharge and shell connections
- (k) Engine cooling water including keel coolers
- (l) Inert gas
- (m) Crude oil washing and salt water tank cleaning
- (n) Sampling
- (o) Instrument
- (p) Fluid power and control
- (q) General refrigeration and air conditioning
- (r) Compressed air
- (s) Potable water
- (t) Sanitary
- (u) Hot water heating
- (v) Industrial piping on mobile offshore drilling units
- (w) Thermal and dynamic stress analysis

(2) Piping Components. (Components for the systems listed in 1.e.(1) above may be approved by ABS for specific installations only, with the exception of nonmetallic flexible hose assemblies, items which must comply with 46 CFR Subchapter Q, products of unusual design or limited application, and valves employing resilient material.)

- (a) Valves
- (b) Pipe joining fittings
- (c) Fluid conditioner fittings
- (d) Special purpose fittings
- (e) Flexible couplings of the compression or slip-on type
- (f) Foreign manufactured products
- (g) Bolting
- (h) Sleeve coupled and proprietary joints

- (i) Pressure and temperature gauging
- (3) Installation and Testing.
 - (a) Pipe hangers, supports, and restraints
 - (b) Pipe lagging and insulation
 - (c) Hydrostatic and performance testing

2. PLAN APPROVAL AND INSPECTION BY THE COAST GUARD

a. General Items.

- (1) All plan review and inspection for Small Passenger (46 CFR Subchapter T) vessels
- (2) Vessel specifications
- (3) General arrangement plans
- (4) Sea trials
- (5) Equipment, materials, or systems being considered on an equivalency basis not of a routine nature
- (6) Any determination where the classification of a hazardous area is in doubt
- (7) All structures other than conventional steel hull vessels
- (8) Assumed environmental conditions for mobile offshore drilling units
- (9) Any area identified by the Coast Guard as being of particular concern
- (10) Operating manuals for Mobile Offshore Drilling Units
- (11) Approved equipment under 46 CFR Subchapter Q and equipment required to be approved by the Commandant
- (12) Determination of vessel manning levels
- (13) Visibility from the navigating bridge
- (14) Inspections for the issuance of International Oil Pollution Prevention (IOPP) Certificates
- (15) Issuance of Certificates of Inspection, SOLAS Safety Equipment Certificates, IMO Certificates of Fitness, International Oil Pollution Prevention Certificates, and IMO MODU CODE Certificates
- (16) Areas identified during review of vessel specifications to be of particular concern to the Coast Guard

b. Lifesaving and Fire Protection Systems and Equipment

- (1) Approval of fire control plans
- (2) Fire protection and detection equipment
- (3) Fire extinguishing and detection systems
- (4) Lifesaving equipment

c. Electrical, Machinery and Miscellaneous Systems and Equipment.

- (1) Review and witnessing of automation test procedures (except auxiliary heating boilers and thermal fluid heaters)

- (2) Automation of machinery spaces. Review of automation system for requested engineroom manning (automated or centrally controlled systems for propulsion or auxiliary machinery, with associated logic, failure analysis, and piping or electrical equipment)
 - (3) Nuclear systems
 - (4) Ballast piping and control systems for semi-submersible mobile offshore drilling units
- d. Cargo Systems and Equipment.
- (1) Cargo systems conveying other than oil
 - (2) Cargo and vapor piping, leak detection, temperature-pressure control, and cargo containment systems for liquefied gas and hazardous chemical tankships and barges
- e. Boilers and Pressure Vessels.
- (1) USCG stamping of pressure vessels and boilers
 - (2) Sealing of boiler safety valves
 - (3) Class I-L and II-L pressure vessels and pressure vessels containing dangerous substances
 - (4) Shop inspections and plan review of boilers and pressure vessels (except by commissioned Authorized Inspectors under the ASME Boiler and Pressure Vessel Code) through final erection of the boiler or pressure vessel

INSTRUCTIONS FOR IMPLEMENTATION

1. IMPLEMENTATION. The original provisions of this Circular were effective on 1 June 1982. The provisions of Change 1 were effective 30 April 1985. The additional provisions of Change 2 are effective for contracts awarded after the publication date of this change.
2. ADMINISTRATION.
 - a. Oversight. The Coast Guard retains statutory responsibility for marine safety; therefore, a monitoring program made up of the following elements will be maintained:
 - (1) Designated persons at ABS World Headquarters and at Coast Guard Headquarters (G-MVI for inspection or certification and G-MTH for plan review), will serve as points of contact for handling matters of interpretation or policy.
 - (2) The Coast Guard will review changes in ABS Rules and Circulars that apply to vessels within the scope of this Circular prior to publication.
 - (3) The Commandant, as a member of the ABS Board of Managers, and several Coast Guard Headquarters staff personnel, as members of various ABS technical committees, will monitor ABS Rules and Circulars.
 - (4) Specific programs for monitoring inspections and plan review activities on behalf of the Coast Guard are published in Commandant Instructions 16710.2 series.
 - (5) At the local level, Coast Guard and ABS personnel will continue to work in close cooperation. It is not intended that Coast Guard field personnel evaluate the performance of ABS personnel. However, inspection for cause as permitted below, action necessary to resolve appeals in accordance with this Circular, and oversight inspections will be carried out. Periodic meetings between the OGMI and local ABS personnel are encouraged.
 - b. Documentation of Inspections. Upon completion of construction, ABS will provide the documentation listed below to the OCMI prior to the OCMI issuing a certificate of inspection.
 - (1) A copy of the Interim Class Certificate.
 - (2) A copy of the Provisional Load Line Certificate.
 - (3) A copy of the Safety Construction Certificate (if applicable).
 - (4) For Tankers - acceptance letters for the inert gas and crude oil washing systems (if applicable).
 - (5) A letter stating that the vessel was constructed and inspected in accordance with the pertinent regulations of the United States Coast Guard and which advises of any outstanding requirements or limitations on areas ABS has inspected.
 - c. Vessel Files.

- (1) ABS will maintain a file for vessels reviewed and inspected on behalf of the Coast Guard. This file will contain all pertinent plans and information. The contents of this file will be available to the Coast Guard on request.
- (2) The cognizant OCMI maintains an up to-date vessel file during construction of the vessel. Upon certification, vessel plan review records are maintained by the OCMI in accordance with Marine Safety Manual Volume I, Section 12.Q.1.b.
- (3) MSC retains plan review records for one year after project completion, except small passenger vessels certificated under the provisions of 46 CFR Subchapter T. After that time, Commandant (G-MTH) retains vessel records in accordance with Marine Safety Manual Volume I, Section 12.Q.1.a.

3. PLAN REVIEW.

a. ABS Plan Review.

- (1) ABS will maintain close liaison with MSC during all stages of plan review. ABS will direct questions concerning interpretation of law, regulations, or policy during plan review to MSC. Questions of this nature that can not be answered by MSC will be relayed to Commandant (G-MTH). MSC contacts the cognizant OCMI in instances where local policy may affect interpretations.
- (2) Six (6) copies of drawings relating to items listed in Section 1 of Enclosure (1) should be submitted directly to ABS, to provide proper distribution of plans for ABS and Coast Guard offices, and to return stamped copies to the submitter. ABS will forward one copy of review letters and plans to the cognizant OCMI and one copy of review letters and plans to MSC. The results of the review will be noted in the letter and on the plans. This procedure applies to all plans reviewed by ABS on behalf of the Coast Guard, not only those marked "approved". These letters and plans are used by the OCMI to help document the adequacy of the vessel certification. MSC uses these plans and letters for reference during review of other plans for the respective vessel. Some of these plans may be selected for oversight review. (See COGDINST 16710.2 series for further information on oversight.)
- (3) If the Coast Guard receives plans pertaining to items indicated in Section 1, of Enclosure (1), and the submitter does not specifically request Coast Guard review, the plans will be forwarded to ABS for review. In this case, the submitter should be informed of the procedures of this circular. If the plans are reviewed by the Coast Guard, the procedures in section 3.b. below apply.
- (4) Plans reviewed under the provisions of this circular will include one stamp to indicate ABS classification action and one stamp to indicate ABS action on behalf of the Coast Guard. Stamps used to indicate ABS action on behalf of the Coast Guard will clearly identify the action taken ('Approved', 'Examined', 'Resubmission Required', etc.), and that the action is on behalf of the Coast Guard. Plans stamped as approved will also indicate compliance with applicable Coast Guard regulations.

- (5) Plan review conducted by ABS on behalf of the Coast Guard will be done only by full time employees of ABS.

b. Coast Guard Plan Review.

- (1) Plans for areas listed in Section 2 of Enclosure (1) should be submitted to the Marine Safety Center, in accordance with applicable regulations, using the guidance in NVIC 8-84 "Recommendations for the Submittal of Merchant Vessel Plans and Specifications". (Duplicate plans may be required by ABS for classification purposes). Generally, a minimum of three (3) copies of plans should be submitted to the Coast Guard. Marine Safety Manual Volume IV, Section 1.D provides additional information on submission of plans.
- (2) The Coast Guard may perform plan review of items indicated in Section 1 of enclosure (1), either by request of the submitter or at the discretion of the Coast Guard.
- (3) For conversions or modifications in which new sections are not involved, and for which the plan submitter requests that the provisions of this Circular be applied, the OCMI may determine that:
 - (a) The alteration is minor and that plan review is not required;
 - (b) The alteration is minor, but that plan review is required. In this case, the OCMI may accept plan review performed by personnel at the marine inspection field unit, MSC, or ABS, as appropriate;
 - (c) The alteration is a major conversion for which the provisions of this Circular may be applied; or
 - (d) Commandant (G-MVI) should determine if the provisions of this Circular may be applied. In this case, the OCMI will forward the Application for Inspection with supporting documents to Commandant.
- (4) In cases where the Coast Guard does not have regulations or policies developed for a particular application, such as for new, unique, or especially complex vessel designs, systems or operations, Commandant may choose to do a preliminary concept review, particularly where such review may result in substantial savings to the Coast Guard or other parties at a later time. After concept review, the applicability of this circular will be discussed between ABS World Headquarters and Commandant.
- (5) The Coast Guard will forward two copies of the plan review letters to ABS World Headquarters. ABS uses these letters for reference during review of other plans for the respective vessel.

4. INSPECTIONS.

- a. Upon receipt of an Application for Inspection, and upon determining that the procedures of this circular apply, the OCMI will provide a copy to the local Principal Surveyor, by the

most expeditious means available, and by a letter of transmittal. The transmittal letter should specify vessel type, route, and any special operating conditions or limitations to ensure that plan review and construction are performed in accordance with applicable regulations. The OCMI will forward a copy of the transmittal letter and Application for Inspection to MSC and ABS World Headquarters.

- b. ABS will not commence inspection on behalf of the Coast Guard prior to receiving an Application for Inspection from the Coast Guard. If ABS receives a request for plan review and inspection under the provisions of this circular, and has not received a copy of the Application for Inspection from the OCMI, they will inform the vessel representative that an Application for Inspection must be received from the Coast Guard prior to any action on behalf of the Coast Guard. If the cognizant OGMI can not be determined, ABS will direct the vessel representative to contact MSC.
- c. ABS surveyors and Coast Guard marine inspectors should work jointly to ensure that all inspection requirements are resolved. For example, work list may be exchanged during the final phase of the inspection for certification.
- d. Inspections conducted by ABS on behalf of the Coast Guard will be done only by full time employees of ABS.
- e. For areas listed in Section 1 of Enclosure (1), Coast Guard inspectors will normally perform inspections only for the following reasons:
 - (1) For cause, should the OGMI become aware of any circumstance which indicates active Coast Guard inspection of items falling under the provisions of this Circular is necessary in the interest of safety. Significant cases shall be reported to Commandant (G-MVI) via the District Commander. Commandant (G-MVI) will advise ABS World Headquarters, as appropriate.
 - (2) As part of the oversight program established to monitor inspections.
 - (3) For training (prior consultation between the OGMI and the ABS Senior or Principal Surveyor is encouraged).
 - (4) If the Coast Guard performed the plan review for the area in question.
 - (5) Inspections required for areas listed in Section 2 of Enclosure (1) will be performed by the Coast Guard. In general, inspections will be done by the same organization performing the plan review.

5. HULL STRUCTURES.

a. Conventional Structures

- (1) Plans for conventional steel hull structures will be reviewed in accordance with section 3.a. of this enclosure. The term "conventional" refers to vessels whose structural configuration and materials are directly within the scope of existing classification rules, and are not "first of a kind" structures or design features. The hull structure of cargo ships, ocean and Great Lakes bulk carriers, tank ships, tank

barges, offshore supply vessels, large passenger vessels, liquefied gas carriers, barge carriers, container and RoRo vessels, and mobile offshore drilling unit designs are among those vessels whose hulls may be considered conventional.

- (2) Coast Guard regulations provide for acceptance by the Coast Guard of hull structural plans for classed vessels approved by ABS. It is understood that under the provisions of this Circular, when Coast Guard regulations exceed the rule requirements of ABS, that ABS will also apply the additional Coast Guard requirements. For example, specific structural calculations are required for some vessels carrying dangerous cargoes.
- (3) Mobile Offshore Drilling Units (MODUs) will be reviewed as conventional structures, except that both ABS and Coast Guard will review the assumed environmental conditions. ABS review procedures do not presently include evaluation of design assumptions such as sea states, ambient temperatures, and current. Such review is considered essential for certification purposes to see that the assumed environmental conditions are appropriate for the service area given on the application for inspection. Suitable operating limitations must also be included in the Operating Booklet reviewed by MSC. Therefore, the following procedures, in addition to those of paragraph 3.a. of this enclosure, will be followed:
 - (a) The designer shall be responsible for identifying and providing the basis for the design parameters to ABS. Upon receipt, ABS should immediately forward to MSC a summary of the designer furnished environmental and loading assumptions, and other preliminary information used as the design basis for the unit.
 - (b) MSC will ensure that design assumptions are appropriate for the service intended, and will advise ABS if any discrepancies are identified.
 - (c) When the structural review is complete, ABS will forward to MSC a letter listing the approved Loading and Environmental Criteria.
 - (d) MSC will ensure that appropriate loading or operating limitations resulting from the structural design and from the stability review are included in the Operating Booklet.

- b. Non-conventional Structures. The term "non-conventional" refers to vessels whose structural configuration and materials are not within the scope of existing classification rules, and are novel or have unique operating or design features. Examples of non-conventional structures are vessels using structural steels of a type where welding and testing procedures are not well established, vessels constructed of aluminum or concrete, connection systems for integrated tug-barges, industrial vessels of unusual proportions, and vessels constructed largely of materials other than steel. Questions concerning whether a particular structure or design feature would be considered non-conventional should be referred to Commandant (G-MTH-4). Plans for non-conventional structures will be reviewed in accordance with paragraph 3.b. of this enclosure.

6. MACHINERY AND ELECTRICAL INSTALLATIONS.

- a. General. The Coast Guard will continue to review and inspect all areas of interest not specifically delegated to ABS under the terms of this Circular.
- b. Boilers and Pressure Vessels. ABS may witness the installation and associated preliminary testing of boilers and pressure vessels on behalf of the Coast Guard. Stamping with the Coast Guard propeller stamp and sealing of boiler safety valves will be done by the OCMI. Necessary shop inspection and plan approval of boilers will be done by the Coast Guard; Control systems for propulsion boilers will be reviewed and inspected by the Coast Guard. Control systems for auxiliary heating boilers and thermal fluid heaters will be reviewed and inspected by ABS.
- c. Heat Exchangers. In general, heat exchangers are treated the same as pressure vessels except for finned tube and flat plate heat exchangers. Finned tube heat exchangers are designed in accordance with 46 CFR Part 56 (Piping). They are treated the same as the piping system in which they are installed and plan review/inspection will be performed by ABS. Flat plate heat exchangers are regulated under 46 CFR Part 54 (Pressure Vessels) except they are not ASME stamped. Shop inspection and plan review of flat plate heat exchangers will be performed by the Coast Guard.
- d. Inert Gas and Crude Oil Washing Systems. Review of plans and manuals and inspection of inert gas systems (IGS) and crude oil washing (COW) Systems should be in accordance with 46 CFR 32.53 and 33 CFR 157 Subpart D respectively. NVIC 1-81 provides additional guidance for crude oil washing systems. At the completion of approvals and inspection, ABS will issue the letters required by 33 CFR 157.116(a) and (b) (copy to the OCMI), and advise the OGMI by letter that the IGS system complies with applicable Coast Guard requirements. The OGMI is authorized to use those letters as the basis for final Coast Guard acceptance of the systems. Exemptions requested for inert gas systems under 46 CFR 32.53-3 should be referred to Commandant (G-MTH) for resolution.
- e. Pollution Prevention Systems and Equipment. ABS will perform plan review and installation tests/inspections of oil pollution prevention systems and equipment required by Annex I of MARPOL. This includes tank outflow calculations and review of dedicated or segregated ballast systems. The OCMI will review installed oil pollution systems and perform the operational tests necessary for issuance of the International Oil Pollution Prevention (IOPP) Certificates as provided for in NVIC's 7-83 and 8-83.
- f. Automation of Machinery Spaces. MSC will review plans of the automation system and the automation test procedure for the requested engineroom manning (two man watch, one man watch, or periodically unattended operation). The OCMI will witness tests, review the test results, and subsequently determine the applicable engineroom manning level.

7. FIRE PROTECTION.

- a. Fire Extinguishing Systems. Where the term "fire extinguishing systems" is used in this Circular, it is intended to include systems such as fire main, foam, carbon dioxide, and halon. Plan review, inspection, and testing of fire extinguishing systems will be conducted by the Coast Guard. The Coast Guard will also continue to review equipment for general approval in accordance with 46 CFR Subchapter Q.

- b. Structural Fire Protection. ABS will conduct plan review and inspection for compliance with structural fire protection requirements.. This will include review and inspection of fire protection boundaries, joiner details, penetrations¹ and verification of the installation of approved materials. The Coast Guard will continue to review equipment and materials for general approval in accordance with 46 CFR Subchapter Q.
 - c. Fire Control Plan Review. The fire control plan (safety plan) shows the safety, fire protection, fire fighting, and emergency equipment of a vessel. Lifesaving equipment is frequently shown on the same plan. The plan contains information necessary for review of structural fire protection, fixed systems, portable equipment, and detection systems. The plan is required to be posted on most types of vessels. This plan may be examined by ABS during review of structural fire protection; however, the plan will be reviewed and approved by the OCMI during the inspection for certification.
8. LIFESAVING SYSTEMS. The OCMI will review the types, numbers, and arrangements of all lifesaving systems, and will witness all tests and inspections. ABS will review lifeboat and liferaft davit and winch foundations for structural strength, lighting installations, and electrical and piping systems associated with lifesaving system installations. The Coast Guard will continue to review and approve all lifesaving equipment.
9. SUBDIVISION AND STABILITY. ABS can conduct the complete stability review for certain types of vessels. The implementation schedule and specific procedures for stability review performed by ABS on behalf of the Coast Guard are detailed in NVIC 3-84, "Acceptance of Stability Related Review Performed by the American Bureau of Shipping for New U.S. Flag Vessels".
10. SMALL PASSENGER VESSELS (SUBCHAPTER T). The inspection and certification of small passenger vessels (46 CFR Subchapter T) and OSV's under 100 gross tons generally requires a greater degree of interpretation of the regulations than do other types of vessels. This necessitates closer involvement of the OCMI throughout the plan review and inspection process. Accordingly, these vessel types are retained for plan review and inspection by the Coast Guard.
11. CERTIFICATION.
- a. The responsibility of the OCMI to issue Certificates of Inspection, Safety Equipment Certificates, IMO Certificates of Fitness, International Oil Pollution Prevention Certificates, and IMO MODU CODE Certificates is not changed. SOLAS Safety Construction Certificates may be issued on behalf of the Coast Guard by ABS as previously provided for in this Circular and applicable Coast Guard shipping regulations.
 - b. The OCMI relies on ABS inspections to ensure compliance with applicable law and regulations. Therefore, the OCMI can not issue an initial Certificate of Inspection until satisfied that the responsibilities delegated to ABS on behalf of the Coast Guard by this circular have been completed. The documents required by subparagraph 2.b above are evidence of this.
12. VESSEL DOCUMENTATION. Although not directly related to inspection, the second proviso of 46 U.S.C. 883 may affect the coastwise trading privileges of vessels which undergo major alterations abroad. The vessel documentation regulations are in 46 CFR Part 67. Specific

requirements to be met and information concerning vessel documentation should be addressed to Commandant (G-MVI).