

Table 1 Class Survey (SS, IS, AS)

SURVEY ITEMS	SS	IS	AS
<p>INTERNAL EXAMINATION, INTERNAL GENERAL EXAMINATION, CLOSE-UP SURVEY AND PRESSURE TEST FOR HULL COMPARTMENTS AND TANKS (EXCLUDING INSTALLED TANKS)</p> <p>(Note) -To make necessary preparations for survey, such as cleaning of compartments, chipping and scaling, gas-freeing, sufficient lighting, nondestructive testing equipment and other items of preparation required for tests and examinations according to the purpose of survey.</p> <p>-To remove dangers such as improper arrangement of scaffoldings, non availability of lighting, fire, explosion, electric shock, falling of things, harmful gases and oxygen deficiency. (Refer to Appendix 4-1 IACS Recommendation No.72.)</p> <p>-To prepare stagings, cherry picker or rubber boats for close-up survey. (Refer to Appendix 4-27 IACS Recommendation No.39.)</p> <p>-To consult with attending surveyor about survey items including gauging which the owner should prepare well in advance.</p> <ul style="list-style-type: none"> • Internal Examination and Pressure Test Refer to Table 1-1. • Close-up survey Oil Tankers and Chemical Carriers : Refer to Appendix 3-1 Part 1 and Part 2. Bulk Carriers including Ore Carriers : Refer to Appendix 3-1 Part 3 and Part 4. General Dry Cargo Ships including ships carrying timber cargoes : Refer to Appendix 3-1Part 5. Ships other than the above : Refer to Appendix 3-1 Part 6. 	I ^{*1} ,P ^{*1}	I ^{*1}	I ^{*1}
<p>THICKNESS GAUGING OF STRUCTURAL MEMBERS</p> <p>(Note) Refer to Appendix 3-1.</p>	M	M ^{*2}	M ^{*3}
<p>MOORING ARRANGEMENT, ANCHORING ARRANGEMENT</p> <ul style="list-style-type: none"> • Measurement of diameter of anchor chain cables (to be conducted at DS coinciding with SS No.2 and subsequent.) • Performance test of the arrangement 	M T	 T	
LOADING COMPUTER	T	C	C
<p>AUTOMATIC AIR PIPE HEADS (Internal examination of the heads indicated by surveyors to be carried out.)</p> <p>Special Survey No.1 : 1. Each one head for ballast tanks at P&S side located on exposed deck In the forward 0.25 L 2. Each one head for ballast tanks at P&S side located on exposed deck in the after 0.25 L</p> <p>Special Survey No.2 : 1. All heads located on exposed deck in the forward 0.25 L 2. At least 20% heads (preferably air pipes serving ballast tanks) located on exposed deck in the after 0.25 L</p> <p>Special Survey No.3 and subsequent Special Survey : All heads located on exposed deck</p>	I		
STEERING ARRANGEMENT (CONTROL SYSTEM, ALARM SYSTEM, RUDDER INDICATOR)	T	T	T
BALLAST LINES	T		
BILGE SYSTEM (CARGO HOLD, ENGINE ROOM, etc.)	T	T	T
WATER LEVEL DETECTION AND ALARM SYSTEMS	T	T ^{*8}	T ^{*8}
DEWATERING ARRANGEMENT FOR DRY SPACES AND BALLAST TANKS	T	T	T

SURVEY ITEMS	SS	IS	AS
Cargo Hatch Cover <ul style="list-style-type: none"> • Hose test (if deemed necessary by the Surveyor) • Mechanically operated steel hatch cover 	H T	H*4 T*6	H*5 T*6
Test of closing appliances (door for watertight bulkhead and superstructure end bulkhead)	T*7	T*7	T*7
Test of fire protection arrangement and means of escape	T	T	T
Plans & Documents <ul style="list-style-type: none"> • Loading Manual • Stability Information • Damage Control Plan and Booklet • Fire Control Plan • Manual for the bow door and inner door and notice board • Instruction Manual for the Inert Gas System • Cargo Securing Manual (for Japanese Ships) • The other plans and documents if required 	C	C	C
General Examination <ul style="list-style-type: none"> • Shell Plating and Weather Deck Plating • Opening on deck and outside of the hull • Casings of Engine Room • Ventilators and Air Pipes • Load Line Marks • Bulwark • Means of Access • Scuppers, Inlets, Other Discharge Pipes and Valves • Securing Arrangement for on-deck timber • Anchoring and Mooring Arrangement • Fire Protection Arrangement and Means of Escape • Sails and their Accessories • Emergency towing Arrangement • Piping in the cargo holds (bulk carriers and general dry cargo ships over 15 years of age) • Ladders and Steps (for Japanese Ships) 	X	X	X

SURVEY ITEMS	SS	IS	AS
<p>MAIN ENGINE, AUXILIARY ENGINE, PROPELLER SHAFTING, POWER TRANSMISSION SYSTEM, MONITORING DEVICE, CONTROL SYSTEM, ETC.</p> <ul style="list-style-type: none"> • Opening-up inspection (Planned Machinery Survey) <ul style="list-style-type: none"> (Note) In applying Planned Machinery Maintenance Scheme (PMS) or Preventive Machinery Maintenance Scheme (PMMS), refer to the approved Survey Schedule Table. In applying Continuous Machinery Survey (CMS), refer to "EXPLANATORY NOTES ON CONTINUOUS MACHINERY SURVEY AND CONTINUOUS SURVEY OF CARGO REFRIGERATING INSTALLATIONS" • Main engine, auxiliary engine for generator and for essential service <ul style="list-style-type: none"> a) Over speed protective device b) Automatic stop and alarm system by failure of supply of L.O. or lower pressure of L.O. c) Steam shut-off devices in case of low main condenser vacuum d) Other safety devices (remote control emergency stop device, trip device by excessive vibration for steam engine, etc.) • Measurement of crank deflection of main engine • Remote control of shut-off device for flammable oil tanks • Remote control stop of F.O. pumps, cargo oil pumps, ventilators, boiler draft fans, etc. • Communication system • Monitoring devices (pressure indicators, thermometers, ammeters, voltmeters and revolution meters) • Automatic devices or remote control devices • Pressure test of condensers and shells of receivers for refrigerating installation (may be dispensed with at the discretion of the Surveyor, except those using NH₃ (R171) as refrigerant.) • Leak test of refrigerant under working condition of refrigerating machinery 	<p>O^{*9}</p> <p>T</p> <p>M</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>P</p> <p>T</p>	<p>O^{*9}</p> <p>T</p> <p>M</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p>	<p></p> <p>T</p> <p></p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p>T</p> <p></p> <p></p>
<p>BOILER, THERMAL OIL HEATER, EXHAUST GAS HEATER</p> <ul style="list-style-type: none"> • Performance test of safety device, alarm devices, relieving gears of the safety valves and pressure indicators including confirmation of calibration records for the pressure indicators (Note) The relief valves on the exhaust gas economizers are to be tested by the Chief Engineer and the results are to be recorded in the logbook. 	<p>T</p>	<p>T</p>	<p>T</p>
<p>SPARE PARTS, TOOLS AND INSTRUMENTS</p>	<p>C</p>	<p>C</p>	<p></p>
<p>ELECTRICAL INSTALLATIONS</p> <ul style="list-style-type: none"> • Performance test of speed governors, circuit breakers and their associated relays (Running test under loaded condition either separately or in parallel) • Performance test of communication system and emergency source of power • Insulation resistance measurement of generators, switchboards, motors and electric cables (may be dispensed with where proper record is maintained and deemed appropriate by the Surveyor) • Insulation resistance measurement of electrical equipment in hazardous area of tankers and chemical carriers (may be dispensed with where proper record is maintained and deemed appropriate by the Surveyor) • Lighting, communication, signaling and ventilation systems and other electrical equipment (including performance test of interlocking devices) 	<p>T</p> <p>T</p> <p>M</p> <p>M</p> <p>T</p>	<p></p> <p>T</p> <p>M</p> <p>M</p> <p></p>	<p></p> <p>T</p> <p></p> <p></p> <p></p>

SURVEY ITEMS	SS	IS	AS																								
FIRE FIGHTING ARRANGEMENT																											
• Water jet test of fire hose	T	T	T																								
• Fire detection and fire alarm system including failure alarm and manual operation	T	T	T																								
• Ventilating arrangement	T	T	T																								
• Fixed deck foam system [water supply test]	T	T	T																								
• Dry chemical powder fire-extinguishing system [air blow test, quantity check of starting/pressuring gas, operation test of remote control system]	T	T																									
• Water spray system [water supply test, quantity check of delivered water may be dispensed with]	T	T																									
• Fixed CO ₂ fire-extinguishing system [air blow test, checking of alarm system]	T	T																									
• Fixed foam, high-expansion foam fire-extinguishing systems [water supply test]	T	T																									
• Fixed pressure water-spraying fire-extinguishing system [water supply test]	T	T																									
• Automatic sprinkler including sprinkler pump, fire detection and fire alarm systems	T	T																									
• Closing appliance of opening related to fire fighting in cargo area [operation test]	T	T																									
• Measurement of quantity of CO ₂ , Halon (to be more than 90% of original quantity) and dry chemical powder (stored pressure type: extinguishing medium not to be more than 90% of original pressure cartridge type: gas bottle not to reduce by more than the maximum tolerance of pressure gauge)	M	M																									
• Confirmation of effectiveness of extinguishing medium	C	C	C																								
• Deep-fat cooking equipment[operation test]	T	T																									
• Fired local application fire-fighting systems [air blow test, operation test for pump and control devices]	T	T																									
• Confirmation of appliances (EEBD, Fire-fighter's outfits etc.)	C	C	C																								
• Confirmation of documents (Maintenance Plans, Training manuals, Fire safety operational booklets, etc)	C	C	C																								
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-right: 1px dashed black;"><u>Type (foam extinguisher)</u></th> <th style="text-align: left;"><u>Standard Validity</u></th> <th style="text-align: left; border-right: 1px dashed black;"><u>Type (dry-chemical extinguisher)</u></th> <th style="text-align: left;"><u>Standard Validity</u></th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px dashed black;">Portable foam (9l)</td> <td>1 year (spare 2 years)</td> <td style="border-right: 1px dashed black;">Portable dry-chemical</td> <td>5 years</td> </tr> <tr> <td style="border-right: 1px dashed black;">Moval foam (45l, 135l)</td> <td>1 year (spare 2 years)</td> <td style="border-right: 1px dashed black;">Movable dry-chemical</td> <td>5 years</td> </tr> <tr> <td style="border-right: 1px dashed black;">Portable foam applicator (20l)</td> <td>3 years* (spare 3 years)</td> <td style="border-right: 1px dashed black;">Fixed dry-chemical</td> <td>valid so far as it is not moisturized</td> </tr> <tr> <td style="border-right: 1px dashed black;">Deck foam</td> <td>3 years*</td> <td></td> <td></td> </tr> <tr> <td style="border-right: 1px dashed black;">High expansion foam</td> <td>3 years*</td> <td></td> <td></td> </tr> </tbody> </table>				<u>Type (foam extinguisher)</u>	<u>Standard Validity</u>	<u>Type (dry-chemical extinguisher)</u>	<u>Standard Validity</u>	Portable foam (9l)	1 year (spare 2 years)	Portable dry-chemical	5 years	Moval foam (45l, 135l)	1 year (spare 2 years)	Movable dry-chemical	5 years	Portable foam applicator (20l)	3 years* (spare 3 years)	Fixed dry-chemical	valid so far as it is not moisturized	Deck foam	3 years*			High expansion foam	3 years*		
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* : - IMO MSC / Circ.582 to be referred. (Validity may be extended for 1 years subject to verification of effectiveness by chemical analysis.) - Flag's special requirements, if any, to be referred.																											

<i>As class requirements for Japanese Flag Ships</i>			
Oil Pollution Prevention System (General) · Shipboard Oil Pollution Emergency Plans	C	C	C
Oil Pollution Prevention System (Engine Room) · Oil Discharge Monitoring and Control System for Bilge · Oil filtering system [alarm, automatic stopping device] · Equipment for control of sludge or homogenizer if the capacity of sludge tank is reduced · Oily-water separating equipment, oil filtering equipment, oil content meter · Correction of oil content meter · Oily-water separating equipment, oil filtering equipment [function test by feeding water] · Open-up inspection of oily-water separating equipment, oil filtering equipment including attached pump and major valve	T T T T C T O	T T T T C T O	T T T
Cargo Handling Appliances	Load Test ^{*10}	ATS ^{*11}	
Cargo Handling Appliances (General)	T	X, T	
Cargo Handling Appliances (5 yearly annual thorough survey for derricks) · Topping bracket, goose neck bracket and derrick heel lugs		O	

X: General examination I: Internal examination O: Opening-up examination T: Performance test
P: Pressure test H: Hose test M: Measurement C: Confirmation examination
__: Special Requirement for Japanese flag ship

- *1 : Refer to **Table 1-1**.
In addition, “*Suspect area*” identified at previous special or intermediate surveys are to be overall and close-up surveyed.
(At Annual Survey, the surveys for cargo tanks are not required.)
As for “*Suspect area*”, refer to **Figure 1**.
- *2 : Applicable to the members of the ships mainly over 5 years of age at the discretion of the Surveyor and the members measured in consideration of the ships age.
In addition, suspect areas identified at previous special surveys.
- *3 : Applicable to the members of the ships mainly over 5 years of age at the discretion of the Surveyor and the members measured in consideration of the ships age.
In addition, suspects areas (except cargo tanks) identified at previous special or intermediate surveys.
- *4 : Performance test may be dispensed with at the surveyor’s discretion. (For Intermediate survey of Bulk carrier over 15 years of age, this test cannot be dispensed with.)
- *5 : When deemed necessary by the Surveyor.
- *6 : To be carried out for selected hatch covers. (For Intermediate survey of Bulk carrier over 15 years of age, to be carried out for all covers)
- *7 : Tests may be omitted at the description of the Surveyor.
- *8 : To be carried out for selected ones. (For Intermediate survey of Bulk carrier over 10 years of age, to be carried out for all.)
- *9 : Applicable to ships other than those applying CMS, PMS or PMMS. Open-up items of IS differ from those of SS.
- *10 : To be carried out with an interval of maximum 5 years (maximum 3 months extension may be granted)
- *11 : To be carried out with an interval of maximum 12 months (maximum 3 months extension may be granted)