

Guidelines on **Remote Surveys/Audits/Inspections**

Revision 1

December 2021



IRCLASS
Indian Register of Shipping

**Guidelines
on
Remote Surveys/ Audits/ Inspections**

Revision 1, December 2021

TABLE 1 – AMENDMENTS INCORPORATED IN THIS VERSION
These amendments are effective from 1 January 2022

Clause	Subject/ Amendments
Section 1: Background	
1.6	Tools used as part of Remote Inspection Techniques are specified.
1.8	Better clarity is provided on the occasions for conduct of remote surveys/ audits/ inspections.
1.9	Modalities for conduct of statutory surveys/ audits/ inspections remotely are specified.
1.10	International standards/ documents that are taken cognizance of whilst conducting remote surveys/ audits/ inspections are listed.
2.4	It is specified that where it is not possible to use IRS licensed software application, other ICT as agreed with the ship/ company/ works may be utilized for undertaking remote surveys/ audits/ inspections.
Section 3: Application and Methodology	
3.1	The type of surveys/ audits/ inspections that can be considered for undertaking remotely are clarified.
3.2.1 to 3.2.3 (new)	Extent of involvement of the ship's crew in remote surveys/ audits/ inspections is clarified.
3.2.5	Type of surveys requiring video calling/ live streaming and their resolution requirements are specified.
Section 4: Review of request and planning remote survey/ audit/ inspection	
4.1	International standards/ documents that are taken cognizance of whilst conducting remote surveys/ audits/ inspections are listed.
4.2	Editorial changes are made.
4.3 (iv)	It is specified that the videography/photographs are to bear date stamp and clear identification of the ship and identification of the structure/ tank/ space/ machinery/ equipment.
5.3	Requirement for photographs to have 'date stamp' is specified.
5.7 (new)	It is specified that remote surveys may be carried out in parts or as a combination of part remote survey and physical survey depending on the circumstances.
Section 7: Qualification and authorization of Surveyor/ Auditor/ Inspector and familiarization of assisting crew	
7.2 (new)	Requirements to verify that the crew are familiar with the planned remote surveys/ audits/ inspections are specified.

Clause	Subject/ Amendments
Section 8: Guidance pertaining to specific surveys	
A (new), B (a) (i), (iv), (v), (vi), (d) (all new).	<p>More guidance is provided on undertaking the following remotely:</p> <ul style="list-style-type: none"> - Examination for postponement of surveys - Postponement of continuous survey of machinery items - Postponement of boiler surveys - Postponement of docking survey without undertaking in-water survey - Postponement of Tail shaft surveys - Occasional In-water surveys - Inspection of Marine Components/ Equipment
C (a), (b), (d)(all new)	More guidance/ clarity is provided on undertaking remote audits/ inspections.

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Section 1

Background

- 1.1 Safety of life at sea, safety of assets and prevention of pollution are key factors for the shipping industry and their exposure to risk is an aspect which is duly considered during ship surveys/ audits/ inspections.
- 1.2 Recent developments in the methods for remote inspections coupled with the advances in the area of information and communications technology and the difficulties faced for attendance on board due to the pandemic situation have led to the increased application of remote surveys/ audits/ inspections by Classification Societies.
- 1.3 The purpose of this document is to provide guidelines to Owners/ Ship Operators and Surveyors for planning and undertaking remote survey/audit/inspection in an efficient and secure manner, as an alternative to survey/audit/inspection by attendance on-site.
- 1.4 Remote survey/ audit/ inspection is a partial or full verification undertaken for obtaining information equivalent to that obtained from survey/ audit/ inspection on-site, by applying digital and technological means, in an efficient and secure manner, without physical attendance of the surveyor/ auditor/ inspector onboard the ship or at site.
- 1.5 The consideration to undertake remote surveys is based upon its suitability and also aims to:
 - a) Maintain applicable safety standards.
 - b) Keep vessels operating despite restrictions on the movement of surveyors and assist meeting the demands of industry stakeholders.
 - c) Minimise disruption during cargo operations.
 - d) Optimize travel time and expenses.
- 1.6 Remote inspection techniques (RIT) may be utilised as required which enable visual examination of any part of the structure without the need for direct physical access of the Surveyor Remote inspection techniques may include the use of Divers, Unmanned robot arm, Remote Operated Vehicles (ROV), Climbers, Drones etc.
- 1.7 Remote survey/ audit/ inspection may be requested to be undertaken due to unforeseen inability of IRS to attend the vessel or when access to the vessel is challenged due to conditions or Force Majeure conditions (as defined in IRS Rules).
- 1.8 For remote survey/audit/inspection using Information and Communication Technology (ICT) IRS has investigated and examined the types of survey to which it can be applied, determined the type and amount of information required for the remote survey/audit/inspection and the requirements for ICT to be used, thereby ensuring reliability equivalent to conventional physical survey/audit/inspection being achieved with transparency in the application of remote survey/audit/inspection. It is recognized that remote survey/audit/inspection may be appropriate in some, but not all, circumstances and there are challenges and benefits involved. Presently remote surveys are envisaged to be used for examination for the purpose of postponement of various surveys and for occasional and other survey / audit/ inspection, as listed in Section 3.1 of these Guidelines. When it is related to statutory matters, remote survey/ audit/ inspection will be subject to approval by the relevant Flag Administration.

- 1.9 Reference is made to IRS Rules and Regulations for the Construction and Classification of Steel Ships, Part 1, Chapter 2 for requirements for remote surveys. While guidelines for statutory surveys/Audits/inspections are provided in this document, specific instructions from Flag for conduct of such surveys/Audits/inspections remotely will be followed. Where the flag does not have specific instruction, the procedure to be followed for remote surveys/Audits/inspections are agreed with the Flag Administration.
- 1.10 Review of request for remote survey/audit/inspection will be carried out by IRS to ensure that there is no breach of International Conventions or legal, regulatory and statutory requirements of the relevant flag Administrations. The request would be reviewed keeping in mind the risk-based approach required by ISO 9001:2015, IMO Circular Letter No.4204/Add.19 - (Guidance for flag States regarding surveys and renewals of certificates during the COVID-19 pandemic), ISO 19011:2018 (Guidelines for auditing management system), IAF Informative Document 12:2015 (Principles on Remote Assessment) and IAF Mandatory Document 4:2018 (Use of Information and Communication Technology (ICT) for Auditing / Assessment purposes) . Further planning for remote survey/audit/inspection would consider technology being used, internet connectivity and awareness and familiarisation of ship-board personnel regarding the requirements which can have an impact on the quality of remote survey/ audit/ inspection.
- 1.11 It is hoped that these guidelines will contribute to the conduct of more rational Surveys/Audits/Inspection of ships. These Guidelines will be reviewed as necessary based on advances in technology being used, experience gained during such survey/ audit inspection and inputs/ feedback from stake holders. Related rules for the survey of ships will be revised accordingly, in due course.

Section 2

Information and Communication Technology used

- 2.1 A software application has been licensed by IRS to be used for remote survey/audit/inspection. The software application will be made available for downloading by ship onto on-board hardware such as Android/iOS Smartphones/ tablet, laptop computers, desktop computers so as to connect to the computer preloaded with the software application located at IRS Head Office for use by the surveyors.
- 2.2 The application also allows for offline recordings of onboard activities in areas where there is no internet (photos & videos) and same can be synced into backend dashboard once the device enters area with internet. Further, the application also allows the surveyor to connect with any expert at either Survey Station or Head Office through a live video/audio call.
- 2.3 Surveyor/auditor/inspector undertaking remote surveys will be familiarized in the application of Software. Guidelines for use of the application software have been prepared and will be provided to the surveyors and shipboard personnel.
- 2.4 However, where it is not possible to use above IRS licensed software application, other ICT as agreed with the ship/ company/ works may be utilized for undertaking remote surveys/ audits/ inspections.

Section 3

Application & Methodology

3.1 The following surveys/ audits/ inspections can be considered for being undertaken remotely:

3.1.1 Examinations for Postponement of various surveys/as listed below:

- (i) Postponement of Class and statutory periodical surveys
- (ii) Postponement of continuous survey of machinery items
- (iii) Postponement of Boiler surveys
- (iv) Postponement of Docking Survey without In-Water Survey
- (v) Postponement of Tail shaft surveys (for maximum period of one year)

3.1.2 Other surveys as listed in the following:

- (i) Occasional In-water Survey
- (ii) Examination/verification of repairs to hull structure and fittings/machinery/equipment, extension/deletion of Condition of Class and Statutory Conditions on review of each case (excluding inspection required on the recommendation of PSC/FSI)
- (iii) Radio surveys utilizing services of IRS approved Radio Firm
- (iv) Inspection of Marine Components/ Equipment

3.1.3 Remote audits/ inspections as listed in the following:

- (i) Interim/Annual/Renewal DOC Audit
- (ii) Postponement of Intermediate/renewal ISM/ ISPS audits/ MLC inspections of ships and Annual/Renewal DOC Audits of Company
- (iii) ISM, ISPS and MLC rectification of Non-Conformities or remarks (not applicable in case of additional audit due to PSC and FSI inspections)

3.2 Methodology for remote survey/audit/inspection:

3.2.1 As part of the remote survey/ audit/ inspection a pre-check is to be undertaken by the Master and Chief Engineer and confirmation received by filling up a checklist regarding condition of the vessel, its machinery and equipment based upon the examination held by them. Master and Chief Engineer are considered to be competent to undertake the pre-check and provide information as required.

3.2.2 Further, based on the provision of IMO conventions (viz SOLAS, MARPOL, ISM Code etc.), the Master of the vessel is required to report any defect when it is discovered onboard to Flag Administration/ Recognised Organisation /Port State Authorities. On this basis, the confirmation received from the Master and Chief Engineer is considered to be impartial.

3.2.3 The examination or verification during remote survey/audit/inspection is carried out by the nominated person on board or at site under the instructions and guidance of the qualified surveyor/auditor/inspector. Hence, the liability arising out of examination/acceptance of the remote survey/audit/inspection will lie with the surveyor/auditor/inspector.

3.2.4 Detailed methodology for remote survey/ audit/ inspection will depend on the type of survey/audit/inspection being undertaken. While information required such as videography/photographs and supporting documents would be exchanged through email. arrangement for two-way communication is to be confirmed for all cases.

3.2.5 In addition, video calling/ livestreaming should be available as follows:

Type of remote survey/audit/inspection	Video calling / livestreaming
In-water survey and verification of repairs to hull structure and fittings/machinery/equipment, inspection of components	High resolution
Examination for Postponement of various surveys/ audits, radio survey and interim and regular DOC audits	Low resolution
Specific cases for extension of CSM items and minor repairs based on evaluation of the case where it is possible to confirm required information and rectification of ISM/ISPS/MLC non-conformities	Not necessary

3.2.6 In general, most of the surveys/audits/inspection listed in Section 3.1 will be undertaken using remote software application in real time. However extension of CSM items, minor repairs may be accepted based on review of videography/photographs and supporting documents on a case by case basis where it is possible to confirm required information without real time communication.

3.2.7 For the purpose of these guidelines, remote surveys/ audits/ inspections are those that use information and communication technology for collection of data and survey process, instead of surveyor attendance at site. The data is collected over the internet by using a computer, smartphone or tablet so the surveyor/auditor at a remote location can communicate with the ship/site. A remote survey may or may not use RIT, as shown below:

Type of Survey/Audit	RIT	ICT
By attendance at site (normal)	Not used	Not used
	Used	Not used
Remote	Not used	Used
	Used	Used

3.2.8 Photographic and videography data captured during survey/audit/inspection is to be archived for future reference.

3.2.9 Data security policies and procedures are to be in place to verify that the data collected during the survey/audit/inspection are captured, transmitted, and stored in a secure way that has minimum vulnerability to unauthorized manipulation and distribution. Integrity of the raw data is to be maintained during the data storage process. The data is to be made available as and when required via secure sharing mechanisms to authorized personnel and systems.

Section 4

Review of request and planning remote survey/ audit/ inspection

4.1 In all cases of request for survey/ audit/ inspection to be undertaken remotely, Survey request form - SRF (Remote Survey), is to be filled up by the ship or the Company. The request would be reviewed at Head Office, keeping in mind the risk-based approach required by ISO 9001:2015, IMO Circular Letter No.4204/Add.19 - Guidance for flag States regarding surveys and renewals of certificates during the COVID-19 pandemic and ISO 19011:2018 Guidelines for auditing management systems while ensuring there is no breach of International Conventions or legal, regulatory and statutory requirements of the relevant flag Administrations.

It is to be ensured by the surveyor/ auditor/ inspector that specific instruction from IRS Head Office including Flag Administration, if any, are taken into account for the conduct of the remote survey/ audit/ inspection.

4.2 Before initiating the survey/audit/inspection, the following are to be confirmed by the surveyor/auditor/inspector undertaking the survey/ audit/ inspection:

- i. scope of survey/ audit/ inspection requested.
- ii. schedule for the planned survey/ audit/ inspection.
- iii. time frame for conducting the survey/ audit/ inspection.
- iv. activities, areas, information and personnel to be involved.
- v. items to be examined, operational tests/ checks to be carried out and sharing of such information and the relevant survey checklists with the ship in advance.
- vi. records and documentation required by the surveyor/auditor/inspector in advance, as well as during the survey/audit/inspection.

4.3 Following would be requested from the ship (as considered necessary) by the surveyor/ auditor/ inspector through email communication:

- i. Relevant records and documentation based on the requested survey/ audit/ inspection.
- ii. Proposal for reviewing information that cannot be shared remotely (i.e. due to confidentiality or access issues).
- iii. Filled in pre survey checklist with findings and declaration by Master/ Chief Engineer regarding condition of the vessel, its machinery and equipment based upon the examination held by them. .
- iv. Videography/ photographs of the ship and its equipment. The videography/photographs are to bear date stamp and clear identification of the ship and identification of the structure/tank/space/machinery/equipment.
- v. Known deficiencies with photographs, proposal for repairs, alternate arrangement and documents supporting proposals.
- vi. Other evidence as deemed essential and necessary by the surveyor/ auditor/ inspector
- vii. Details of person/s involved during remote survey/ audit/ inspection on ship.
- viii. Confirmation of having received the instructions towards conduct of remote survey/ audit/ inspection (standing instructions and any specific instructions if required and considered necessary by surveyor/ auditor/ inspector).
- ix. Mitigation measures based on risk assessment which may be required for undertaking remote survey/ audit/ inspection.

- 4.4 Surveyor/ Auditor/ Inspector will review the supporting documents and videography/photographs provided by the Master / Chief Engineer prior to undertaking the remote survey/ audit/ inspection, to arrive at specific areas requiring focus during the survey/ audit/ inspection.
- 4.5 Surveyor/ Auditor/ Inspector is to ensure that the remote software application is satisfactorily installed on ship's equipment and conduct a trial to ensure the scheduled survey/audit or inspection will perform as planned. He/ she will further confirm that the responsible person is conversant with the use of software application, the platform and requirements of remote survey/audit/inspection. Real time communication channels other than software application platform between the ship and the surveyor/ audit/ inspector is to be checked and confirmed.
- 4.6 As the purpose of the survey/ audit/ inspection is to verify that the ship is in compliance with IRS Rules and statutory Conventions, it is essential that Master, Chief Engineer and other personnel involved in remote survey/ audit/ inspection cooperate and provide information in a transparent manner so that deficiencies/ non-compliances are brought out, in the interest of the safety of the vessel, crew and protection of the environment.

Section 5

Conduct of Remote Surveys/ audits/ inspections

- 5.1 A planning/opening meeting is to be scheduled to brief the Master, Chief Engineer, responsible persons on ship including service suppliers, (if required) during remote survey, in respect of the scope of survey/ audit/ inspection, how the activities will be progressed, items and tests which will be witnessed and to confirm the arrangements.
- 5.2 Date / time shown on the device having the application software installed is to be verified for correctness, as this would be reflected in the remote survey/ audit/ inspection records.
- 5.3 It is recommended to take photographs bearing date stamp which includes ship particulars such as ship name, IMO No., marking in engine room, name plate on machinery/ equipment, AIS static data etc.
- 5.4 It is essential that sufficient lighting is arranged by the ship to show the condition of the ship, its machinery and equipment clearly. Where the survey location does not have sufficient /no natural lighting, temporary lighting is required to be provided, keeping safety issues on priority at all times.
- 5.5 Remote survey/ audit/ inspection is to be undertaken by checking items to get information as normally obtained from a physical survey/audit/inspection based on IRS survey procedures/work instructions.
- 5.6 If the surveyor/ auditor/ inspector is not satisfied with the arrangements or if the remote session cannot be properly maintained, he/ she may call off the survey/ audit/ inspection. For example in case of a live video, the image quality is to be at least such that the person or the thing can be clearly seen.
- 5.7 Remote Survey may be carried out in parts or as a combination of part remote survey and physical survey depending on the circumstances.
- 5.8 All findings are to be recorded and proposal for repairs, corrective actions are to be reviewed along with provisions for alternate arrangements. For deferment of repairs to statutory items, Flag advice would be sought.
- 5.9 In case of postponement of various Class and Statutory surveys including postponement of audits and inspections undertaken remotely, as the survey/ audit/ inspection is only deferred for limited period of time, requirement of subsequent confirmatory survey/ audit/ inspection by physical attendance is not considered in such cases. Similarly, in the case of Radio surveys utilizing services of IRS approved Radio Firm and for Occasional In-water Survey undertaken remotely, as these surveys are undertaken with the physical attendance of approved service supplier technician, requirement of subsequent confirmatory survey by physical attendance is not considered necessary, unless the flag Administration requires otherwise. However, for remote examination/ verification of repairs to hull structure and fittings/ machinery/ equipment and for remote inspection of marine components/ equipment, a confirmatory survey/ inspection is to be undertaken by physical attendance.

Section 6

Use of Electronic Certificate

- 6.1 Electronic certificate will be issued or endorsement done electronically, as appropriate, where any class or statutory certificate is required to be issued to the ship or endorsed upon successful completion of the remote survey/audit/inspection. E-certificate issued will be in compliance with the IMO FAL.5/Circ.39 & flag administration guidelines. It will be ensured that acceptance by Flag State exists to issue electronic certificate.

Section 7

Qualification and authorization of Surveyor/Auditor/Inspector and familiarization of assisting crew

- 7.1 Surveyors/ Auditors/ Inspectors who are qualified for the surveys/ audits /inspections to be undertaken remotely listed in these guidelines are familiarized in the use of the software application and the platform including the procedure for undertaking remote survey/audit/inspection. Record of surveyor/auditors/inspectors authorized to undertake remote surveys is being maintained by IRS.
- 7.2 The persons on board assisting in the remote survey are to be familiarized in carrying out those activities. A pre-survey checklist is to be filled up and submitted by the Master/ Chief Engineer, which will be verified by the Surveyor. During the survey-planning meeting, the surveyor will discuss the modalities of survey with the assisting persons on board to ensure that they are familiarized with the survey activities.

Section 8

Guidance pertaining to specific surveys

A. Examination for Postponement of surveys

a) Postponement of class and statutory periodical surveys

(i) Vessel is provided with pre survey checklist/s so that a pre-check can be done by Chief Engineer/Master and the checklist/s returned with their findings.

(ii) Relevant supporting documents for the declaration are to be submitted for review as required by IRS. This will also include current certificates, records of examination and testing of equipment, maintenance records of machinery and systems etc.

(iii) Photographs/videography of deck, engine room, steering gear room, wheelhouse and accommodation spaces are to be provided to depict general condition of the ship.

(iv) Where the ship is issued with condition of class or statutory condition and these are to be deferred along with periodical survey, relevant items are to be examined by Master and Chief engineer and confirmed in writing that these are continuing satisfactorily with the existing condition maintained and considered to remain efficient for the time for which extension is being sought. Proposal for permanent repair is also to be submitted and reviewed for acceptance. The confirmation is to be supported by photographs. Items covered under class/statutory conditions are to be examined by the surveyor during the survey remotely.

(v) Substantially corroded structures, ballast tank requiring annual inspection due to coating conditions as reflected in survey status are to be examined by Master and confirmed that these are maintained and do not require immediate attention. This is to be supplemented by examination of relevant structures during the survey remotely including thickness gauging as considered necessary.

(vi) In respect of postponement of Safety Radio Survey, GMDSS equipment are to be examined and tested by an approved Radio Firm. Radio firm is to examine & test relevant items as per GMDSS report which is then filled up, signed by the Radio Firm & Master of the vessel and submitted along with the relevant test reports. Due to circumstances, where services of approved Radio Firm cannot be availed, in consultation with Flag Administration, relevant examination and testing of GMDSS equipment can be undertaken by qualified GOC operator on board. Findings related to verification and testing of items covered under SRT survey are to be reviewed by the surveyor and clarified with the Radio Firm/GOC operator on board as the case may be.

(vii) Verification of loadline marking, other markings on hull, examination and test of relevant equipment are to be covered during such survey as per survey scope based on survey checklist. Status of LSA & FFA, ship's manning, availability of mandatory documents/emergency plans, record of maintenance/calibration, periodic tests, entries made in record books to show compliance to Convention requirements including valid contracts with service providers for services required as per various Conventions need to be verified.

(viii) Where periodic maintenance, examination or testing of life saving, firefighting or other items are to be deferred, specific proposal for dealing with these are to be received including record of previous maintenance, testing, declaration from Master/Chief Engineer regarding the present condition of the equipment with photographs so that these can be communicated to flag and processed based on advice received.

(ix) For surveys involving carriage of dangerous goods as per IMDG, IGC, IBC code including surveys for IMSBC code, a confirmation is to be provided by the Master that additional safety requirements (Ventilation, Gas measuring, inerting, personnel protection equipment etc.) as required by the respective code are in satisfactory operational condition and special requirements as per the cargoes permitted to be carried are being complied with. Relevant provisions as per survey checklists are to be verified through these surveys.

(x) Flag specific requirement if any will be communicated and is to be verified for compliance. Finding if any is to be dealt with. In the case of any proposal for deferment, Flag Administration will be consulted for matters affecting statutory items for consideration.

(xi) Based on satisfactory survey for postponement, the relevant full-term certificate will be withdrawn and short-term E-certificate will be issued valid for a period of maximum 3 months. Relevant supporting documents will be retained by IRS for records.

b) Postponement of continuous survey of machinery items

(i) Ship will be requested to provide supporting documents pertaining to planned maintenance undertaken, record of operating parameters including running hours since last maintenance, megger test report as applicable including confirmation from Chief Engineer that machinery is operating in satisfactory condition. Photographs/ videography of machinery items are to be submitted for records.

(ii) Based on review of above, examination of the machinery will be undertaken remotely along with trial of machinery as required by the surveyor. In case the running trial is not found satisfactory or the operating parameters beyond normal range, a complete examination of the machinery item will be required and a condition of class will be recommended to this effect if existing condition is considered to remain efficient meantime

(iii) Survey status will be updated reflecting the period of postponement.

c) Postponement of Boiler surveys

(i) Chief Engineer is to confirm that the boiler along with its safeties are working satisfactorily and provide following supporting records for review:

- Operation
- Maintenance
- Repair history if any
- Feedwater chemistry

(ii) Surveyor will verify the submitted documents which are to be retained as records and undertake the such survey covering following:

- a) External examination of the boiler
- b) Examination of boiler safety valve relieving gear (easing gear) and operational test
- c) Operational test of boiler safety devices and alarms with their cut outs

(iii) Photographs/videography of boiler, its mountings and safety valves including the easing gear are to be submitted for record.

(iv) Based on satisfactory survey, the boiler survey is to be postponed for a period of maximum 3 months while reflecting such postponement in the survey status.

d) Postponement of Docking Survey without undertaking In-Water Survey:

Where the Class Rules and Flag Administration permit postponement of docking survey without undertaking In-Water Survey, remote survey is to be undertaken as below:

(i) Following documents are to be submitted for verification:

- logbooks for stern tube bearing operating parameters and oil consumption
- bilge and tanks sounding records.

Confirmation from the master that ship has not sustained any damage since last docking survey and free from any undue vibration

(ii) Surveyor is to verify the submitted documents which are retained as records and undertake survey covering following for consideration of the postponement requested.

- a) Visual external examination of all sea chest valves and overboard valves and their connections to the side shell.
- b) Visual examination of the Seawater main line and any other S.W line having a direct connection to the shell plating.
- c) Functional test and visual examination of the steering gear and rudder trunk space if fitted.
- d) visual external examination to note the effectiveness of the tail shaft seals
- e) Examination and verification of Bilge pumping arrangement.

(iii) Photographs/videography of sea chest valves, overboard valves and their connection to side shell, sea water main line and any other sea water line having direct connection to shell plating, Tail shaft forward gland are to be submitted for record..

e) Postponement of Tail shaft surveys (for maximum period of one year)

(i) Request for proposal for extension of tail shaft survey for a maximum period not exceeding one year by remote survey can be considered subject to Flag concurrence and satisfactory examination as detailed below. Towards such a proposal, Chief Engineer is required to confirm on following:

- a. that the propeller is free of damage and there are no undue vibrations
- b. no abnormal leakage from the shafting system
- c. no under water repairs have been done to shaft and/or propeller since last examination in dry dock.
- d. the shafting arrangement is in good working condition

(ii) Following documents which are to be kept as records are to be submitted by Chief Engineer for review:

- a. Review of previous wear down and/or clearance recordings.
- b. Review of service records.
- c. Review of test records of lubricating oil analysis and oil sample examination.
- d. Review of stern tube lube oil consumption for last one year.
- e. Review of stern tube bearing temperature records, if applicable.

(iii) Subject to satisfactory verification of the submitted documents, surveyor undertakes the remote survey based on scope as per IRS survey procedure towards extension of tail shaft survey.

(iv) The following will be undertaken remotely:

- a. Visual Inspection of all accessible parts of the shafting system in the machinery space.
- b. Verification that propeller is free of damage which may cause propeller to be out of balance.
- c. Verification of any leakage from the shafting system to prove effectiveness of seal.
- d. Verification of any water contamination by opening drain provided in stern tube lube oil system.

Based on satisfactory survey, the tail shaft survey may be extended for the requested period not exceeding one year.

B. Other Surveys

a. Occasional In-water Survey:

(i) Occasional In-water survey are surveys which are undertaken for the purpose of examining damage to underwater portion of hull, appendages or shafting system or any other suspected damage or for the purpose of extension of docking survey. Occasional in-water survey does not include in-water survey for the purpose of crediting of docking survey.

(ii) The inspection plan for the use of remote operated vehicle if used, will be reviewed and agreed prior to commencement of the survey.

(iii) Underwater examination will be carried out using the services of an approved diving company which is witnessed remotely by the surveyor. Surveyor will communicate with the supervisor of the diving company at site who in turn guides the diver underwater. In case of remote operated vehicle, surveyor will directly communicate with the operator. Master and/or Chief Engineer of the vessel will also witness the underwater examination and countersign the report prepared by the diving company prior sending same to surveyor. Video recording of in-water survey is also sent to the surveyor electronically.

(iv) Where the occasional in-water survey is for extension of docking survey these are subject to concurrence of the flag Administration and declaration from Chief Engineer that the vessel is free of any underwater damage subsequent to last dry-docking, no undue vibration and no stern tube oil leakage. Following documents are to be received from the ship for verification additionally:

- a. logbooks for stern tube bearing operating parameters and oil consumption
- b. bilge and tanks sounding records.

(v) For extension of docking survey, surveyor is to verify the submitted documents which are retained as records and undertake survey covering following in addition to the In-water survey for consideration of the extension requested.

- a) Visual external examination of all sea chest valves and overboard valves and their connections to the side shell.
- b) Visual examination of the Seawater main line and any other S.W line having a direct connection to the shell plating.
- c) Functional test and visual examination of the steering gear and rudder trunk space if fitted.
- d) visual external examination to note the effectiveness of the tail shaft seals

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- e) Examination and verification of Bilge pumping arrangement.
 - f) Additional requirement of flag Administration if any

(vi) Photographs/videography of sea chest valves, overboard valves and their connection to side shell, sea water main line and any other sea water line having direct connection to shell plating, Tail shaft forward gland are to be collected for record.

(vii) Findings and proposal from the Owners (as relevant) are shared with Flag Administration. Conditions imposed are to be agreed with the Flag Administration and reflected in relevant statutory certificates & Class survey status.

b. Examination/verification of repairs to hull structure and fitting/machinery/equipment, extension/deletion of Condition of Class and Statutory Conditions on review of each case:

(i) Remote survey for verification of repairs to hull structure/machinery/equipment, extension/deletion of condition of class (COC) and statutory recommendation may be considered subject to review of the specific case based on the extent, nature of deficiency, structure/machinery/equipment involved and repairs proposed.

(ii) For request related to deferment of repairs to items which impact statutory certificate/s, extension/deletion of statutory condition/s. Flag Administration will be consulted and advice obtained.

(iii) Extension of condition of class and statutory conditions are based on examination and confirmation that the temporary repairs and/or alternative arrangements are effective and considered to remain efficient for the proposed period of extension requested.

(iv) For proposal for deletion of condition of class/statutory condition, supporting documents are required to be submitted to surveyor for consideration such as manufacturer's recommendation, approval of works involved, approval details of material/component used, qualification of personnel/service supplier, work done report as applicable. The repair procedures are to be approved by the surveyor.

(v) The stage verifications and tests are witnessed remotely by the surveyor based on the approved repair procedure. High resolution camera will be required to carry out examination of certain repairs at the discretion of the surveyor. Stage verifications including witnessing of test are also done parallelly by the Chief Engineer/Master. A report of repairs undertaken including the tests done satisfactorily is received from the ship duly signed by the manufacturer/service supplier/works undertaking the repair and countersigned by the Chief Engineer/Master.

(vi) Based on satisfactory remote survey of the repair, surveyor may accept the same subject to a confirmatory survey at the first available opportunity, being undertaken onboard or recommend a fresh COC/Statutory condition. Necessary condition is included in the survey status/statutory certificate as applicable.

c. Radio Survey utilizing services of radio technician

(i) Radio survey can be undertaken remotely utilizing the services of IRS approved Radio Firm, only after agreement with the Flag Administration.

(ii) Necessary checklist/forms/formats for survey are to be provided to the radio technician of the Radio Firm through electronic means. Radio technician is required to attend the opening meeting for remote survey where he will be provided with specific instruction by the surveyor regarding the survey, compliance to new requirement and dealing with finding if any.

(iii) The examination and test of GMDSS equipment undertaken by radio technician will also be witnessed by the surveyor remotely while these are also witnessed on board by an officer holding GOC. (Certificate of GOC holder to be forwarded to remote surveyor)

(iv) On completion of examination and test of GMDSS equipment on board, radio technician is to fill up and send the reports to the surveyor duly endorsed by GOC holder on board who witnessed the examination and test of GMDSS equipment along with supporting documents and test reports for radio equipment, as required by the surveyor.

(v) Surveyor will review the GMDSS report and supporting documents and on satisfactory review, endorse the report and issues fresh electronic certificate in case of renewal survey or endorses the electronic certificate previously issued to the ship in respect of periodical survey held now, as the case may be.

d. Inspection of Marine Components/ Equipment

(i) Any request for remote inspection is to be accompanied with details of location of the works and explanation for the Force Majeure condition or exceptional circumstance including proposal by the manufacturer in form of a quality assurance plan (QAP) for part of the inspection to be undertaken remotely and those to be undertaken physically. Further, risk assessment for acceptance of critical items by remote survey, is to be carried out and submitted to IRS.

(ii) The request for remote marine component inspection towards unit certification or against Purchase Order are to be considered subject to the manufacturing firm holding valid Type Approval and/ or Works Approval by IRS or by any other IACS member society. If the works is approved by other IACS Member, reassessment of the works by IRS may be required to be carried out on improvement of situation of force majeure.

(iii) The manufacturer may be required to provide further information as applicable such as plan/drawings, approval details of material/component used, qualification of welder, service supplier for NDT, procedure for welding, NDT and heat treatment, calibration record of test/measuring equipment etc.

(iv) The QAP along with risk assessment as proposed by the manufacturer is reviewed by the surveyor and the agreed QAP is duly endorsed by all stakeholders namely, firm, Owner and Class. Specific inspection activity to be carried out remotely are to be highlighted and additional supporting documents such as material testing reports from accredited labs, photographs to highlight features which otherwise may not be clear from submitted plans, video coverage of factory tests as per agreed test cycle and parametric/safety device tests etc. will be required.

(v) A report of examination and verification done including the tests witnessed is to be provided by the manufacturer duly signed by the quality inspector/responsible person of the manufacturer. Photograph/videography of the component including copies of tests and examination reports are to be provided for review and record.

(vi) In all cases, manufacturer's declaration is to be submitted towards correctness and truthful information/data, compliance of dimensions including material used are as per relevant drawing/plan and the component meets the requirement of Class Rules/Standard as relevant.

Part of the inspection undertaken remotely is to be subjected to confirmatory inspection at the time of physical attendance during subsequent visit. Details of the confirmatory inspection is to be agreed in consultation with the manufacturer.

Reporting is to be carried out mentioning details of consideration for undertaking part of the inspection remotely and confirmatory inspection undertaken.

C. Remote audits/ inspections

Remote shipboard audits/inspections will not be undertaken unless, due to unavoidable circumstances, these are mandated by the flag State. Where remote audits/ inspections are to be undertaken, specific instructions received from Flag will be taken into account. Where the Flag requires that the remote audit is to be confirmed by a physical audit, same is to be undertaken within the agreed period.

(a) Interim DOC Audit:

Following are to be verified:

- i. review of safety management system documentation, confirming that this meets the objectives of paragraph 1.2.3 of the ISM Code. Documentation is sent to the auditor electronically and reviewed by the auditor prior to audit.
- ii. verification that the company has adequate technical staff and DPA meets the guidelines on qualifications, training and experience for the role.
- iii. DOC audit assessment checklist is to be used for verification of the relevant items by tele-conferencing/ video chat /video live streaming or equivalent means.

A statement is to be received from the Company confirming that the Company has plans to implement a safety management system meeting the full requirements of the ISM Code within a period not exceeding 12 months.

(b) Annual / Renewal DOC Audit:

Following are to be verified:

- i. Details of ships operated by the company under the DOC.
- ii. Ships operated under the DOC have valid Class and statutory certificates and no surveys, CoCs or statutory notes are overdue.
- iii. Any modifications made to SMS comply with the requirements of ISM Code and any new requirements have been incorporated in SMS.
- iv. Record of internal audits performed by the Company ashore and aboard ships.
- v. corrective actions, including actions to prevent recurrence, for NCs recorded during previous ISM audit, if any.
- vi. corrective actions, including actions to prevent recurrence, for deficiencies identified during PSC inspection, FSI and PR17 report, as applicable, for ships operated under the DOC. Any case of PSC/FSI detention and actions to prevent recurrence.
- vii. SMC audit assessment checklist is used to verify the relevant items by tele-conferencing/ video call /video live streaming or equivalent means.

A statement is to be received from the Company confirming that the safety management system is satisfactorily implemented both in the company and on board ships operated under the DOC in compliance with the requirements of company's SMS and the ISM Code.

Audit Findings

Findings (Non-conformances, Observations, etc.) are to be drafted by the remote audit team and passed on to the auditee in a timely manner for each session for review and acknowledgement.

The findings are to be posted in writing and the auditee is encouraged to provide additional information to be included in the text.

Post Audit/inspection Activities and reporting:

The Audit report should include the details of the records reviewed and any findings.

Communication between the auditor and the auditee for sending documents or clarification on issues and corrective action management are to be pre-defined and communicated.

The auditor is to delete any confidential documents, images, recordings, etc. after the audit.

The non-conformities, issuance / endorsement of certificate, reporting of audit, are to be dealt in the same way as in case of a physical audit.

Summary of Recommendations for Audits/Inspections:

In the summary of recommendations, following text, modified as appropriate, are to be included by the Auditor/ inspector:

“[Audit/Inspection] carried out remotely, with the use of electronic technology for exchange of documents, discussions, interviews, etc. and as authorized by the Flag Administration vide their email dated dd/mm/yyyy (alternatively vide their Circular No.).”

The above text is in addition to recommendations in case of an audit by attendance on board.

c. ISM, ISPS and MLC – rectification of non-conformities or remarks

Rectification of non-conformities or remarks recorded during ISM, ISPS and MLC audit/inspection will be carried out electronically through IRS website and in accordance with relevant IRS Work Instruction Manual.

Corrective action plan is to be received from the ship / company and agreed by the auditor, in accordance with the procedures described in the relevant Work Instruction Manual.

Duly completed non-conformity report, which includes actions to restore compliance, its root cause and actions to prevent recurrence, along with supporting documentary evidences, is to be received from the company electronically.

Upon satisfactory review of non-conformity report by the lead auditor or any other qualified auditor, the non-conformity is to be resolved with endorsement electronically and suitable comments, as appropriate. Example of such comments are “effectiveness to be verified during next scheduled audit”.

The above procedure for rectification of non-conformities is applicable only to non-conformities that are not major non-conformities.

d. Postponement of Intermediate/renewal ISM/ISPS audits/MLC inspections of ships and Annual/Renewal DOC Audits of Company

Request for postponement of Intermediate/renewal SMC/ISPS audits/MLC inspections of ships and Annual/Renewal DOC Audits of Company are subject to agreement by Flag Administration.

While the list of documents which are required to be received from the ship / company for verification is provided below, based on specific scenario or case further documents may be required.

(aa) For DOC audit:

- i. any modifications made to the SMS since previous DOC audit, for review and confirming that these comply with the requirements of ISM Code.
- ii. statement from the company confirming that statutory and classification certificates of all ships being operated under the DOC are valid and no surveys are overdue. Survey records of at least one ship of each type to be verified.

(bb) For SMC audit

- i) survey records confirming that the ship is having valid Class and required statutory certificates and no surveys, CoCs or statutory notes are overdue.
- ii) latest crew list and copy of Minimum Safe Manning document, confirming that the ship is manned in accordance with minimum safe manning document.
- iii) photographs showing condition of ship and it's equipment, such as lifeboats, emergency fire pump, oily water separator, machinery space, main deck, etc.
- iv) last Master's SMS review.
- v) last Superintendent inspection report.
- vi) a statement from the Master confirming that the safety management system is in place and meets the requirements of paragraph 1.2.3 of the ISM Code.

(cc) For ISPS audit:

- a) ISPS audit Document Review Report (IRS Form), duly completed by the ship.
- b) previous SSAS test record.
- c) record of maintenance of security equipment.
- d) last internal audit report.
- e) latest crew list and copy of Minimum Safe Manning document, confirming that the ship is manned in accordance with minimum safe manning document.
- f) declaration from the Company Security Officer / Ship Security Officer confirming that security measures identified in SSP are in place and provisions of the ISPS Code have been met.

(dd) For MLC inspection

- a) copy of approved DMLC Part I and DMLC part II and confirmation that the approved copies are available on board.
- b) copy of the financial security documents as per MLC Regulation 2.5.2 and Regulation 4.2.
- c) copy of wage slips of seafarers on board for last 3 months (signed/stamped by Master and signed by individual seafarer concerned).
- d) copy of SMD and latest crew list, confirming that the ship is manned in accordance with the requirements of SMD.

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- e) statement from Master of the vessel confirming following:
- (i) COCs /Endorsements of seafarers on board valid or have been duly extended by flag Administration.
 - (ii) Seafarers Employment Agreements (SEA) of seafarers on board are valid or any expired SEA extended with consent of seafarer and concurrence of flag Administration.
 - (iii) accommodation air conditioning is working in order.
 - (iv) stocks of food, provisions and drinking water are in sufficient quantity on board. seafarer wages are paid up to date.
 - (v) medical certificates of seafarers on board are valid till next 3 months.
 - (vi) there are no on board complaints recorded /received from seafarers (if any to be specified in detail).
 - (vii) procedures as stated in DMLC part II are implemented on board and the objectives of MLC convention are met.

Based on satisfactory review of documents and flag Administration authorization, an extended Interim / short term certificate, as appropriate, valid for the duration agreed will be issued. Relevant supporting documents will be retained as records.

A physical Intermediate/Renewal audit/MLC inspection of ship and Annual/Renewal DOC audit of the Company will be undertaken as soon as practicable and in any case within the validity of extended Interim certificate / short term certificate issued.

References:

- Panama MMC – 382 - Panama Policy on Remote Surveys for Recognized Organizations and Recognized Security Organizations
- IMO Circular Letter No. 4204/Add.19 – Guidance for flag States regarding surveys and renewal of certificates during the Covid-19 pandemic
- IACS Recommendation 42 - Guidelines for Use of Remote Inspection Techniques for surveys
- ISO 9001:2015
- ISO 19011:2018 - Guidelines for auditing management systems
- IAF Informative Document 12:2021 - Principles on Remote Assessment
- IAF Mandatory Document 4:2018 - Use of Information and Communication Technology (ICT) for Auditing/ Assessment purposes

End of Guidelines