



2021

Guidance for Remote Survey

APPLICATION OF "GUIDANCE FOR REMOTE SURVEY"

1. Unless expressly specified otherwise, the requirements in the Guidance apply to remote survey for which the application for Classification Survey is submitted to the Society on or after 1 May 2021.

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CHAPTER 1 GENERAL

Section 1 General

101. Application

1. This Guidance provides specific applications for Remote Survey specified in **Pt 1, Ch 2, Sec 11 of the Rules for the Classification of Steel Ships**.
2. This Guidance describes type, procedures and the requirements for the equipment and communications for remote survey.
3. This guidance can be applied to ships performing remote survey in place of conventional witness survey.
4. In principle, remote survey is carried out through agreement between the shipowner and the Society after obtaining approval from the flag state when the surveyor cannot be witness.
5. Prior to conducting the remote survey, an agreement between the shipowner and this Society shall be discussed on type, procedure, equipment for the remote survey, and the quality of information/communication.
6. In order to conduct the remote survey, the quality of information shall be guaranteed equivalent with on-board survey carried out by surveyor.
7. In application to this guidance, the relevant requirements in **Pt 1, Ch 2 of the Rules for the Classification of Steel Ships** are to be applied.

102. Definitions

The definitions of terms are to follow **Rules for the Classification of Steel Ships**, unless otherwise specified in this Guidance.

1. **"Remote Survey Information"** means the information obtained by communication technology for remote survey, such as through photographs, videos, documents, live streaming, etc.
2. **"Hardware"** means equipment used for remote survey such as smartphones, tablet PCs, video, audio equipment and etc.
3. **"Software"** means a program that enables communication between ships and surveyor through hardware.
4. **"Applicant"** means a person of the shipowner or manager of the ship who applies for remote survey.
5. **"Remote Survey Supporter"** means a person who supports the surveyor to perform remote survey of a ship.
6. **"Live Streaming"** means a real-time broadcast for ship's conditions to the surveyor during the remote survey by audio and video throughout the Internet without any communication disruption.
7. **"Cloud"** means data stored on a central computer connected to the Internet, the data is available anywhere through the cloud.

103. Class notations

1. Ships which comply with **Ch 4** may be assigned with the Remote notation at the request of the owner.

104. Equivalency

The equivalence of alternative and novel features which deviate from or are not directly applicable to the Guidance is to be in accordance with **Pt 1, Ch 1, 105. of Rules for the Classification of Steel Ships**. ↕

CHAPTER 2 REMOTE SURVEY

Section 1 General

101. General

1. At the request of the owner, the Society accepts that it is appropriate to carry out a remote survey in accordance with the requirements of this Guidance, remote survey can be applied instead of the conventional witness survey.
2. Remote survey is determined whether or not it can be conducted according to the PSC Total Matrix Point of the Society (hereinafter referred to as "PSC TM Point"), and the type of survey available in each section follow **Table 1**.

Table 1. Type of survey according to PSC TM Point

PSC TM Point	Annual Survey ¹⁾	Occasional Survey (Flag Change) ²⁾	Occasional Survey (General)
TM Point < 80	Applicable	Applicable	Applicable
$80 \leq \text{TM Point} \leq 100$	Not Applicable	Applicable	Applicable
TM Point > 100	Not Applicable	Applicable	Applicable ²⁾
(Remark)			
1) For ship with Remote notation			
2) After completion of the remote survey, the survey will be re-conducted at the next port that can be attended by surveyor.			

3. Where the required data or conditions are not met or where any damages or defects requiring attention are identified or the Society deems it necessary, the Remote Survey is to be canceled and conventional witness survey is to be carried out.

102. Survey Method

1. The following methods can be used for Remote Survey.
 - (1) Documents
 - (2) Pictures
 - (3) Videos
 - (4) Live Streaming
 - (5) Other methods as deemed appropriate by the Society.
2. Annual Survey shall be carried out in accordance with **Par 1 (4)**.

103. Type of Remote Survey

1. Remote Survey is applicable to the following items.
 - (1) Occasional Survey (Laid-up, Minor Damage, etc.)
 - (2) Three(3) month extension of Shaft Survey
 - (3) Three(3) month extension of Boiler Survey
 - (4) Continuous Machinery Survey
 - (5) Outstanding COC(Condition of Class) or confirming the repairing deficiencies or corrective actions.
 - (6) Annual Survey (It is applied to ship with Remote notation and feasibility shall be confirmed according to requirements in **Ch 4**)
 - (7) Other Survey as deemed necessary by flag state and Society.

2. Even for ships with Remote notation, Annual Survey is not applied if the PSC TM Point in **Sec 101. 2** is 80 or more at the time of submission of the remote survey application.
3. Notwithstanding **Par 1**, if deemed necessary by the Society, alternative survey methods or witness survey is to be required. ↴

CHAPTER 3 PREPARATION

Section 1 General

101. General

1. This chapter provides the matters to be prepared on the ship before remote survey.
2. This chapter describes equipment and communication requirements used for remote survey, and qualifications of remote survey supporter.
3. For cyber security purposes, remote survey equipment should be independent of the ship's main communication system.
4. When conducting remote survey in enclosed spaces of the ship (ballast tanks, engine room, etc.), equipment in **Ch 4, Sec 2** may be required.

Section 2 Technical Requirements for Remote Survey equipment

201. Requirements for Remote Survey equipment

1. When selecting information collecting equipment and communication equipment, the reliability of hardware and software shall be considered.
2. The data format of recorded video and photo should be universal, and a communication environment that can reliably transmit and receive recorded video and photo with quality suitable for remote survey.
3. Data transmission means for massive capacity recorded videos and photos shall be discussed with the Society in advance.

202. Quality of Informations and Communications

1. The quality of videos and photos should be satisfactory to the surveyor.
2. Communication for remote survey is based on using the Internet. Communication quality suitable for remote survey shall be maintained without communication problems such as communication interruption or significant time delay.
3. The quality of the remote survey information should be sufficient to judge the condition of the hull structure and machinery equipment.
4. If possible, the date, time and place should mark in the transmitted remote survey information to verify the validation.

Section 3 Remote Survey Supporter

301. General

1. Remote survey supporter should provide surveyor with remote survey information that guarantees the same quality as conventional witness survey.

302. Qualification

1. Remote survey supporter should be fully familiar with management and use of remote survey equipment and procedures. ↓

CHAPTER 4 REQUIREMENTS FOR Remote NOTATION

Section 1 Survey

101. General

1. In addition to **Ch 3**, Ships complying with this chapter may be assigned with the Remote notation at the request of the owner.
2. The shipowner should identify type of survey including annual survey, and reflect the type of survey and the list of necessary equipment in remote survey procedure manual.
3. Notwithstanding the above notation, survey types and items applied to remote survey shall be sufficiently discussed with the Society before proceeding with the survey.

102. Classification Survey

Ships intending to register shall be satisfied with this chapter.

1. Drawings and data

The following drawings and data are to be kept onboard after reviewed by the Society.

- (1) Remote Survey Procedure Manual (for reference)
 - (A) type of survey
 - (B) Procedure of remote survey
 - (C) equipment list for remote survey
 - (D) Instructions of equipment for remote survey
 - (E) Maintenance procedure for remote survey equipment (changes, maintenance records, etc.)
 - (F) Designated remote survey supporter of the ship
- (2) Where remote survey equipment are installed, wiring diagram and arrangement (for review)

2. Testing and inspection

- (1) Visual inspection
- (2) Function test
- (3) Simulation test (if necessary)

103. Periodical Survey

1. Check that the remote survey procedure manual specified in **102. 1** is provided on board and well maintained.
2. Through the tests and inspections specified in **102. 2**, the effectiveness of the remote survey equipment is verified.

Section 2 Remote Survey equipment

201. General

1. The remote survey equipment should be capable of live streaming in the area to which the remote survey is applied.
2. The remote survey supporter should manage the remote survey equipment so that the remote survey can be performed smoothly.
3. It should be able to check the list of remote survey equipment and its management history through the remote survey procedure manual.
4. The remote survey information collected or transmitted through the remote survey equipment shall be marked with an accurate date and time or be confirmed by other means.
5. All equipment used in the hazardous area should be explosion-proof suitable for the area.

202. Remote Survey equipment

1. At least the following information collecting equipment should be available on the ship.
 - (1) Live streaming equipment
 - (2) Filming equipment such as video and camera
 - (3) Equipment necessary for collecting other information
2. The following information and communication technology equipment can be used in ship.
 - (1) Communication equipment
 - (A) Smartphones, tablet PC and computers capable of video conference
 - (B) Equipment capable of transmitting and receiving remote survey information
 - (C) Wi-Fi modem
 - (D) Network cable for use in enclosed spaces where wireless communication is not available
 - (E) Closed headphones with microphone
 - (F) Other equipment required for Internet access
 - (2) Software
 - (A) Application for video calling
3. Other necessary equipment
 - (1) Cloud or equivalent equipment that can submit remote survey information

Section 3 Remote Survey Supporter

301. General

1. The remote survey supporter shall be designated in the shipping company's safety management system manual or remote survey procedure so that the surveyor can perform the survey smoothly.

302. Qualification

1. Since the survey is conducted on the ship, it is a principle that the person in charge of the relevant job of the ship is in charge of the remote survey according to the division of work in the safety management system manual of the shipping company. However, depending on the situation of the ship, an assigned person by the ship owner may substitute for it. ↓

CHAPTER 5 CONDUCT REMOTE SURVEY

Section 1 General

101. General

1. The remote survey is applied after the applicant and the Society agree.
2. This chapter deals with preparations and survey procedures required for remote survey.
3. When live streaming is applied to remote survey, there should be sufficient consultation between the Society and the applicant on the type of survey.

102. Precautions for survey

1. The surveyor confirms that the quality of the information provided by the remote survey supporter can be sure the reliability equivalent to witness survey.
2. Remote survey supporter should collect and provide necessary information at the request of the Surveyor.
3. The remote survey can be canceled if the remote survey information for the surveyor's judgment cannot be obtained, such as communication failure during the survey or the inability to transmit the informations.

Section 2 Remote Survey Procedure

201. Remote survey conduct procedure

1. Applicants submit an application for remote survey to the headquarters or branch office of the society.
2. After confirming the approval of the flag state and the survey application at the headquarters, the Society approves the conduct for remote survey and informs the applicant of the results. If it is determined that remote survey is not possible, it shall be conducted through conventional witness survey.
3. The surveyor review the type, methods and procedures of the survey. In addition, the surveyor checks the operating status of the hardware and software used for remote survey and/or the communication environment between the shore and the ship to ensure the quality of the survey.
4. The surveyor should confirm that the ship for which the remote survey is applied and the ship conducting the survey are the same.
5. Before the start of the survey, the surveyor checks the communication status with the ship and performs remote survey as follows:
 - (1) Preparation meeting between the remote survey applicant and the surveyor (when remote survey is performed through live streaming)
 - (2) Confirmation of the survey target according to the method specified by the surveyor
 - (3) Depending on the type of survey, the information and verification means (videos, photos, documents, etc.) to be collected by remote survey supporter according to the instructions of the surveyor are provided together with the 'Declaration of Master' in Annex 1.
 - (4) The surveyor confirms the collected information and determines the survey results.
 - (5) Remote survey close meeting
6. If the remote survey results are satisfactory, the Surveyor issues a ship survey report. ↓

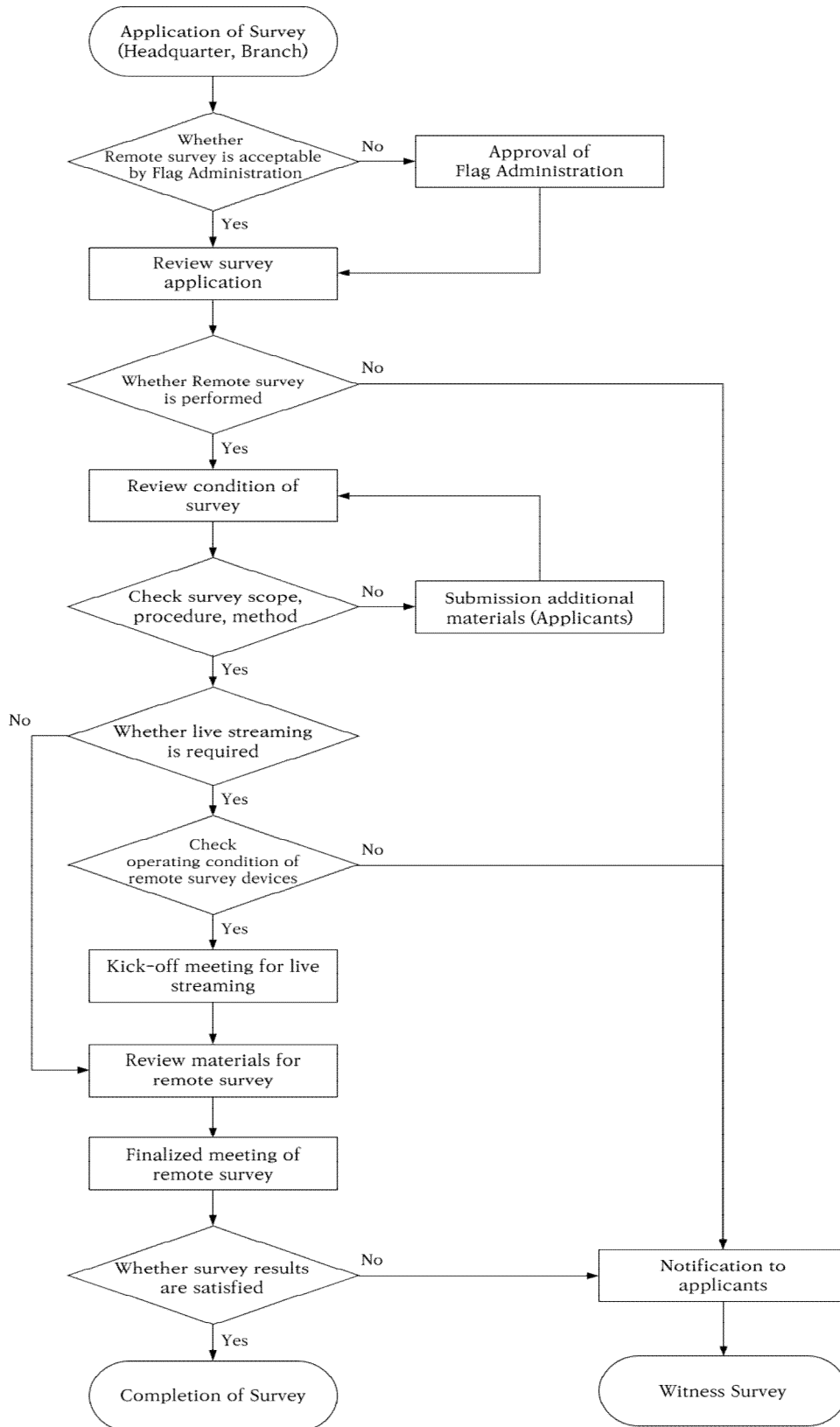


Fig. 1 Flow chart of remote survey procedure

Annex 1 Declaration of Master

The master should prepare and submit a declaration in accordance with **Ch 5, 201. 5 (3)**, and an example of the preparation is shown in **Table 1**.

Table 1 Example for declaration of master

<h1 style="margin: 0;">DECLARATION OF MASTER</h1>	
Ship name	
IMO No.	
Flag	
Name of the Master	
<p>I, Master of the subject ship, declare that there is no falsehood on the presented data (video, photo, statement, documents, etc.) to Korean Register for the survey at this time, and agree with Terms and Condition of Survey Application of Korean Register.</p>	
Day. Month. Year.	
Master Signature (Stamp)	

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