



MARITIME AND PORT AUTHORITY OF SINGAPORE
SHIPPING CIRCULAR
NO. 13 OF 2018

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Applicable to: Shipowners, ship managers, operators, masters of Singapore-registered ships and Recognized Organizations (ROs)

ACCEPTANCE FOR THE USE OF REMOTE INSPECTION TECHNIQUES FOR SURVEYS

1. This circular informs all our stakeholders that the usage of remote inspection techniques can be accepted for the conduct of surveys on board Singapore Registered Ships. When permitted, remote inspection technique may be used to facilitate the required external and internal examinations. The methods applied for remote inspection technique are to provide the survey results normally obtained for/by the Surveyor.
2. The remote inspection techniques may comprise of the following:
 - Unmanned Robotic Arm
 - Remote Operated Vehicles (ROV)
 - Unmanned Aircraft System (UAS)
 - Other means acceptable to the Administration.
3. For periodical surveys using UAS, if the UAS is not operated by the RO itself, the company engaged to operate the UAS for the inspection is to be approved by the RO for carrying out such services in accordance to the RO's criteria for approving service providers. Inspections should be carried out in the presence of the Surveyor.
4. An inspection plan for the use of remote inspection technique(s), including any confirmatory survey/close-up survey/thickness measurements, is to be submitted to the RO for review and acceptance in advance of the survey. The proposal for usage of UAS in periodical surveys is to be submitted by the RO to the Administration for acceptance.
5. The results of the surveys by remote inspection techniques when being used towards the crediting of surveys are to be acceptable to the attending Surveyor. Confirmatory surveys/close-up surveys may be carried out by the Surveyor at selected locations to verify the results of the remote inspection technique, if required.

6. The acceptance of remote inspection techniques does not waive the requirement for thickness gauging where applicable. Thickness gauging by remote inspection techniques can be accepted subject to the same criteria of approval as applied to other Non-Destructive Test (NDT) techniques by the RO. Confirmatory thickness measurements on-site may be requested by the attending Surveyor, if required.

7. The usage of remote inspection technique is not acceptable in conditions as stipulated in the Annex to this document.

8. Reference is made to the ESP Code Annex A (Bulk Carrier) and Annex B (Oil Tankers); *“Close-up survey is a survey where the details of structural components are within the close visual inspection range of the surveyor, i.e. normally within reach of hand.”* In addition to requirements in paragraph 1 to 7 above, the usage of remote inspection techniques such as UAS can be accepted for close-up survey on ships subjected to the ESP Code, if the attending surveyor is satisfied that the information provided by the remote inspection technique, such as video footage from the UAS, is equivalent to a survey where the details of structural components are within the close visual inspection range of the surveyor.

9. Any queries to this circular should be directed to Mr Goh Chung Hun at 63756206 or email: shipping@mpa.gov.sg.

CAPT DAKNASH GANASEN
DIRECTOR OF MARINE
MARITIME AND PORT AUTHORITY OF SINGAPORE

ANNEX

Unless agreed by the Administration, the usage of remote inspection technique is not accepted or not to be continued for the specific location on the ship, at the following conditions:

1. Where there is existing record or indication of abnormal deterioration or damage to structure or to items to be inspected.
2. Where there are existing recommendations for repairs or conditions affecting the class of the vessel.
3. Where during the course of the inspection survey, defects were found such as damage or deterioration that requires attention. In such cases, the normal close-up survey/thickness measurement without the use of remote inspection technique is to be carried out to determine the scope of repairs required.
4. Where the coating condition of the tank/hold is rated as less than “Good¹” by the Surveyor. This does not apply to sections of cargo oil tanks that are not coated and stainless steel cargo tanks.

¹ Refer to Resolution MSC. 288(78), “*Performance Standard for Protective Coating for Cargo Oil Tanks of Crude Oil Tanker*” for the definition of “Good” condition.