

Subject

Improvement measures to reduce the damage generated by fire accident on large size Vehicle Carriers  
-Effective use of fixed foam fire-extinguishing systems-

# **ClassNK**

## ***Technical Information***

No. TEC-1239  
Date 11 June 2021

To whom it may concern

Recently, multiple cases have been reported that some large size Vehicle Carriers which had fire in cargo space with consequent almost or total loss of cargoes. Japanese Administration studied the safety measure to avoid any casualties and to minimize cargo damage at similar accidents in future. As the result of study, "Measures for effective use of fixed foam fire-extinguishing systems" was concluded, as per attached to this Technical Information. Finally, on 10 June 2021, the Administration invited the Japanese shipowners' Association to disseminate the result of the study to its members and take possible spontaneous action for improving fire safety of this type of vessels further. This information is also sent to ROs recognized by Japanese government including this Society for reference.

The working group on study for the countermeasure (hereinafter "the working group") composed of Japanese Administration, relevant organizations, shipping companies, shipyards, manufacturers of fire extinguishing/detection systems, university, etc. was established. This Society participated in the working group as well.

"Measures for effective use of fixed foam fire-extinguishing systems" as attached to this Technical Information is concluded based on the study including the fire test for vehicles using gasoline, early detection of fire, efficient use of the fixed foam fire-extinguishing system etc.

As this Society has been seriously involved in the working group with a view to enhancing fire safety, the ship owners and management companies managing large size Vehicle Carriers are kindly urged to consider taking "Measures for effective use of fixed foam fire-extinguishing systems" for the safe navigation.

This Society plans to issue the guidelines on this issue and more details will be addressed in them. Information on the issuance of the guidelines will be publicized through our website etc. Paying continuing attention on this would be highly appreciated.

(To be continued)

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“Measures for effective use of fixed foam fire- extinguishing systems”

It is recommended to implement following measures for effective use of fixed foam fire- extinguishing systems. The target and assumed conditions are as follows:

- Type of vessel: Vehicle Carrier
- Gross tonnage : abt 60,000
- Loading Condition: Full load

- The target time (Standard time: 14min※) for activating fixed foam fire-extinguishing system should be set in “Procedure to activate foam fire-extinguishing systems (A part of procedure for fire extinguishing)” which is related to Safety Management System. The target time should be announced to the crews.

※ Above target time 14 min is a simply the standard time. Actual target time is to be decided by ship owners and/or operators etc., in consideration of specification, construction, kind of cargoes and loading condition etc.

It is possible to apply / refer these measures to other size vehicle carriers in consideration of the time for on-site confirmation of fire etc.

The background of the standard time being set as 14min will be provided in the guidelines which will be issued at a later date.

- The measures in below table should be implemented to achieve the target time for activating fixed foam fire-extinguishing. The measures may be applied to both new building and existing ships by establishing and/or modifying the fire extinguishing policy, procedure etc.
- The operation matters (e.g. Omission of the fire extinguishing action using fire hoses and hydrants etc.) should be specified in “Procedure for fire extinguishing”.

Note: The measures in the following table assumes the loading of vehicles using gasoline, therefore mixed loading of electrical vehicles and hybrid vehicles is not anticipated at the moment.

Table : Measures for effective use of fixed foam fire-extinguishing systems

Item	Content
The measures to be implement	The automatic(remote) start of generators (To secure the required electrical power rapidly for the use of fire-extinguishing system) <sup>*1</sup>
	Normally-open or automatic ventilators (To shorten the starting time of fire extinguisher) <sup>*1</sup>
	Omission of the fire fighting action using fire hoses and hydrants <sup>*2</sup>
The measures recommended to implement(Option)	Remote monitoring of cargo holds using CCTV (To detect the fire rapidly)
	Securing the safety of crews with RFID tugs etc. (To shorten the time to roll-call)
	Installation of one smoke detection to each frame spaces of car deck ceiling (To detect the fire certainly)
	Installation of the additional boundaries to prevent the spread of fire in cargo holds (To prevent the spread of fire and to remove the psychological obstacles to activate the fire extinguisher) <sup>*3</sup>

<sup>\*1</sup>: Alternatively, activation of generators and operation of ventilators can be manually done by each team(s) formed by crews, provided that there is no adverse effect for achieving the target time (standard time: 14min) for activation of fixed foam fire-extinguishing systems.

<sup>\*2</sup> Except for cases where the fire may be certainly extinguished by fire hoses and hydrants such as: the fire in the vicinity of wheelhouse, the fire happened to be discovered by crew during fire patrol. In this case, if the enough number of crews onboard are forming multiple firefighting teams, firefighting by hoses and hydrants can be tried provided that the fire is being monitored onsite in parallel. However, there should be no adverse effect for achieving the target time (standard time: 14min) for activation of fixed foam fire-extinguishing systems.

<sup>\*3</sup>: This measure is supposed to be applied only to newly built ships.