

DANISH MARITIME AUTHORITY

	Issue	Regulations	Authority
Technical solutions	LNG operation of ships	<p>Consolidated act no. 72 of 17 January 2014 on safety at sea.</p> <p>Passenger ships: International voyages: Notice B from the Danish Maritime Authority. Domestic voyages: Notice D from the Danish Maritime Authority.</p> <p>Cargo ships with a length of or above 15 metres: Notice B from the Danish Maritime Authority.</p> <p>All installations where LNG is used as fuel, except for LNG tankers: Resolution IMO MSC.285(86), "Interim guidelines for natural gas-fuelled engine installations in ships".</p> <p>LNG tankers: International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code).</p>	Danish Maritime Authority Division: Ship Survey and Certification
	Standard procedures and communication	<p>Approval of gas installations in accordance with Res. MSC.285(86):</p> <p>Drawing approval, approval of general risk assessment, cf. section 2.-1. The approval of the gas installation must be made by the ship's classification society, except on passenger ships where the Danish Maritime Authority is the approving authority:</p> <ul style="list-style-type: none"> - Fire safety, cf. section 3. - Section 8 on operational and training requirements. - Bunker procedures, including emergency procedures. 	<p>Ship's classification society</p> <p>Danish Maritime Authority Division: Ship Survey and Certification</p>
Procedures	Bunker installations	<p>Bunker installations must be fitted with:</p> <p>A defect detection system with two stop/fast closing valves located on the ship and the bunker station, respectively, as close to the coupling as possible, which will automatically close in a maximum of 5 seconds in case of a defect (an Emergency Shutdown System (ESD)). Gas detectors on the manifold connected to the ESD. Manual emergency stop from bunker station, engine control room and the LNG supplier (vehicle tank or bunker ship), all connected to the ESD. The break-away function on the hose between the ship and the LNG supplier manifold is located so as to create as little spillage as possible in case of a leak. The use of quick couplings making it possible to separate hoses, etc. during LNG flow.</p>	<p>Ship's classification society</p> <p>Danish Maritime Authority Division: Ship Survey and Certification</p>

Risk assessment	Bunker operations on passenger ships with passengers on board	<p>If it is intended to perform LNG bunker operations on passenger ships while there are passengers on board, a special risk analysis must be made, showing that the operations can be performed in a manner that is at least as safe as ordinary bunker operations.</p> <p>This risk analysis is an addition to the general analysis and must include the safety conditions on board the ship and on the quay, evacuation of the ship and port areas, etc.</p>	<p>Danish Maritime Authority</p> <p>Division: Ship Survey and Certification</p>
Bunker operations on cargo ships and passenger ships without passengers on board	Bunker operations on cargo ships and passenger ships without passengers on board	LNG bunker operations on passenger ships without passengers on board and on cargo ships must be performed in accordance with the above-mentioned procedures; the bunker operation as such does not require any special approval by the Danish Maritime Authority.	
Training	Training of ships' crews	<p>Res. MSC.285(86) stipulates the special training requirements for crews on board LNG fuelled ships based on the individual crew member's function on board.</p> <p>The Danish Maritime Authority approves these courses.</p>	<p>Danish Maritime Authority</p> <p>Division: Ship Survey and Certification and Maritime Regulation and Manning</p>