

## Scrubber

Note 1: Information which detail was unknown from the reference documents is left blank.

Note 2: In order to improve the appearance, there are some differences in the expression of the regional regulations from the reference documents.

Country	Area	Summary	Reference documents
Norway	Fjords (World Heritage)	Ban on the use of open-loop scrubbers. (Actual sentence in the reference documents: Approved closed loop exhaust gas cleaning system or hybrid exhaust gas cleaning system in closed loop mode shall use.)	<a href="#">06 (Norway)Regulations.msg</a> (Refer to the Section 14b)
USA	California	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">Final 2013 VGP</a> (Refer to the 6.4.1, 6.5.9)
	Connecticut		
UAE	Port of Fujairah	Ban on the use of open-loop scrubbers.	<a href="#">ClassNK TEC1173</a>
China	Port area of the Coastal Control Area*	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">ClassNK TEC1174</a>
	Inland River Control Area**		
	Bohai Area		
Germany		Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">CDNI Convention</a> (Refer to the PART C Article 9.01(1))
Belgium	Ports or inland waters	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">2016 note on discharge of scrubber washwater</a> (Refer to the BE column of PDF page 4)
Ireland	Port of Dublin	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">Notice to mariners (Dublin Port Company)</a>
	Port of Waterford		<a href="#">Marine Notices (Port of Waterford Company)</a>
Singapore		Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">A Guide For Ships Calling To Port Of Singapore</a>
Panama	Panama Canal	Ban on the use of open-loop scrubbers.	<a href="#">ClassNK TEC1194</a>
Malaysia	Malaysian water (12 nautical miles from the nearest land)	Discharge of exhaust gas scrubber washwater is prohibited. (Any ship transiting through the Malaysian Waters without any intention of entering at any Malaysian Ports is exempted)	<a href="#">MSN072019</a>
			<a href="#">MSN082019</a>
Bermuda	Territorial waters	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">environmental-policy-ships</a> (Refer to the 3.)
Egypt	Suez Canal	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">8-2019</a>
Saudi Arabia	Port	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">Circular No.(55) 2020</a>

Oman	Ports or territorial waters	Discharge of exhaust gas scrubber washwater is prohibited.	<a href="#">Maritime Notice No.09/2020</a>
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\*Within 12 nautical miles of China coast

\*\*Regulated waters of Yangtze River and Xijiang River

## Low sulphur fuel oil

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Country	Area	Summary	Reference documents
EU	Union port	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass. (Ships at berth in Union ports, except the cases when ships are due to be at berth for less than two hours according to published time tables, or the cases when ships switch off all engines and use shore-side	<a href="#">DIRECTIVE(EU)2016/802</a> (Refer to the Article 7)
Norway		Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass.	<a href="#">Environmental safety for ships and mobile offshore units</a> (Refer to the Section 13)
USA	California	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass.	<a href="#">ClassNK TEC879</a>
China	DECAs***	Ban on the use marine fuels with a sulphur content exceeding 0.50% by mass	<a href="#">ClassNK TEC1171</a>
	Inland River Control Area**	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass. (2020/1/1~)	
	Hainan Water Area	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass. (2022/1/1~)	
Hong Kong	Hong Kong waters	Ban on the use marine fuels with a sulphur content exceeding 0.50% by mass.	<a href="#">ClassNK TEC1167</a>
Taiwan	Port of Keelung	Ban on the use marine fuels with a sulphur content exceeding 0.50% by mass.	<a href="#">ClassNK TEC1163</a>
	Port of Taichung		
	Port of Kaohsiung		
	Port of Hualien		
	Port of Taipei		
	Port of Suao		
	Port of Anping		
	Port of Mailiao		<a href="#">Inspection requirement for ships in Mailiao</a>
Turkey	Ports and inland water	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass. (Quay of Turkish ports and inland vessels)	<a href="#">ClassNK TEC882</a>
Australia	Sydney Harbour	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass. (Cruise vessels capable of accommodating more than 100 passengers)	<a href="#">AMSA Marine Notice 21/2016</a>

South Korea	Around the major domestic ports such as Busan Port, Incheon Port, Yeosu Port, Gwangyang Port, Ulsan Port, Pyeongtaek and Dangiin Port	Ban on the use marine fuels with a sulphur content exceeding 0.10% by mass.	<a href="#">Sox emission control in Korean ports</a>
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\*\*\*Control area which includes both Coastal Control Area and Inland River Control Area