This news covers vital information from the Chinese Ministry of Transport: introduction of a 0.5% sulphur limit for ships entering China’s coastal waters, and updated NOx regulations for imported ships engaged in domestic trade. Both regulations will enter into force on 1 January 2019.

To improve the quality of shipping and promote the environmentally friendly development of water transport within China, the Chinese Ministry of Transport published new requirements on 6 December 2018 for air pollution in Chinese coastal waters:

1. 0.5% sulphur limit from 1 January 2019
From 1 January 2019, all ships entering China’s coastal waters must use fuel with a maximum sulphur content of 0.5% m/m. The coastal waters are illustrated in Figure 1, and coordinates are listed in the document published by the Chinese Ministry of Transport (see reference below). A carriage ban for fuel oils containing more than 0.5% sulphur will be enforced for all ships without an exhaust gas cleaning system (EGCS, or scrubber) starting from 1 March 2020, thus being in line with global IMO sulphur regulations.

From 1 January 2020, even stricter requirements will apply to ships entering inland waterways, including the Yangtze River and Xijiang River (western part of Pearl River), where a maximum 0.1% sulphur content will be allowed. From 1 January 2022, the 0.1% limit will also apply to the domestic area of Hainan Island.

For ships undergoing a conversion, which includes the installation of EGCSs in Chinese dockyards, should communicate with the Chinese Maritime Safety Administration if fuel oils with a higher sulphur content can be used during the commissioning test of the EGCS.

China will further evaluate the situation of using 0.1% sulphur fuel and will determine whether to implement the 0.1% sulphur limit in all coastal waters (not only the rivers) from 1 January 2025.

2. Updated regulations on NOx emissions for ships in domestic trade
In the past, DNV GL published a news covering requirements for second-hand vessels involved in Chinese domestic transport (see DNV GL Technical and Regulatory News No. 10/2018).

Further details to this regulation are now been made available.

It is now confirmed by the Chinese Ministry of Transport that all diesel engines installed on board an imported ship, which is engaged in domestic trade, need to comply with the IMO...
Tier II emission limits, i.e. main and auxiliary engines. The new NOx regulations are applicable for diesel engines installed on either:

- Imported vessels (acquired second-hand from international owners) or
- Chinese-flagged vessels which are only involved in Chinese domestic transport (either coastal or inland).

These vessels are required to comply with the IMO Tier II emission limits. This limitation applies to vessels imported after 1 September 2018 and to vessels converted to be engaged in domestic trade only after 1 September 2018. The NOx emission regulations cover vessels operating within domestic waters (see figure 1).

The only means of acceptance criteria for this requirement are valid Engine International Air Pollution Prevention (EIAPP) certificates. Other (voluntary) statements of compliance will not be accepted.

There are basically three ways to comply:

1. Engine already fulfils Tier II level, but EIAPP currently only shows certification according to Tier I:

   In this case, a new Tier II engine group can be established based on paperwork. The responsible engine manufacturer should be contacted.

2. Engine does not fulfil Tier II, but by changing some settings such as injection or valve timing, it can be incorporated into an already approved Tier II group:

   New settings to be fit by the engine manufacturer; new NOx Technical file needs to be prepared with the new settings, including a final parameter check by DNV GL on board the ship; issuance of EIAPP (Tier II).

3. Engine does not fulfil Tier II and parts need to be changed:

   On-board emission test according to test bed requirements of NOx Technical Code. After successful emission testing of an emission group, the NOx Technical File and EIAPP need to be prepared. This option might not be feasible, as in most cases it is cumbersome to fulfil the strict requirements of test bed conditions at an on-board emission test.

**Recommendations**

1. 0.5% sulphur limit

   All ships operating in Chinese coastal waters are recommended to strictly follow the early implementation of the 0.5% sulphur content limit in fuel oils starting from January 2019.

2. NOx requirement for import vessels

   If it is intended to sell a ship to a Chinese domestic owner and the vessel was keel laid before 1 January 2010, it might be a challenge to convert some diesel engines to the Tier II emission limits, without a conversion. Some possible scenarios are outlined in this news.

**References**

Maritime Safety Administration of the People’s Republic of China

DNV GL Technical and Regulatory News No. 10, July 2018: New requirements for NOx emissions for vessels engaged in Chinese domestic trade
Update on emissions to air regulations for ships operating in Chinese coastal waters