

Large diesel emission technologies



Magister Les Gingell
Vice President, Marine Sales
MAN Energy Solutions
les.gingell@man-es.com

Technical and Regulatory News No. 10/2018 – Statutory

New requirements for NOX emissions

for vessel engaged in Chinese Domestic Trade

Relevant for ship owners and managers.

The new NOx regulations are applicable for diesel engines installed on either: Imported vessels (acquired second-hand from international owners) or Chinese-flagged, international sailing vessels which are only involved in Chinese domestic transport (either coastal or inland). They 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 the following waters:

Coastal waters . Chinese National 12 nm zone

Hainan Island waters. Chinese Regulation and the Real World
Retrofit from Tier 0 or Tier 1 emissions to Tier 2 is POSSIBLE, but:

From old mechanical engines (MC, MC-C) to Tier 2 could be costly because of significant retrofit costs.

Retrofit to Tier 2 would mean that there would have to be a “parent” engine, of the same configurations which would have to be tested to Tier 2 requirements.

Other engines would have to be retrofit to exactly the same configuration. Would probably involve engine timing, turbocharger configuration, significant combustion chamber changes etc.

Other methods MIGHT be available, such as incorporating an ECO EGR, but again, there will need to be a “parent engine” that was tested for compliance.

Chinese Regulation and the real world for NOX business:

Retrofit from Tier 0 or Tier 1 emissions to Tier 2 is POSSIBLE, but:

From old mechanical engines (MC, MC-C) to Tier 2 could be costly because of significant retrofit costs.

Retrofit to Tier 2 would mean that there would have to be a “parent” engine, of the same configurations which would have to be tested to Tier 2 requirements.

Other engines would have to be retrofit to exactly the same configuration. Would probably involved engine timing, turbocharger configuration, significant combustion chamber changes etc.

Other methods MIGHT be available, such as incorporating an ECO EGR, but again, there will need to be a “parent

engine” that was tested for compliance.

MAN B&W 2-stroke Marine Engine Controlling SO_x by
Cleaning the Exhaust

Extensive rebuild of the funnel was necessary to give space for the scrubber.

