



Technology and Solutions

80% fewer emissions: “Artania” equipped with EGR system

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Credit

In order to meet the higher standards for emissions, the cruise ship “Artania” was equipped with a modern exhaust gas recirculation system.

The project was carried out by ship manager [BSM](#) Cruise Services and Swedish system manufacturer CET Marine. The “Artania”, which sails for Phoenix Reisen, is the world’s first cruise ship to be equipped with IMO III-compliant exhaust gas recirculation (EGR). It sails in ecologically vulnerable areas such as the Norwegian fjords, where strict emission regulations have been in force since mid-2024.

The system, which has been installed on the ship’s engines, reduces NO_x emissions during combustion directly at the source. This makes it an effective alternative to conventional selective catalytic reduction (SCR) systems, which are normally installed in the ship’s smokestack, according to the engineering firm Alternative Energy Solutions.

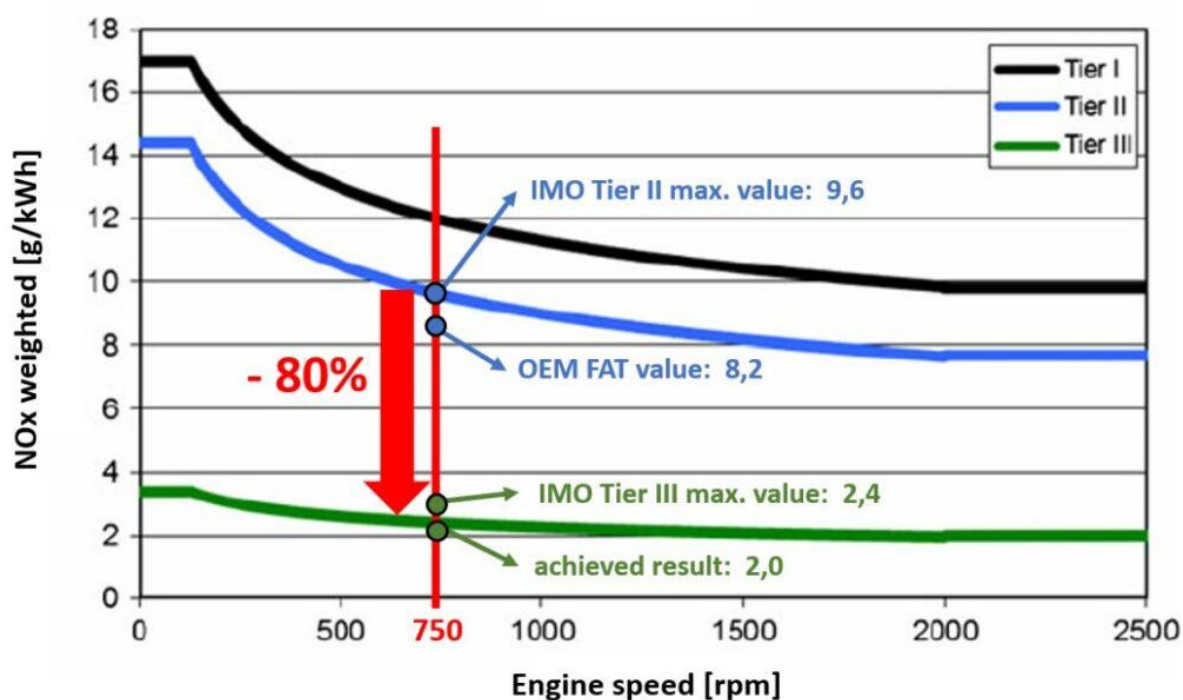


Engine equipped with EGR (© Phoenix Reisen / AES)

“Artania” saves 500 tons less of NO_x emissions per year

The “Artania”, built in 1984, underwent its first modernisation back in 2014, when it was equipped with four Wärtsilä main engines (12V 32E) to comply with the IMO II standard at the time. The EGR systems that have now been added have reduced the ship’s emissions by 80% compared to the requirements for IMO Stage 1. This means that the “Artania” saves around 500 tons of NO_x emissions in one year, it is said. The classification society [Lloyd’s Register](#) issued a new EIAPP certificate in July 2024, confirming compliance with the requirements.

IMO NOx Tier Levels



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As the ship spends a large part of its operating time in Norwegian waters, the project was supported and co-financed by the Norwegian NO_x Fund. Alternative Energy Solutions, which specialises in emission reduction and is based in Germany, managed the implementation.

The “Artania” (44,500 GT, formerly “Royal Princess” and “Artemis”) has been sailing for Phoenix Reisen since 2011. The 231-metre-long ship can accommodate a total of 1,200 passengers on nine decks and is crewed by around 500 people. The ship was last docked at the [Lloyd Werft in Bremerhaven](#); among other things, balconies were added and further modifications carried out.