



# PRESS RELEASE

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## Ricardo delivers first virtual remote certification testing for a marine engine

**To continue to enable marine sector customers to check their products' compliance with upcoming international regulations to prevent air pollution from ships, Ricardo has implemented a virtual certification test service. This enables the witnessing agent, customer and its sub-system supplier to observe tests and validate quality checks safely and remotely**

With travel restrictions, quarantine procedures and social distancing measures associated with the control of the Covid-19 pandemic still in place, Ricardo's 'digital-first' strategy is enabling the company to offer customers in the marine sector an advanced emissions testing and certification service.

IMO Marpol Tier III regulations, which relate to the prevention of air pollution from ships, will apply to shipping in the North Sea and Baltic Sea from January 2021. Ricardo worked with its Norwegian-based customer Bertel O. Steen Power Solutions to provide a virtual certification service to certify a large marine engine series. This was the first time that Ricardo had undertaken an IMO Tier III virtual certification testing event for a customer in the marine sector.

Bertel O. Steen Power Solutions arranged for the engine to be shipped to the test facility at Ricardo's Shoreham Technical Centre. The Ricardo team provided a suite of



IT solutions to streamline the remote certification test process. These included fixed and portable camera technology to enable inspection of the test-cell and the emission measurement system checks, and a comprehensive connection of virtual network connectivity to consolidate multiple systems: the test automation system data display, test-cell live camera, engine management system (EMS) and selective catalytic reduction (SCR) control sub-system, all of which were orchestrated centrally by the test engineer to continually adapt the presentation display securely via Microsoft Teams to suit the witnesses requirements, while operating an efficient compliance testing schedule.

In addition, the Ricardo team facilitated separate connectivity of the EMS and SCR remotely to Bertel O. Steen Power Solutions and its Swedish sub-system supplier to enable effective live monitoring and control of specialised systems by the relevant experts in Sweden and Norway.

This enabled the customer, the supplier and the German-based independent witnessing agent (DNV GL) to observe the remotely-performed emissions tests and validate quality checks which more usually would be undertaken in person, and participate in the test and certification virtually and safely – without the need for travel.

Even as organisations start to return to normal after national, regional or local lockdowns, the successful implementation of remote engine, vehicle test and certification work may continue to appeal to customers and witnessing agents within the marine sector particularly given the need post-pandemic to accelerate product plans by reducing time and cost, while receiving a high quality, safe and efficient service.

Ricardo Test Operations director Richard Murphy commented: “The impact of the Covid-19 pandemic and the resultant travel restrictions could have stopped this certification test completely. Fortunately, Ricardo has considerable experience in virtual certification and with the strong responsive cooperation of Bertel O. Steen Power Solutions, we were able to work together to change the whole delivery concept at very short notice. Without adapting to support a remote event it is unlikely that our customer would have been able to certify in the required timeframe with anyone else and may have faced substantial logistical challenges with 7-14 day isolation of staff during any international travel.”

“Although this is our first IMO Tier III certification event, the general requirements are broadly similar for any recent or current global emission standard, so the key deliverables of open, transparent testing, quality data, excellent digital security and a high level of responsiveness, apply to any federal marine testing, European on- and off-highway certification project. Therefore, we were able to apply our knowledge and experience of successfully performing remote/virtual test and certification events for eMachines, passenger cars, real driving emissions and other on-dyno testing to this challenging project. We know that the remote accessibility of the Ricardo test facilities is proving increasingly attractive to our customers for more general test operations.”



Ingleif Iverson – Director of Engineering & Projects – Bertel O. Steen Power Solutions said: “I want to take the opportunity to thank the Ricardo team for very good cooperation through the complete project. A number of challenges due to Covid -19 did not manage to stop Ricardo from performing their mission, and we are extremely grateful to the team, both at Ricardo and the witnessing authority, for going the extra mile to support our test and certification.”

In April 2020, Ricardo announced a ‘world first’ in virtual vehicle certification enabling automaker clients and certification bodies to observe tests via a secure, live three-way feed to the automation and data management systems of Ricardo’s advanced test facilities.

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## NOTES TO EDITORS:

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**Bertel O. Steen Power Solutions (BOS Power)** supplies high quality and reliable power systems for professional marine, industrial and critical public infrastructure applications. The company is located across the Nordic countries - offering local support, service, spare parts and workshops - securing an optimal lifecycle cost and uptime, through the lifetime of the systems. Find more information at [www.bospower.com](http://www.bospower.com)

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