

PACECO GROUP and Mitsui E&S Machinery provide solutions to reduce port emissions by NZE RTG Transtainer® and ZE RTG Transtainer®

Corporate Press Release: 2/25/2021

PACECO Group (PACECO) and Mitsui E&S Machinery (MES-M) announced the market release of NZE (Near Zero Emission) RTG Transtainer® and launch of ZE (Zero Emission) RTG Transtainer® development.

The NZE Transtainer is an updated version of the PACECO-Mitsui well-established hybrid Transtainer, first introduced to the market in 2009 with power module combination of lithium-ion batteries and half size engine than a conventional Transtainer. The NZE Transtainer features larger lithium-ion batteries and smaller engine genset designed with a start/stop feature to primarily operate to recharge the battery bank. The hybrid power system is fully integrated into the crane with internally developed technologies to drive crane efficiencies and achieve tight interaction with the crane.

Climate change is compelling ports and terminals to consider methods to reduce emissions from container handling equipment. Moreover, governments issued objectives to become carbon neutral by 2050, and port emission reduction is a key area to attain those objectives. In the US, the Port of Los Angeles and Port of Long Beach launched a Clean Air Action Plan (CAAP) with a goal to achieve zero emissions by 2030.

MES-M and PACECO have long advocated for advanced technologies to reduce emissions, and successfully developed and introduced a hybrid version of the popular Transtainer to the market. MES-M released the eco-friendly Hybrid Transtainer in 2009 and by 2020 have delivered more than 270 units to global customers. “MES-M and PACECO, have heavily invested in lower emission technologies to assist our global customers, and proud to be a leading manufacturer of hybrid cranes,” said Soshi Sato, president and CEO of PACECO. “NZE technologies will allow our customers to invest now with low emission Transtainers and enable them to easily convert to zero emission Transtainers in the future.”

NZE technology benefits the environment and operational costs by reducing CO₂, NO_x, and PM particulates, lower fuel consumption, and reduce maintenance cost. The PACECO-Mitsui Hybrid Transtainer realize fuel savings of 60% over a conventional RTG, and the NZE Transtainer can achieve an additional 20% savings in fuel consumption compared to a Hybrid Transtainer.

Zero emission technologies such as hydrogen fuel cell power modules are advancing, however establishment of required infrastructure will take time. MES-M is aggressively proceeding with ZE solutions, and currently developing a hydrogen fuel cell power module for ZE Transtainers. This will easily enable the Conversion of NZE Transtainer to a ZE Transtainer by simply replacing the diesel generator with a hydrogen fuel cell power module without modification of other drive systems or mechanical parts, and plan to complete in-house testing of ZE Transtainer by March 2023.



ZE technology testing to be conducted on the Transtainer at our Zero Emission Development Center in Mitsui E&S Oita factory.