Onshore Power Supply for Cruise Ships

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The market for ship cruises is continuously growing over the past years. During the last 10 years the number of passengers only in Germany has tripled and currently this trend does not seem to end soon. The frequency of calls at the ports world-wide is constantly rising.

As a logical consequence of these growths the problem of exhaust emissions in the ports is increasing. At an average a cruise ship is at the pier 40% of its operating time. During this time the onboard systems need to be supplied with power. This usually is produced by the ship’s own diesel generator sets.

Thus, all around the cruise ship terminals pollution by nitrogen oxides, sulfur dioxides and particulate matters is happening, which at times can be that high that, strictly speaking, residential areas would not be permitted. In times of bans on motorized traffic for passenger cars in city centers and “ecological footprints” for ports additional pollution just cannot be afforded anymore.

We offer innovative systems and system-components for supplying onshore power into the onboard supply systems of cruise ships, container vessels as well as electrical ferries. This way, we are contributing to the reduction of emissions of air pollutants, noise and carbon dioxides in the port areas.

Our systems can be customized individually to the conditions in all the ports world-wide.
At the Cruise Terminal in Hamburg we have installed an onshore power supply system for cruise ships which is unique in its dimensions and design.

The power- and data transmission to the cruise ship is effected by means of our onshore power supply-vehicle which can be moved along a underfloor cable channel with a length of 300 m. By means of the underfloor supply it is granted that the medium voltage cable is not damaged and that the port operations are not negatively influenced by cables lying about. Thus, the logistics in the pier area are not affected while the cruise ship is present. For controlling and driving the vehicle only one person is required. Our onshore power supply-vehicle as well as the low floor- and cable system are protected from flooding up to a height of 1.3 m above the quay edge (IP 67).

Corresponding to the requirements of the particular ship our system transmits different frequencies and voltages. From the long travel distance and the tidal range compensation of up to 9 m an enormous coverage range is resulting with regard to the accessibility of the ship connection hatch.
In the port of Shanghai, at the cruise terminal Wusongkou, we have realized an onshore power supply system which is customized especially to the local conditions.

Our onshore power supply-vehicle is moved to the pier by a battery-operated drive and there it is coupled with our underfloor connection system. From this supply point on a flexible travel distance of up to 70 m is possible.

This system also has a tidal range compensation and can, corresponding to the requirements of the particular ship, supply different frequencies and voltages. In accordance with the standard our onshore power supply-vehicles offer pilot-/ground check- as well as cable tension monitoring.
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