

Onshore Power Supply for Container Vessels



STEMMANN APPLICATIONS

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Reduction of emissions in ports

The emissions caused in the port area are a growing problem due to the increasing capacities of the ports. For keeping the vessel functional in the quay area of a port normally the required power is produced by means of auxiliary diesel engines and generators while the main engine is switched off.

In the future, a power supply by means of onshore power supply units will replace the diesel-powered vessel generators to a large extent. The implementation of emission limit values and environmental specifications in general additionally expedite this development.

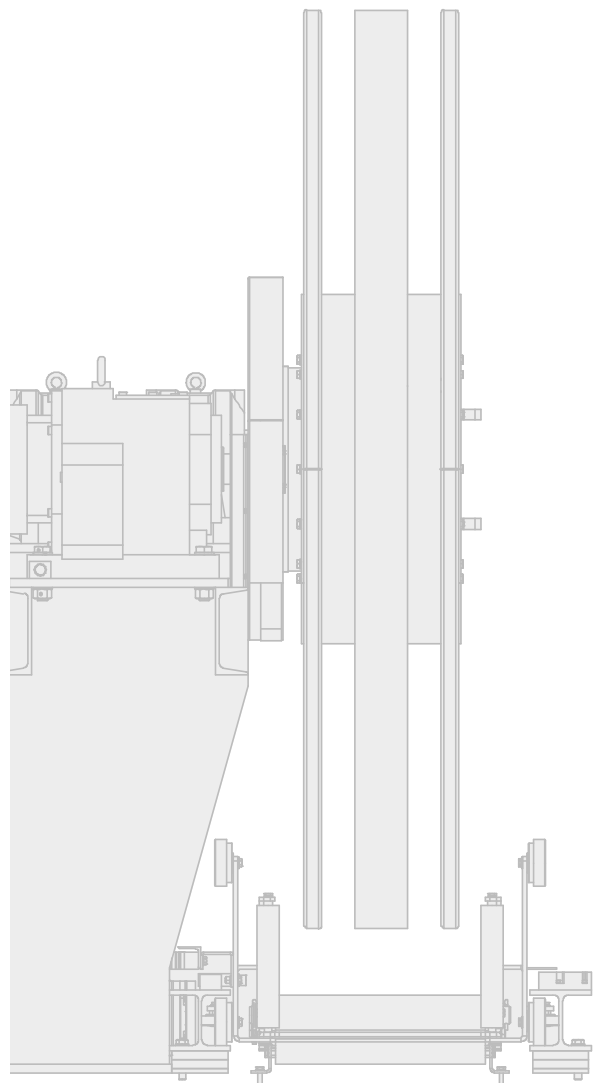
We offer systems and system components for feeding onshore power into the onboard power grid and thus contribute to reducing the emissions of air pollutants, noise and carbon dioxide in the port area.

BACKGROUND KNOWLEDGE

In 2006, the European Commission passed a "recommendation for the promotion of the onshore power supply for vessels at quays in ports of the European Community" (2006/339/EG) [EuKom06u]. The European Commission requests the member states to check the installation of onshore power supply systems at the berths, especially where the limit values of the air quality are exceeded. The member states shall inform the European Commission about planned measures to be taken to reduce the vessels' emissions in ports. In the draft submitted in 2009 regarding the revision of the EU-directive of energy taxation for 8 years a tax exemption of onshore power for shipping is intended, for that onshore power and power produced onboard are treated equally with regard to taxes.

An example for the rapid development is the port of Los Angeles, USA. Here, until 2013 all cruise ships and two thirds of the container vessels shall be supplied with onshore power.

Quelle: www.forschungsinformationssystem.de

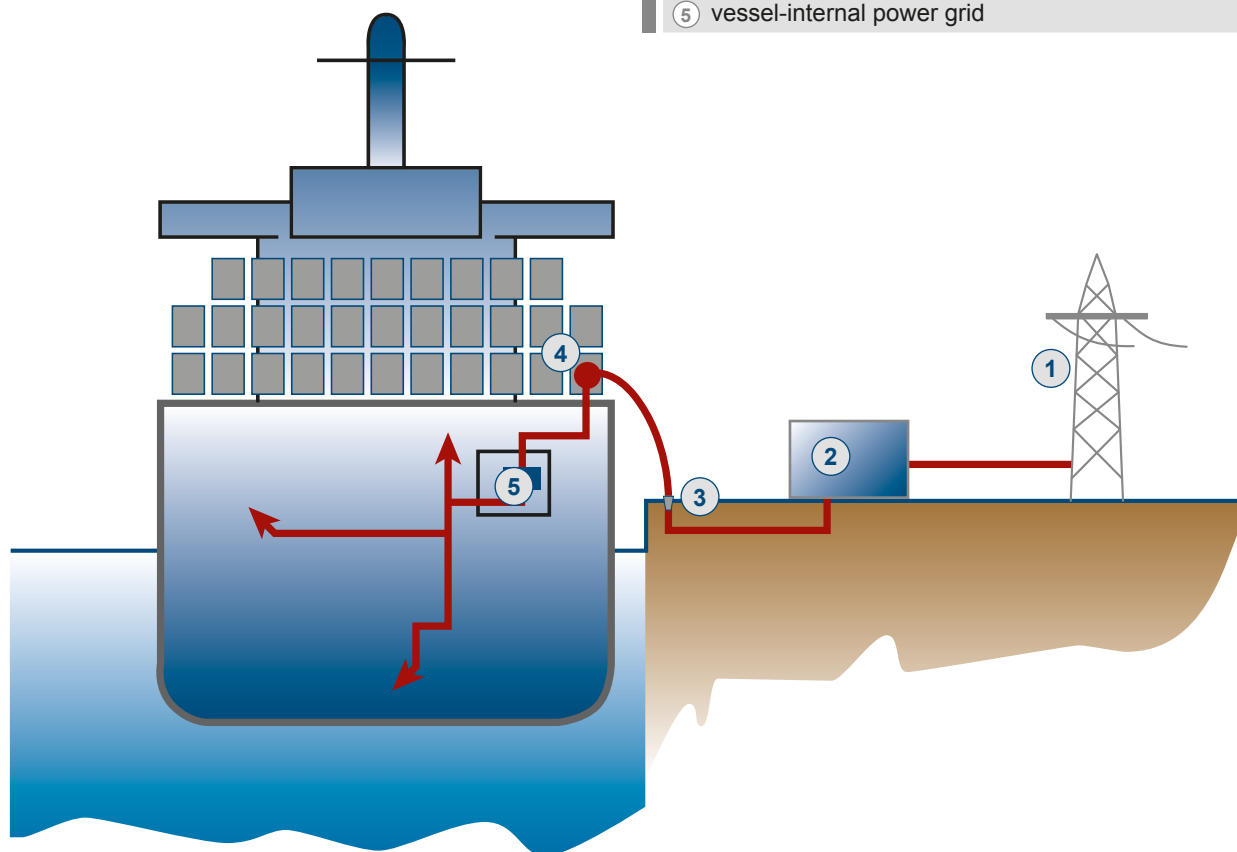


Onshore Power Supply

QUALITY MADE IN GERMANY

POWER SUPPLY TO THE CONTAINER VESSEL

- ① regional power grid
- ② transformation / frequency adjustment in the port
- ③ connection mechanism at the quays
- ④ container unit incl. cable reel
- ⑤ vessel-internal power grid



TECHNICAL DATA (EXEMPLARY)

Version	spiral motor cable reel incl. extendable roller conveyor
Cable length	up to 35 m
Hoist distance	30 m to 35 m
Mounting height/height above quay wall	approx. 25 m
Winding speed	max. 12 m/min
Cable diameter	68 mm to 75 mm
Cable weight	9.9 kg/m
Voltage / power / amperage	6.6 kV / 7.2 MVA / up to 800 A
40 ft. HC-container (inside dimensions)	12.040 m x 2.340 m x 2.680 m
Reel body	core diameter = 800 mm / outer diameter = 2100 mm
Ambient temperature	- 25 °C to + 45 °C
Ambient conditions	sea-climate / application on vessels
Further components	slip ring assembly / fibre optic rotary connector

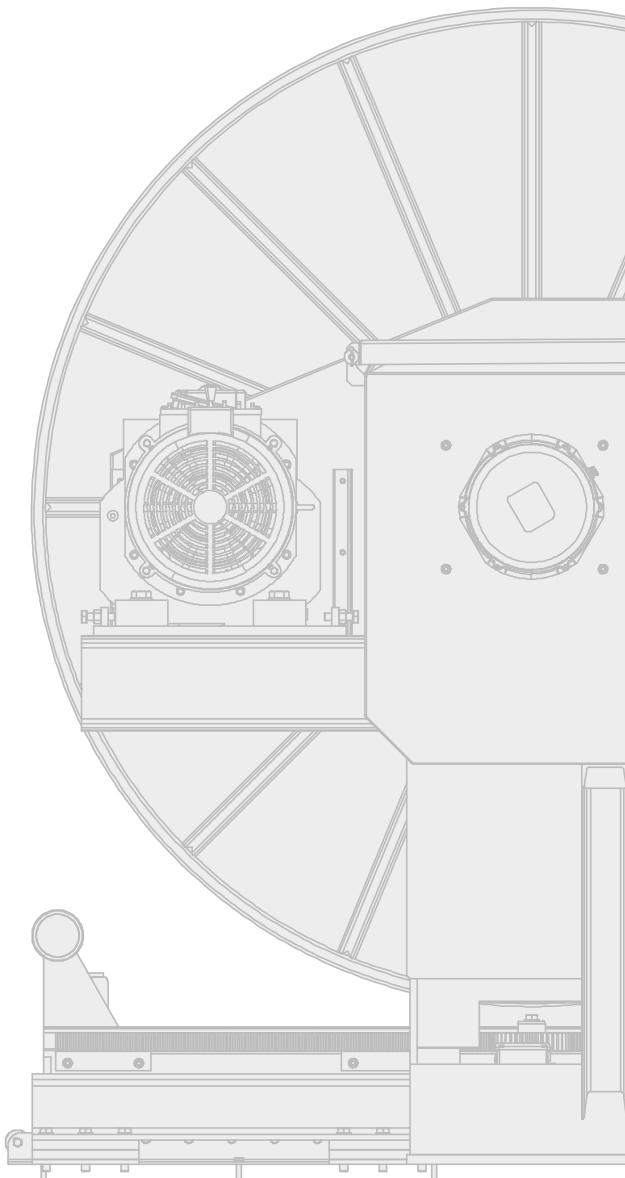
Onshore power supply by means of container-system

The feed of the onshore power supply for container vessels is realised by the installation of a 40 ft. HC-container in the bottom storage row. The mounting height can be up to approx. 25 m above the quay wall.

The system consists of a spiral cable reel with slip ring assembly and fibre optic rotary connector incl. the drives for the reel and the extension system of the roller conveyer. The operation is effected by means of a radio remote control.



Cable reel in the container hatch



Inside of the container at time of installation

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Corporate headquarters and manufacturing facility in Schüttorf, Germany

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