

# PRESS RELEASE

EST-Floattech to offer Inductive Charging System® for the maritime sector

## **EST-Floattech and INTIS sign agreement for the market introduction of inductive charging systems for the maritime sector.**

**EST-Floattech has concluded an agreement with INTIS – the global technology leader in the area of induction charging for mobility – to develop an Inductive Charging System® for the marine sector. In the agreement, both parties have committed themselves to an exclusive collaboration for North-West Europe. The Inductive Charging System® will be combined with the Li-Ion NMC battery chemistry. It will be specifically designed for electric and hybrid power propulsion and is intended for application on yachts, commercial vessels and ferries.**

### **Making every second count**

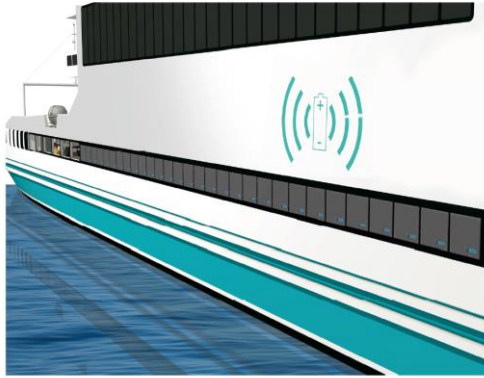
Induction charging makes a cable connection between ships and the shore redundant, resulting in time gains where recharging is concerned. This opportunity-based charging system offers huge benefits, especially in situations where vessels are frequently berthed for short periods back to back.

### **Smaller battery pack, smaller investments**

Because the recharging process begins immediately with every berthing, the battery packs can be smaller. This saves space on board and requires smaller investments in storage capacity. The INTIS inductive power transfer system can be installed with an absolute minimum of changes to the vessel and existing infrastructure, and enables the safe transfer of large amounts of energy. Installation requirements are kept to a minimum.

### **Hands-free, for ease of use and safety**

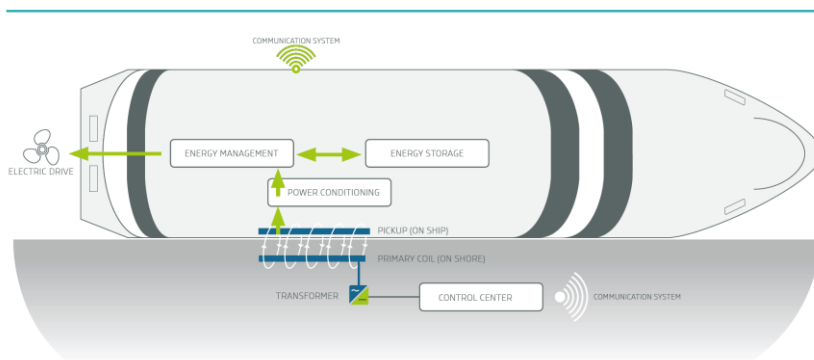
In addition to financial benefits, the Inductive Charging System® offers ease of use and safety. It eliminates the need for cable connections, so the attention of everyone on board can be dedicated to the berthing process and other routine tasks. The Inductive Charging System® also reduces the need for maintenance: there are no cables that can wear out and no electrical connection points to become damaged or worn by water/seawater, snow and ice.



### Technology

The wireless INTIS technology was originally developed in 2013 for charging heavy vehicles (e.g. electric buses) on the move. Since then, INTIS has adapted this ‘dynamic’ technology for stationary applications. Each wireless inductive charging system is composed of land-side and ship-side components. The land-side components consist of a power electronics cabinet, connected to the power grid and communications network, which first rectifies incoming 3-phase power and then converts the resulting DC current to high-frequency AC for wireless transfer. This high-frequency AC power flows through a charging plate, which creates an alternating magnetic field. On the ship-side, a pick-up plate converts this alternating magnetic field back into high-frequency AC current. Our ship-side power electronics then rectify this AC current and supply the resulting DC power to the ship’s DC intermediate circuit.

The transfer of power between the charging and pick-up plates of our inductive charging technology is completely free of cables and plugs and is not affected by water in any way, even if the plates are submerged.



## Inductive charging system<sup>©</sup> - Specifications

	30 kW system	100 kW system
Rated power	30 kW	100 kW
Rated air gap	3 cm	5 cm
Rated frequency	30 kHz	30 kHz
PRIMARY COMPONENT		
Area	0,5 m <sup>2</sup>	1,5 m <sup>2</sup>
Thickness	34 mm	34 mm
SECONDARY COMPONENT		
Area	0,75 m <sup>2</sup>	2 m <sup>2</sup>
Thickness	22 mm	22 mm

\* Expandable to 900 kW

### About INTIS

INTIS specialises in the provision of integrated engineering services, catering to the key industrial sectors of energy and transport. Their focus lies with sustainable solutions. The wireless provision of energy on the move has the potential to increase the available charging time, thereby increasing the flexibility of EVs while simultaneously reducing the load on the grid. A reduction in the required charging energy also allows the use of inexpensive energy buffer storage systems to further reduce the strain on the grid. Locally generated renewable energy could finally be used to power the transport sector.

### About EST-Floattech

Worldwide, EST-Floattech serves the maritime and land-based sector with clean, silent, powerful energy systems based on lithium polymer batteries. The environmental gains are great: NO<sub>x</sub> and CO<sub>2</sub> emissions are reduced to little to nothing, and offensive odours and noise pollution are also diminished for the crew, the environment, residents and the natural world. Our lithium polymer batteries are implemented in fully electric vessels, for example, as well as robust hybrid combinations with a traditional diesel or LNG generator.

### For further information

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