

## Duresca® busbars for a link between gas turbine and generator



ABB Energi & Industri A/S, Denmark, placed an order for two three-phase generator links for the Power Plant Mongstad CHP of the DONG Generation Norge AS, Norway. Each of them connects a gas turbine generator with a power transformer. In addition to that the power supply of the excitation transformer is connected by a T-off sleeve.

### Technical data of the busbars

- 24 kV and a max. current of 7000 A for the main busbar
- 24 kV and 1000 A for the derivation to the excitation



A part of the installation is an outdoor service (transformer). The delivery also comprised a metal framework of 7 m. MGC delivered the required protection boxes for the generator side as well as for the transformer side and a fire wall plate was also supplied.

This is where the fully insulated Duresca® busbars offer an ideal solution for a high voltage application for indoor and outdoor service.

**Advantages of this solution**

- Little space is required
- Smallest possible arc radius
- High short-circuit strength
- Fully insulated busbar system
- Natural cooling

Transformer Side	Generator Side
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Connection to the auxiliary transformer

## Expertise in offshore applications: Why the fully insulated Duresca® busbars are particularly indicated

The application of Duresca® busbars makes sense on offshore platforms, because they meet the requirements of a rough environment and limited space. Furthermore they allow to decrease the cost of platforms and to facilitate the assembling.

### Structural saving

The reduced bend radius allows, in comparison to cables, an optimization of the run. This reduced space requirement leads to a possible reduction of the structure dimensions and as a consequence to substantial economy.



### Installation process

The use of connecting sleeves authorizes an optimized split in the run and therefore simplifies, in comparison with cables, the assembling of the busbars run. A simplified assembling saves money and time.

### Corrosion aspects from saline offshore environment

The severe conditions bound with the saline environment need an adapted solution regarding the choice of the exposed materials. Fixation hardware is in a particular quality of stainless steel, special fastening clamps are not in aluminium as usual and what is to be noted, is the excellent behaviour of the protection tube in polyamide which represents also a strong barrier against moisture ingress as well as a mechanical protection of the busbars. These are decisive pre-conditions regarding corrosion given in the harsh sea environment.

### Duresca® and Tiresca® busbars for Marine application

The Duresca® and Tiresca® of MGC have been successfully certified by the Marine division from Bureau Veritas and find application in ships.



Jewel of Sea is equipped with Duresca® busbars