

## Duresca® busbars in renewable energy: Geothermal Power Station



Recent supply of MGC, the Geothermal Hellisheidi Power Station started its operation in 2006 and is actually the second largest geothermal power plant in the world, 213 MW in electrical energy, biggest in Iceland. This plant is situated in the city of Hengill, an active volcanic ridge in Iceland, South West of the country.

Orkuveita Reykjavíkur is its owner. Once completed the full capacity of this plant, the Geothermal Hellisheidi Power Station will be the largest of the world with 300 MW in electricity and 400 MW in thermal energy.

The installed capacity includes 4 turbines with 45 MW and 1 turbine with 30 MW, all in operation. This plant started its operation with just 1 turbine with 40 MW and 1 with 45 MW; in 2007 received 1 more turbine with 30 MW and, in 2008 added 1 turbine with 40 MW and 1 with 45 MW. In 2010 this disposition was reviewed to get the current capacity.

This plant is combined with heat and power plant. The purpose is to meet the increasing demand for electricity and hot water for space heating in the industrial and domestic sectors.

The region covers 112 square kilometres and is one of the most extensive geothermal areas in Iceland.

The Orkuveita Reykjavíkur supply heating, water and electricity for more than 50% of Iceland population, and due to this reason needs a safe partner to supply them quality equipment. MGC is the best partner for these applications, because we have top quality products, a specialized technical team to give support on design and after sales services, and may deliver its systems in a short time.





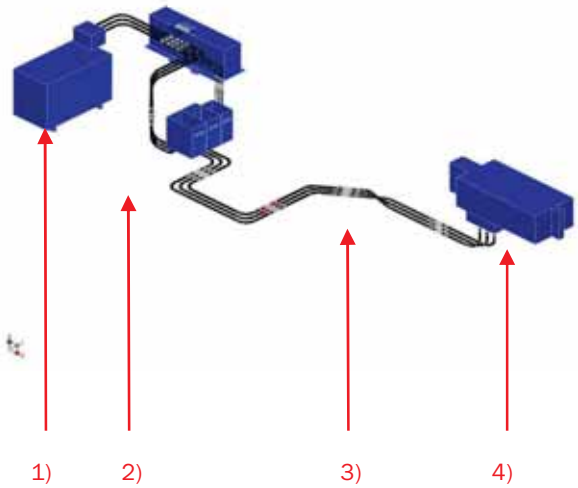
**Electrical data and Duresca® Busbar use:**

- main circuit connecting power transformer—generator—switchgear: 17.5 kV, rated current 3150 A, short-circuit capacity 40 kA 1 sec.

- auxiliary circuit: 17.5 kV, rated current 1250 A and the same short-circuit capability 40 kA 1 sec.

**The scope of this supply:**

- 270 m of DURESICA Busbar in 17,5 kV 3150 A
- 90 m of DURESICA Busbar in 17,5 kV 1250 A
- as usual, complete set of supports, earthing systems and bends
- assembly supervision service



1) Power transformer connection

2) Auxiliary transformer

3) Switchgear

4) Generator

