Case study - Wando-Dongjeju 3 HVDC Converter Station Project

Kraftpowercon secure the operation of converter cooling stations for HVDC link

Project

Jeju is one of South Koreas nine provinces and its biggest island. This subtropical paradise, which is known for its beauty and volcanic sand beaches, lives 620,000 people.

Korea Electric Power Corporation (KEPCO), South Koreas's largest electric utility, is building a third HVDC interconnection to provide an additional 200 MW of power to boost supply and stabilize the island's power grid.



HVDC

Jeiu

Challenge

The Wando – Dongjeju onshore converter stations will convert AC to DC and reverse to feed the national grids. To prevent overheating, the converter process generate undesirable heat that has to be cooled continuouslyby a water-cooling pump system. A seamless power backup is required for the pump system in the event of a power outage during operation. The critical power infrastructure is secured for continuous operation with the KraftPowercon UMD system.

Solution

Scope of supply include UMD for converter stations

Uninterruptible Motor Drive system for cooling pumps



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Uninterruptible Motor Drive

Benefits



Electrical configuration for each station:

UMD[™] S400 is an inverter system for uninterruptible operation of a standard AC-motor with mains supply and with back-up from a battery system. The transition from mains supply to battery supply is automatic and seamless.

Single Line Diagram



- Highest possible availability
- Eliminates Single Point of Failure



*KraftPowercon offers solutions for uninterruptible motor drives based on decades of experience. We have tailored the solution for the Wando-Dongjeju project to meet the high requirements and expectations."

Håkan Rydenborg -Technical Sales Manager KraftPowercon

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