Taishan, China

The Guangdong Guohua Yuedian Taishan Power Plant has been built in Tongguwan, Taishan City in the Guangdong Province of China. Surrounded by three sides of mountains and one side of sea, the power plant is located 180 km from Guangzhou City and 50 km from Taishan City. It is one of the most important power plants in Guangdong Province. With its total capacity of 3,000 MW (2005), the power plant covers approximately one tenth of the Guangdong Province’s electric-net installed capacity.

Customer:
Guangdong Guohua Yuedian Taishan Power Co. Ltd., P.R. China

Application:
3,000 MW

Commissioned:
Unit 1 + 2: 2003
Unit 3: 2005
Unit 4: 2005
Unit 5: 2005

Full corrosion resistance thanks to duplex stainless steel

The Guangdong Guohua Yuedian Taishan Power Co. Ltd. operates an extra sub-critical fossil fuel fired power plant optimised for the processing of coal. The direct seaside location means that cargo ships can unload the coal to the large coal storage area of the power plant. KSB has delivered 10 vertical cooling water pumps for the 5 units of the Taishan power plant. The pumps, ideally suited to handling the 30 °C warm seawater setting high requirements on the material of the pump components, provide the top performance required. The use of duplex stainless steel (1.4462 for the shafts and the welded components, 1.4571 for the castings of impellers and wear rings) ensures full corrosion resistance of the SEZ range pumps.
Solutions for Taishan, Units 1-5

Following the initial contract in 2001, KSB delivered four cooling water pump units including motors for the Taishan power plant units 1 and 2. A second contract was signed in 2003 for the supply of 6 further cooling water pump units including motors destined for the power plant units 3, 4, and 5.

### Taishan, Units 1-5 – Scope of supply and project details

<table>
<thead>
<tr>
<th>Pumps supplied:</th>
<th>Technical data of SEZ:</th>
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</thead>
<tbody>
<tr>
<td>2003:</td>
<td>• Flow rate Q: 39,600 m³/h</td>
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<tr>
<td>4 pumps for Taishan units 1 + 2</td>
<td>• Head H: 17.8 m for Units 1 + 2</td>
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<tr>
<td>2 x 2 SEZ A 20-135, welded duplex</td>
<td>• 18.2 m for Units 3, 4 + 5</td>
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<tr>
<td>design, with ALSTOM motor</td>
<td>• Speed n: 329 min⁻¹</td>
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<td>( P_{\text{motor}} = 2,500 \text{ kW} )</td>
<td>• Efficiency ( \eta_{\text{pump}} ): 87.2 %</td>
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<td></td>
<td>• Power ( P_{\text{motor}} ): 2,500 kW (6,000V / 50 Hz / 18 poles)</td>
</tr>
</tbody>
</table>

2005:
6 pumps for Taishan units 3, 4 + 5
3 x 2 SEZ A 20-135, welded duplex design, with VEM motor
\( P_{\text{motor}} = 2,500 \text{ kW} \)

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