Turboexpander Modification & Redesign

LAT44 Turboexpander-Compressor

L.A. Turbine completed a modification and redesign of the mechanical center section of this existing turboexpander-compressor located on an offshore platform off the African coast. The purpose of the project was to increase gas-processing capacity, while accommodating the existing requirement for a reduced footprint, meeting the demanding environmental platform conditions and providing the customer with more reliable, stable and maintenance-free equipment. The modification and redesign work involved the magnetic bearing, terminal boxes, inlet guide vane (IGV) system, feed-through seal, active magnetic bearing control system, PLC Delta-V control system and seal gas system.

Specifications

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>L4000/FR40</th>
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</thead>
<tbody>
<tr>
<td>Speed</td>
<td>21,500 RPM</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>223,433 kg/hr.</td>
</tr>
<tr>
<td>Inlet Pressure/</td>
<td>79 BAR A/-5.6°C</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>Outlet Pressure/</td>
<td>26 BAR A/-55.6°C</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>Wheel Power</td>
<td>4300 kW</td>
</tr>
</tbody>
</table>
L.A. Turbine designs and manufactures application-specific, highly engineered turboexpanders used in hydrocarbon processing, geothermal power generation and other industrial power recovery or refrigeration applications.

The company is also a recognized leader in aftermarket repair, redesign, maintenance and production of spare parts for all brands and configurations of turboexpanders worldwide.

24/7/365 Support Services

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Turboexpanders

Turboexpander configurations include expander-compressor, expander-generator, expander-dyno (oil brake) and expander-compressors with active magnetic bearing units. Turboexpanders range from 3kW to 14MW, are capable of handling up to 3,000 PSIG pressure, can operate at speeds up to 105,000 RPM, and accommodate temperatures between -195˚C to 260˚C.

Ability to Deliver

From concept to commissioning, L.A. Turbine controls and manages the entire design, engineering manufacturing, assembly and testing process for all new and aftermarket equipment. As a result, we are able to deliver faster-to-market customized solutions than competitive firms, and our equipment not only meets but often exceeds clients’ output performance requirements. All engineering design and development processes comply with ISO 9001:2008.

Global Presence

L.A. Turbine has established a global presence on five continents, in 16 world offices and partner locations. U.S. headquarters and manufacturing is located in Valencia, California, with sales and service facilities in California, Texas and Belgium. U.S. operations also support the needs of Canada, South America, Asia and Australia. European headquarters in Belgium serve Europe, the Middle East and Africa.

L.A. Turbine: Your On-Call Turboexpander Experts

L.A. Turbine designs and manufactures application-specific, highly engineered turboexpanders used in hydrocarbon processing, geothermal power generation and other industrial power recovery or refrigeration applications.

A global field service team provides diagnostics, maintenance and emergency support 24/7/365.

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