The experience acquired during this time (since 1940) allows us to provide a wide range of products, developed from our own technology, placing us in a position of leadership in those sectors in which we operate.

The more than 25,000 generators for wind applications, more than 23 GW of installed power throughout the world are a clear exponent of our competitiveness and productive capability and of the trust our clients have shown in the company.

At Indar Electric, the quality of our products and services, respect for the environment, and occupational hazard prevention are all essential to our work. With this in mind, we have achieved management systems certification in compliance with the ISO-9001, ISO-14001 and OHSAS-18001 international standards, with the aim of establishing continuous improvement bases on the involvement of all parties.

In this context, Indar Electric has decidedly opted for the LEAN Manufacturing Philosophy and systems of self-control and bar code traceability as a framework for competitiveness in the coming years, with the aim of offering excellence in our products and services.

Indar Electric, an Ingeteam company, has worked for over 75 years in the design, manufacture and supply of electrical rotating machines.
Cooperation with the client forms part of the philosophy of the company, with a personalized and unique treatment forming the basis of the relationship, and with a clear common purpose.

INDAR has one of the best test benches in the world. The main capabilities are:

- On load tests up to 9 MW
- Back to back configuration testing up to 65 MW
- LVRT (Low Voltage Ride Through) testing capability
- Self generated grid of 50/60 Hz 20 MVA
- Combined tests of electrical and thermal insulation ageing
- Climatic chamber (-30ºC to 80ºC) extreme ambient conditions.

The test bench allows INDAR to fully test his designs for all kinds of environmental conditions and to guarantee the best quality on his products.

INDAR develops products and services adapted to the characteristics of each project and client. For this purpose, the R+D+i support unit is made up of highly qualified personnel, and has the most advanced computer resources for the design and development of generators.

### World class testing facilities

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The main philosophy of the company is to guarantee the quality and the reliability with in-house fully proven solutions.

### SYNCHRONOUS AND ASYNCHRONOUS WIND GENERATORS

The range of generators is adapted to the requirements of our clients based on state-of-the-art technology for Onshore and Offshore applications.

#### Features

- Tailor made solutions according to customer specifications.
- Generators of power levels from 1MW up to 9MW.
- Asynchronous doubly fed or synchronous with permanent magnets.
- Direct Drive, medium or high speed.
- Air or water cooled.
- Up to insulation class H for all types of machines.
- Voltages from 690 V up to 12000 V for DFIG Technology.
- Voltages from 690 V to 6600 V for PMG Technology.
- Onshore & Offshore applications.
- Various fabrication structures and forms.
- Noise level adjusted to client needs.
- Compliance with international standards: IEC, UL CSA, USTC, etc.

#### Customized design solutions for different environment applications:

<table>
<thead>
<tr>
<th>Cold Temperatures</th>
<th>-30°C to 50°C</th>
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<tr>
<td>High Corrosion Resistant</td>
<td>CH3, C4H, C5H</td>
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<td>Desert Conditions</td>
<td>Sandstorm</td>
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<tr>
<td>Frequency</td>
<td>50 Hz / 60 Hz</td>
</tr>
</tbody>
</table>

#### World class testing facilities

- DFIG Series
  - Doubly Fed Induction Generators
- PMG Series
  - Permanent Magnet Generators
- IG Series
  - Squirrel Cage Asynchronous Generators