#### Ingeteam

COOPERATION WITH THE CLIENT FORMS PART OF THE CULTURE OF INGETEAM. THE BASIS OF OUR RELATIONSHIP IS A PERSONALIZED AND UNIQUE TREATMENT, WITH A CLEAR COMMON PURPOSE.

INGETEAM has one of the best electric machines and power electronics laboratory in the world.

- The main capabilities are:
- On load tests up to 8 MW.
- LVRT (low voltage ride through)
- thermal insulation ageing.



## WORLD CLASS TESTING FACILITIES

## R+D+i

#### This allows INGETEAM to fully test his For this purpose the R+D+i department designs under all kind of environmenbest quality on his products.

The development of our products and services is specifically adapted to the characteristics of each project and client.

is made up of highly qualified personnel, tal conditions and to guarantee the and it has the most advanced computer resources for the design and development of generators.

> The philosophy of INGETEAM is to guarantee the quality and the reliability of its products with in-house fully proven solutions.



# Ingeteam

Ingeteam Indar Machines S.A.

Ingeteam Indar Machines S.A. Barrio Altamira, Polígono Industrial Txara, s/n 20200 BEASAIN - SPAIN Tel.: 34 943 02 82 00 hydro@ingeteam.com





### HYDRO GENERATION

## Ingeteam

### DESIGN, MANUFACTURE AND SUPPLY OF ELECTRICAL ROTATING MACHINES

The experience acquired over 80 years, allows us to provide a wide range of products, developed with our own sustainable and efficient technology, placing us in a position of leadership in the international market.

One of the most important factors of INGETEAM's success is the quality offered in products and services, guaranteed by the **ISO-9001, ISO-14001 and ISO-45001**, as well as the high level of involvement of all of the personnel that take part in the design and manufacturing processes.

In this context, INGETEAM has decidedly opted for the LEAN Manufacturing Philosophy as well as different systems of self-control and bar code traceability, with the aim of offering excellence in our products and services.

INGETEAM aims to encourage constant care for and respect of the environment by means of a proactive approach designed to strengthen awareness, commitment and continuous improvement of the organization through related activities in their offices and the environmental implications of their services taking into account the prevention of pollution and the sustainable use of resources as an essential part of its activity.

The prime objective of the company is the **safety of all its employees** because they are its most valuable resource. We give maximum priority to their protection and it is convinced that this is a key factor in the business success.

INGETEAM encourages a solid Preventive Culture through a proactive approach conceived to strengthen awareness, commitment and continual improvement of Safety and Health at Work.







In our commitment to offering our clients complete and personalized solutions, we offer a **360° CRS service with all of our product range**, providing you with comprehensive consultancy, direct technical support, training and maintenance services throughout the lifetime of our products.

360° CRS is a dynamic, personalized service that covers all of stages and contact points between Indar and our customers. The 360° CRS program is supported by a professional technical team whose goal is client satisfaction and continuous improvement of products and services, always hand in hand with the latest advances and technologies in each application sector.

The Technical Support Service included in 360° CRS provides our clients with specific preventative and corrective maintenance programs for the whole product range, as well as personalized customer service and guaranteed, on-site assistance in any part of the world.

#### Features

- More than 10,5 GW installed
- Synchronous generators up to 100 MVA
- Grid Code compliance analisys
- Depending on turbine characteristics, vertical, horizontal, bulb generators are avaliable.
- Motor-Generator solutions for storage
- Permanent Magnet machines

Refurbishment of existing machinery up to 200 MVA

- Complete new machinery in existing embedded structures and foundations.
- Different stator solutions (splitted or continuous).
- Individual coils or Roebel bars
- Rotor pole core and coils
- Analisys of core clampings systems, slot-wedge fixation, fatigue life estimation.
- Auxiliary equipment rehabilitation
- Bearing recovery
- Recovery works in asbestos environments.

Redesign of active elements and repowering of generators.



#### STATE-OF-THE-ART TECHNOLOGY FOR HYDRO APPLICATIONS

