

REINTJES News

YOUR PARTNER FOR THE FUTURE

01 / 08

Barreras and REINTJES Intensify Cooperation

"Never Change A Winning Team" - this view is shared by Barreras President José Francisco Gonzáles Viñas who was welcomed at the REINTJES plant in Hameln on 18th July this year.

Accompanied by his Procurement Director Serafin Vázquez, he was updated on the state of affairs regarding current orders and the prospects for future orders. He also expressed his satisfaction with their long-term partner REINTJES.

Our subsidiary REINTJES España, represented by its Managing Director José Luis Gutiérrez, has contributed a lot to this successful development. Together with the team in Hameln, it established a business relationship with the shipyard in the NorthWest of Spain twenty years

ago which has been very solid and built on trust right from the beginning - trust based on an always high product quality and competent service.

This has also been demonstrated by 58 gearboxes REINTJES already delivered. And they will be followed by another eight shortly: José Francisco Gonzáles Viñas and Serafin Vázquez ordered eight twin-in/single-out gearboxes for RoPax ferries with an output of 2 x 7,000 kW and 2 x 8,400 kW each.

At the Hijos de J. Barreras Shipyard (H.J. Barreras) everything has been revolving around shipbuilding ever since 1892: this is where ocean-going vessels, among them RoRo, RoLo and RoPax ferries, chemicals tankers and specialist vessels, are built, repaired or converted.



► from top to bottom.: a selection of realised projects: Sorolla, Volcan de Tamasite, Neptune Aegli, Cote d'Albatre, Atalaya de Alcudia;

◀ from left to right, top: J. L. Gutiérrez, H. Hansmann; from left to right, bottom: Serafin Vázquez, Dr. C. Schliephack, J. F. Gonzáles Viñas;



Technology that Beats the Waves - Resilient Mountings for Yacht Applications

Convenience comes first: Passengers going onboard a yacht today can enjoy a perfect cruise - and be sure that there are no "side effects".



... Today's conditions on modern yachts are definitely different from those prevailing some years ago. Life onboard is comfortable and convenient, since the passengers are only little aware of the machinery operating in a yacht's hull - last but not least also thanks to technology from REINTJES.

This technology contributes to the fact that vibrations caused in the engine room are neither heard nor felt by the passengers. The underlying problem: the machinery in the engine room generates vibrations which are directed into the ship's structure via the foundation and passed on, for example, to the cabins where they are perceived by the passengers as vibrating walls and floors or airborne noise. Therefore, to ensure a calm journey, vibrations originating from gears, engines and alternating torque and foundation forces must be kept to a minimum.

Due to their principle of operation, gears generate vibrations when operating. To minimise them, REINTJES uses state-of-the-art calculation methods which can simulate the extremely complex meshing processes.

Taking into account the dynamic excitations of the shaft system passing through the gearbox, toothings are developed whose geometry and surface design provide optimal results for a quietly running gearbox.

A rigid gearbox housing optimised specially for minimum vibrations, this provides for maximum convenience on modern yachts.

For many yacht applications, rigid gearbox mountings are common. However, a resilient mounting designed by REINTJES can additionally reduce vibrations in the foundation.

The benefit: The propeller thrust is taken up by the thrust bearing which is integrated in the gearbox. Therefore, a separate thrust bearing is not required and, moreover, the customary steel propeller shafts can be further used without installing compensating couplings. REINTJES uses special rubber elements pressed into a steel bush designed to take up the propeller thrust and torque forces.

The dynamic design of the resilient mounting is of particular importance. Special computer programmes allow REINTJES to describe the vibrational behaviour of the resilient mounting in the axis directions and around the three axes. The engineers match this behaviour with the relevant engine and propeller excitations.

In cooperation with the customers, REINTJES designs solutions for a wide range of yacht applications. The result is a gearbox mounting which noticeably minimises structure-borne noise. While the well known high operational reliability of the REINTJES gearbox is ensured, an optimal noise and vibration behaviour of the machinery can be achieved - for the benefit of the passengers who can enjoy a relaxed and pleasant cruise "without side effects"!



Special Housing in Record Time

She is the flagship of Spanish shipping company "Balearia" in sea transport to and between Minorca, Majorca, Ibiza and Formentera:

"Super Fast Ferry" Federico García Lorca* connects the Balearic Islands with Barcelona and Denia in just two hours, and in a highly convenient way at that. So, it would have been really tragic, if the ferry had been taken out of service after suffering damages on the propulsion system at a very heavy sea with wind force 9.

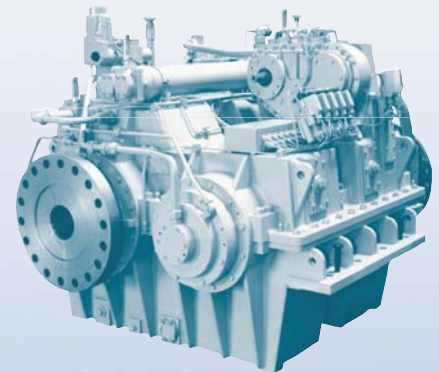
On the very same day when the damage was reported, our Spanish subsidiary REINTJES España in Madrid arranged for the gearboxes to be inspected at Palma de Majorca. The inspection revealed that three of four gearboxes had been damaged.

An assessment of the machinery showed that the gearbox housings could no longer be used in unlimited operation.

But, in order to ensure the service of the Federico García Lorca during the normal operating hours, REINTJES had to replace three gearbox housings during the nighttime hours.

The respective repair plan was set up and implemented immediately: our procurement department was faced with the challenge of procuring special housings with an aluminium alloy at short notice, and the production department had to complete them as quickly as possible, although it was already running to capacity.

Due to optimally synchronised processes and the good cooperation, it was possible to manufacture and install replacements for the damaged gearboxes within a minimum of time and



without any changes in the ferry's schedule - so that none of the passengers had to do without their "Federico".



* The author Federico García Lorca (*1898 †1936) was a writer and poet and is considered as one of the major Spanish authors of the 20th century.



Technical Workshop at REINTJES

Always respond competently and flexibly to the needs of their international customers - this not only is the claim the staff of REINTJES GmbH meet every day, but it is also one of the major reasons why employees of the REINTJES headquarters meet their subsidiaries and partners at regular intervals for a transfer of knowledge.

On 2nd September 2007 they met again. Managing directors and sales and service staff from America to Australia had come to Hameln to talk about topics revolving around "Technology for Markets". For three days they had an intensive exchange of experience on

market requirements, customers' wishes, as well as the status and trends of gearbox development aimed at achieving a common level of information and knowledge within the entire REINTJES team.

Moreover, they took this opportunity to optimise the information paths for technical order processing and new developments.

As part of the two-day programme the following topics were dealt with in greater detail and discussed intensively:

- effects of dynamic loads on marine gearboxes and their impact on gearbox design,
- developments in the field of gearbox control,

- revised designations for PTO, PTI and PTH applications,
- applications of finite-elements method for the structural analysis of gearbox housings.

The third day of the workshop ended with an arranged discussion forum offering the opportunity to extend the new knowledge in groups or individual talks and address and discuss open points. After all, not only the common, high level of knowledge in all areas, but also "unlimited" teamwork in the true sense of the word, constitute main pillars of the global success of REINTJES.

Teamwork which, by the way, also made this workshop very successful for all participants.



◀ Participants of the workshop:
R. Senner, A. Weber, J.-U. Steinhauer, T. Roppel, W. Rieseberg, H. Hansmann, M. Mosca, Dr. H. Birkholz, Dr. C. Schliephack, D. Scheyd, A. Theodoridis, S. Günther, Dr. H. Reso, H. Quast, Dr. S. Otto, S. Codd, D. Vanniasingham, M. Koole, F. del Olmo, R. Wilschek, E. Sim, D. Martens, J. Meyer, J. L. Gutiérrez;



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