Tecnatom will supply the emergency control room for the Slovenian Krško nuclear plant.

Tecnatom has completed the ultrasonic inspection of the Garoña reactor vessel.

Enresa has awarded Tecnatom with a contract for engineering support at the centralized spent fuel storage facility (ATC).
Emergency Control Room at Krško NPP

The consortium formed by the Spanish engineering companies, Tecnatom and Idom, has been awarded a project for the supply of the emergency control room for the Slovenian Krško nuclear plant, operated by Nuklearna Elektrarna Krško (NEK), within the framework of an international call for bids.

This supply is part of phase 2 of the Safety Upgrade Program initiated by Krško nuclear power plant in order to adapt to the new European initiatives.

Krško began its commercial operation in 1983 and it is the only nuclear power plant in Slovenia. It is a two-loop Westinghouse pressurised water reactor with a rated power level of 632 MWe, and provides more than 20% of the electricity consumed in Slovenia and Croatia.

This project comes to join others that Tecnatom is carrying out at the Slovenian plant, such as the inspection of control rods.
Reactor Vessel Inspection at Garoña NPP

Tecnatom has completed the ultrasonic inspection of the reactor vessel of the Santa María de Garoña NPP with the collaboration of General Electric Hitachi International (GEH).

In this inspection, the mechanical equipment RPVID (Reactor Pressure Vessel Inner Diameter) has been used in a Spanish plant for the first time. This equipment moves across the inner surface of the vessel wall autonomously, thanks to turbines that provide the necessary support and traction. Tecnatom has developed the manipulator for the inspection of BWR reactor vessel welds, and has also redesigned certain additional characteristics of the equipment in order to adapt it to the geometry and dimensions of the vessel.

The techniques applied during the inspection were qualified in accordance with the ENIQ programme and the CEX-120 methodology approved by the Nuclear Safety Council. For the development of the inspection procedure, Tecnatom used the techniques previously qualified by EPRI within the framework of the Performance Demonstration Initiative (PDI) programme, an international reference in this field.

Tecnatom completed the inspection in accordance with the schedule mapped out and, thanks to the development of this new equipment, the records obtained have been of high quality, with a high degree of repeatability and linearity.
Engineeríng Desígn
for Spánish Waste
Facílity

Tecnatom and the engineering subsidiary of Gas Natural Fenosa have been awarded the contract for design support engineering for the Centralised Temporary Storage (ATC) facility at Villar de Cañas (Cuenca).

The contract, awarded by Enresa, the public company responsible for the safe management and storage of the radioactive wastes produced in Spain, will cover a period of 40 months and will require the far-reaching dedication of highly specialised resources.

Both companies are already involved in other activities at the ATC facility, along with other partners. For its part, Tecnatom has been participating in the engineering of the ATC cask maintenance workshop since 2013, and the achievement of this contract complements other activities in which the company is involved with Enresa, such as dosimetry services and projects related to the safety culture and engineering activities at the low and intermediate level waste facility, El Cabrill.

The ATC facility will provide storage for some 12,816 cubic metres of waste for 60 years, by which time a repository for permanent disposal should be available. The Spanish facility is modelled on the successful HABOG plant that fulfils the same role in the Netherlands.

3D view of the ATC facility (source Enresa).
Snubber maintenance at Cernavoda (Romania)

Tecnatom has been awarded a framework contract covering integral snubber maintenance services for Cernavoda nuclear power plant in Romania. This is a 4-year contract that encompasses all activities relating to both mechanical and hydraulic snubbers. These activities will be carried out in consortium with the local company Titan Echipamente Nucleare (TEN), and include functional testing, snubber maintenance, the manufacturing of spares, failure analysis, remaining lifetime assessment and the implementation of management software. The achievement of this contract strengthens Tecnatom’s position in Romania, where the company carries out other work in the areas of HVAC and engineering.
The full-scope simulator of the Angra-1 nuclear plant (Brazil) has reached the Ready For Training status. In order to achieve this milestone, it has been necessary to successfully pass the acceptance tests carried out by a mixed team of Eletronuclear and Tecnatom engineers. This full-scope simulator has been totally developed using in-house technology and with support of personnel from Tecnatom do Brasil. Eletronuclear is expected to start using the simulator officially in June 2015, thus replacing the Almaraz nuclear power plant simulator on which the Brazilian operators have been trained to date.
Enusa and Tecnatom have reached an agreement with the Chinese Nuclear Fuel Manufacturing Company CJNF (CNNC Jianzhong Nuclear Fuel) for the supply of a new fuel inspection system for the latter’s factory in Yibin, in the province of Sichuan.

The equipment involved will be used for the quality control of the fuel rods manufactured at this factory, using non-destructive testing techniques.

The system supplied will be capable of detecting defects on the surface of the rods using eddy current techniques, combining the wide experience in this field demonstrated by Tecnatom through multiple applications with the know-how acquired by ENUSA through the operation of its Juzbado fuel manufacturing facility.

This supply is part of a series of international activities that ENUSA and Tecnatom reinforced last autumn with the signing of a number of equipment development and supply agreements in the field of nuclear fuel manufacturing.
New aerospace robotized systems for Germany

The factory acceptance tests carried out on the automatic UT inspection system for Premium AEROTEC GmbH, a first-tier supplier of structures to Airbus, have been successfully completed at the Tecnatom facilities in Madrid.

This system is a track-mounted robot with two modules of combined tools designed specifically for the inspection of the client’s varied geometries and taking into account the required level of productivity. It is also fitted with highly versatile tooling that allows different parts to be held and exchanged through a simple operation. Furthermore, it represents an important technological breakthrough since the new FPA-128M electronics developed by Tecnatom are included for the first time in a supply to the aviation industry.

Last year Tecnatom signed an agreement with the German company Premium AEROTEC, this marking the entry onto a market traditionally operated by local competitors. This inspection system not only represented a relevant technical breakthrough but was also an important milestone since it was the first aeronautical supply for the German manufacturer, one of the world’s most important companies in the development and manufacturing of structures and production systems for the civil and military aviation industry.
Tecnatom presents two new eddy current probes that have just completed their development phase and that will be fitted to our steam generator inspection equipment.

With the capacity to manufacture this type of rotary probes for tubes (in addition to those already available, such as Bobbin and Array probes), Tecnatom complements the capacities of its inspection systems, thereby increasing the independence of our technology. Two types of probes have been implemented: a standard rotary probe with three sensors and another with two sensors plus a Bobbin type sensor for the simultaneous performance of the two types of tests in those tube areas in which this is required.

These probes are in the final phase of testing and validation and will provide Tecnatom with a product that will complete our catalogue of probes for both in-house users and external clients, while allowing us to consolidate our autonomy with respect to third-party suppliers.

Tecnatom presents the modernisation of its nuclear power plant operating aid computerised procedures system, especially designed for operating plants.

The improvements made involve the updating of the user interface, management of the information generated and the procedures editing mode. The new system will allow the efficiency and security of operation and supervision to be increased, while contributing to improvement of the productivity of the administrative tasks involved in the processes.

The information that the system may incorporate includes: operating documentation, data on plant status in real time and the possibility of processing information to perform calculations and help in decision-making.
Among the periodic publications that Tecnatom makes available to its clients, collaborators and professionals in the sector, special mention may be made of our Aeronautics and Space bulletin, the fifth edition of which may now be accessed via the following link.

All news relating to the aerospace industry – an area in which we continue to see consolidation thanks to our in-house technology and the trust of our clients – is gathered together in this four-monthly publication. Through its five clearly differentiated sections, Tecnatom shares with the readers its latest news and on-going projects.

This number deals with the importance of reducing costs and improving productivity through the automation of processes. We also focus on the Tecnatom Group’s activities in China and the Asia-Pacific area, and the Technology section describes new structured light applications.
agenda

Cienpi 2015 -11th China International Exhibition on Nuclear Power Industry 2015
From 22 to 24 April 2015, Beijing (China)
http://www.chinaexhibition.com

13º Congreso Nacional de Ensayos No Destructivos
From 6 to 8 May 2015, Sevilla.
http://www.aendsevilla2015.com

Paris Air Show
http://www.siae.fr/EN