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SNGC and NIATR sign a MoU

The Spanish Nuclear Group for Cooperation (SNGC) and the Nuclear Industry Association of Turkey (NIATR) have signed a Memorandum of Understanding to enhance dialogue, information exchange and communication between their member companies. SNGC and NIATR believe that strengthening co-operation between the two organizations in the area of nuclear policy, nuclear supply chain, localization, technology and energy will bring benefit to both parties. They affirm their mutual interest in collaborating in:

- Identifying opportunities or projects in Turkey or in third countries on which companies within the NIATR and within SNGC could work together;
- Hosting seminars and workshops in Turkey and in Spain at which companies within the NIATR and within SNGC could exchange information and identify further areas of cooperation including joint ventures;
- Supporting and promoting innovative cooperation opportunities associated with the joint development, design, testing, licensing and construction of pressurized water reactors and small modular reactors in Turkey and in other locations.

ENUSA sponsors a course on nuclear fuel organized by the Spanish Nuclear Regulator

The vice-president of the Spanish Nuclear Regulator (CSN), Rosario Velasco, inaugurated the course on nuclear fuel organized by the Chair Juan Manuel Kindelán in the School of Mines and Energy of the Polytechnic University of Madrid. The vice-president highlighted the strong vocation of it for training and defined as a challenge and an opportunity this course of nuclear fuel. In this context, she highlighted that the management of spent fuel is a challenge at country level. ENUSA president, José Luis González, also participated in the inauguration of the course and spoke about the importance of training in the nuclear sector and the collaboration with universities.

The course was held for a whole week and gathered nuclear professionals and doctoral students. This course aims at giving an overview of the various aspects of the nuclear fuel such as design, manufacturing, management, evolution and behavior along the first and second phases of the fuel cycle as well as to present the research topics current development in this area.
SNGC sponsors the International Youth Nuclear Congress in Hangzhou, China

The Spanish Nuclear Group for Cooperation, SNGC, a consortium formed by ENSA, ENUSA, Ringo Valves and Tecnatom has sponsored the International Youth Nuclear Congress (IYNC) held in Hangzhou (China) from July 24th to 30th 2016.

IYNC has gathered more than 400 young professionals and students from 30 different countries, as well as several major companies in the nuclear sector in China. The opening session was attended, among others, by the President of State Nuclear Power Technology Corporation (SNPTC), the vice-presidents of China Nuclear Engineering & Construction Group (CNEC), of CGN Power Company, of Shanghai Electric Group and of Dongfang Electric as well as the Chief Engineer of China National Nuclear Corporation (CNNC). It was also attended by the China Atomic Energy Authority (CAEA), the government of Zhejiang Province, the National Energy Administration and the State Nuclear Safety Agency.

During the congress, SNGC has had the opportunity to present the skills, services and products of its member companies to various representatives and authorities as well as to provide information to 400 international participants to the event.

Throughout the congress, SNGC has been represented by four young professionals, Liu Tom (Tecnatom), Alejandro Palacio and Alberto González (ENSA) and José García Laruelo (ENUSA).

Santander will hold the 42nd meeting of the Nuclear Spanish Society (SNE)

The 42nd annual meeting of SNE is going to take place from September 28th to 30th 2016 in the Conference and Exhibition Centre of Santander. The president of SNE, Mr. Jose Ramon Torralbo, expressed his satisfaction because Santander was selected again to celebrate the meeting. It was previously celebrated in the years 1982 and 1996.
This event emphasizes the significance of the nuclear sector in Spain, able to create employment for 27,500 persons; this was possible thanks to utilities, suppliers and technological centers.

This meeting is going to offer diverse sessions, workshops and more than 30 stands of different businesses and nuclear technology and research centers. Also, it is the first time in these type of meetings, that an itinerant information center will be opened and a conference about the climate change given.

**ENSA experts visit the facilities of Daya Bay Nuclear Power Plant (China)**

Recently, experts of ENSA in loading and unloading of spent fuel casks visited the Daya Bay plant to prepare the training operation and maintenance of the ENUN 24P cask and its auxiliary equipment, all of which has been designed and supplied by ENSA.

During the visit, meetings were held with URC, DNMC and CNOC to fully understand the needs and requirements and to prepare training content tailored to their needs. The ENUN 24P cask is one of the ENUN cask series designed by ENSA for the transport and storage of high burnup spent fuel, and it is currently in the process of licensing in Spain and China.

The meetings were very effective and constructive and URC, CNOC and DNMC appreciated the efforts made by ENSA and were very satisfied with the presentations and explanations of the ENSA technical experts.

**Tecnatom in the Russian nuclear Programme**

These two subsidiaries belong to the ROSATOM Group and are involved in different activities. On the one hand, JSC Rusatom Service is in charge of the integral management of inspection services, operating support and human resources aimed at the international expansion of the VVER reactor programme, while Rosatom CICE&T (Central Institute for Continuous Education & Training) is responsible for the training of personnel for ROSATOM’s new nuclear projects at international level.

The three companies have agreed to cooperate in the training of operators for the new VVER reactors under construction across the world. One of the key points will be to bring the training programmes currently undertaken by Tecnatom and Rosatom CICE&T into harmony. Both companies are members of the ENEN-Ru project for the “strengthening of cooperation and exchanges between the European Union and
the Russian Federation in relation to initial and on-going nuclear training”. This programme will offer the nuclear industry highly qualified human resources and will speed up cooperation in the development of nuclear programmes at world level.

Tecnatom and ENUSA supply a new inspection equipment to SNPI (China)

Tecnatom and ENUSA have reached an agreement for the supply of an irradiated nuclear fuel inspection system for the Suzhou Nuclear Power Research Institute (SNPI), in China. The equipment will be used to determine the thickness of the layer of oxide that forms on the surface of nuclear fuel rods during operation, and will also be used to measure the diameter of these rods. A new method based on artificial vision technology is being developed for this latter application, the first time that such technology is used for this purpose.

The equipment, known as SICOM-COR, belongs to the SICOM family of irradiated fuel inspection systems that ENUSA and Tecnatom have developed jointly in recent years. This family is made up of ten types of equipment that allow for the characterization of a wide variety of irradiated fuel parameters, from the dimensional analysis of fuel assemblies to the detection of leaking assemblies and rods.

This contract comes about just months after the three companies signed a framework cooperation agreement referring to nuclear fuel inspection in the Chinese city of Shenzhen in February. The cooperation between ENUSA, Tecnatom and SNPI began in 2014, with the signing of an agreement for the supply of SICOM-UT equipment. This system for the ultrasonic inspection of irradiated nuclear fuel was delivered in 2015 to the SNPI facilities at Daya Bay, in the province of Guangdong.

SPI is also an important technology partner for Tecnatom, since the two companies share the ownership of CITEC, a Chinese company that renders services to nuclear power plants and whose headquarters are in the Chinese city of Shuzou.
Ringo initiates shipment of two 42” 900# Pneumatic Ball Valves

Ringo Válvulas is currently manufacturing an order for the South Pars Project in Iran of more than 250 valves. Project Data are as follows:

- Valve types: Ball, Gate & butterfly
- Total number of pieces: 266
- Materials: Carbon Steel, Stainless Steel & Aluminum Bronze
- Maximum sizes:
  - Ball Valves up to 42” 900#
  - Gate valves up to 24” 150#
  - Butterfly valves up to 28” 150#
- Operation: Manual, Pneumatic & Motor Operated
- Project: Tombak onshore facilities (South Pars 14)

Delivery of this contract is made in several partial shipments and Ringo Válvulas has recently dispatched some of the largest valves items included in the order, the two pieces of 42” 900# trunnion mounted pneumatic operated ball valves (total weight 40 tons each valve)

Ringo premises held a Control and On-Off seminar for the Russian nuclear sector

Ringo Válvulas, in cooperation with OKAN, its main partner for the Russian nuclear market, organized a Seminar about Control and On-off valves for the nuclear sector that was held recently at Ringo facilities and attended by representatives of Rosatom General Designer Companies JSC Atomproekt, JSC Atomenergoproekt and JSC NIAEP.

The seminar program included the following:

- The general presentation of Ringo: global capabilities and nuclear references;
- Factory tour and assembly of a 4”600# control valve under the presence of the seminar participants;
- Presentation of all Ringo/OKAN capabilities to offer specific solutions for the nuclear sector in control valves as well as in on-off valves;
- Modeling and sizing process of control valves;
Presentation of international codes and standards applicable to control valve design and adaptation to customer specific requirements/specifications;
Performance of a Cv test for the 4”600# to determine the Cv values at different opening positions. Comparison with the theoretical data obtained by calculations.

The main target of this seminar was to enforce the image of Ringo/OKAN in the Russian nuclear market where the two companies are successfully working so far and have had a very important growth since the first order was won for Beloyarskaya NPP on 2012. Currently Ringo/OKAN have already supplied (or is in the process to do so) valves to the following Russian NPPs: Beloyarskaya, Leningrad, Novovoronezh, Baltic and Kalininiskaya. Besides these supplies, Ringo has also designed and manufactured valves for Atomstroyexport (the Rosatom subsidiary delivering international projects), for the following plants: Belarus (Belarus), Kozloduy (Bulgaria) and Tianwan (China).

Ringo supplies high rangeability valves to Belarus NPP

Ringo Valves has recently supplied a contract to the Belarus NPP, including 16 globe control valves Nuclear Class 3, for level regulation of the ringo_1Steam Generator. The scope of this supply is as follows:

- **Size**: DN400 (8 valves); DN150 (8 valves)
- **Design pressure**: 12.9 MPa
- **Working fluid**: Demineralized water
- **Design temperature**: 250 ºC

The control globe valves DN 400 and DN150 are installed previously to the Steam Generator. The main purpose of these valves is to provide all working modes of Steam Generator during whole NPP lifetime: the valve DN400 is placed on the main pipeline and used for nominal modes of ringo_1bSteam Generator while the DN 150 valve is placed on a by-pass line to perform the regulation for the starting and stopping modes of the Steam Generator: this has been a technical challenge since the DN150 valve has to regulate more than 17 different cases so minimum required rangeability was 164:1.

Ringo selected its special balanced trim with multicylinder cage and cascade in order to reach the required high rangeability and is proud to announce that, as part of the customer inspection, this valve was Cv tested getting a satisfactory result with a rangeability of 200:1.
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