Press Release

INDRA PLAYS A KEY ROLE IN DEVELOPMENT IN JAPAN OF ONE OF THE WORLD'S MOST ADVANCED PARTICLE ACCELERATORS

- **Indra is the leading Spanish company in an international consortium that is developing a prototype particle accelerator in Rokkasho, in the north of Japan. The project is a vital aspect of plans to build a reactor capable of generating vast amounts of clean energy in a consistent and commercially viable manner**

- **The particle accelerator forms part of the International Fusion Materials Irradiation Facility (IFMIF) and is designed to test potential materials for use in future commercial fusion reactors**

- **Indra's technology and reliable solutions have helped to underpin the IFMIF-EVEDA since 2008. The project is spearheaded by the European Union and Japan, with the aim of driving our understanding of fusion physics (ITER), while also expanding knowledge in such fields as biochemistry, medicine (radioisotopes), the aerospace industry and satellite technology**

Madrid, October 2, 2017.- Indra, one of the world's foremost consulting and technology firms, has completed the design, manufacturing and integration of critical elements of the radiofrequency system for the LIPAC prototype particle accelerator. Located in the north of Japan, the accelerator is one of the most advanced anywhere in the world. Indra's involvement, which includes providing technical assistance to support integration of the supplied systems, is framed under the international IFMIF-EVEDA project, a joint initiative between Japan and the European Union.

Indra is the leading Spanish company in an international consortium working on the project. The initiative will mark a major scientific milestone on the roadmap toward construction of a large reactor capable of generating vast amounts of clean energy in a consistent and commercially viable manner, and one that can be replicated at different sites around the globe.

The now prestigious ITER project is set to be the seed from which the ambitious IFMIF (International Fusion Materials Irradiation Facility) initiative will grow. The IFMIF program is subdivided into several pioneering projects. Among these, the IFMIF-EVEDA project focuses on verifying the facility's principle technical aspects (via the construction of prototypes) and the development of detail engineering.

Indra technology, and the reliability of its solutions, have been a driving force behind the IFMIF-EVEDA project since 2008 in a number of areas: developing detailed design, manufacturing and incorporating eight radiofrequency modules to inject power into several of the accelerator's cavities; specifying and supplying materials to connect the radiofrequency modules with the cavities; as well as other systems to ensure the correct functioning of subsystems and providing technical assistance and integration expertise.

The final stage of the IFMIF-EVEDA project is underway at the Rokkasho facilities, in the north of Japan, where the prototype is located. Indra staff are overseeing initiation of the advanced radiofrequency systems that have been deployed. The project is especially ground-breaking, as there are no other facilities currently working on irradiation tests capable of reliably simulating conditions inside a fusion reactor. Which is why the project represents a major step forward toward development of magnetic confinement fusion. Spain has already stated its interest in hosting the future accelerator, which will be built in the following stage of the IFMIF-DONES program.

The scientific community has great hopes for fusion as an inexhaustible source of energy with barely any environmental impact. It represents one of the major energy challenges for the coming decades. Thus, together with ITER, the IFMIF program could be key to proving that massive energy generation via nuclear fusion is not only possible, but commercially viable.

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Indra's involvement has been channeled via the CIEMAT (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas).

Indra's role in the project is further evidence of the company's genuine ability to develop reliable solutions that help drive progress toward major milestones. Other examples include Indra's contributions to the Galileo global positioning system, the Copernicus Earth observation program, and the SST (Space Surveillance and Tracking) program from the European Commission, which provides a system for monitoring space objects, chiefly to calculate the position and trajectory of objects orbiting the Earth.

About Indra

Indra is one of the main global consulting and technology companies, the top IT firm in Spain, and the technology partner for the core operations of its clients businesses worldwide. It offers a comprehensive range of proprietary solutions and cutting-edge services with a high added value in technology, which adds to a unique culture that is reliable, flexible and adaptable to its clients' needs. Indra is a world leader in the development of end-to-end technology solutions in fields such as Defense and Security, Transport and Traffic, Energy and Industry, Telecommunications and Media, Financial Services, Electoral Processes, and Public Administrations and Healthcare. Through its Minsait unit, it addresses the challenges of digital transformation. In 2016 Indra posted revenues of €2,709m and had a workforce of 34,000 professionals, a local presence in 46 countries, and sales operations in more than 140 countries. Following its acquisition of Tecnocom, Indra's combined revenues amounted to more than €3,200m in 2016 with a team of nearly 40,000 professionals.

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