

Txetxu Rivacoba's Biography

Born in Portugalete, Vizcaya, in 1932, he graduated in Civil and Energy Engineering from the University of Moscow (1955) and in Roads, Canals and Ports from the Autonomous University of Madrid (1970). He has a PhD in Civil Engineering from the University of Cantabria (1978).

He has combined his work as an engineer (firstly at the State Institute for Hydrology Projects in Moscow and then at Juan José Krug, Mecánica de la Peña and SENER) with his teaching work, which led him to hold the Chair in Metal Structures and Bridges at the School of Civil Engineering in Santander (1979-1985), to be a lecturer on postgraduate courses at the University of Madrid and the University of Barcelona (1981), as well as the University of Santander (1982-1985), and to be a Member of the Technical Committee on Standardization in Metal Structures, of the Spanish Association for Standardization and Certification (1972-1990). He has authored technical articles and is an amateur translator of Russian literature into Spanish.

At SENER, Txetxu Rivacoba carried out naval projects such as the design of port cranes, offshore platforms, special sea vessels (such as the Sant Jordi, with tanks for transporting liquefied natural gas) and shipyards (in Cádiz and Santander). In Infrastructures, he took part in the design of port projects including the port and inlet of Bilbao and the port of Castellón de la Plana, as well as dykes and loading and unloading systems at ports such as Las Palmas, Vigo and Asunción (Paraguay). He was also part of the Euskalduna Conference Centre and Concert Hall project and worked on silos (Silos del Abra, in Santurce, Vizcaya) and workshops and industrial buildings (for General Motors in Figueruelas, Zaragoza; for Ford in Almusafes, Valencia; for Vaysan in San Andrés de la Barca; for Helisold in Bilbao... he even designed an abrasives factory in Pamplona that was awarded a design prize by Navarra Regional Council), but he also made inroads in the field of energy, designing power stations (Los Barrios, in Seville, and Guardo, in Palencia), steel plants (the Basauri plant, the Vitoria plant for Forjas Alavesas, the modernization of the Babcock-Wilcox steel plant in Galindo, Vizcaya, and the Orinoco steel plant in Venezuela), natural gas liquefaction and storage plants (in Iran), nuclear power plants (Santa María de Garoña in Burgos and ENSA in Santander), mines (a sinter plant for iron ore at Bodovalle, Vizcaya, and several facilities for Altos Hornos de Vizcaya in Sestao) as well as others, such as the polyurethane products plants for ICOA in Álava. He was also behind the first heliostats for the Almería Solar Platform (PSA).

In the area of Space, his main area of activity, he took part in SENER's first space contract: the design and construction of the launch tower in Kiruna (Sweden) for ESRO, the predecessor of today's European Space Agency (ESA), in 1967. He later developed numerous designs for the ESA, from deployable booms to berthing and docking systems. He was part of the ESA's and NASA's Spacelab, the COLUMBUS project for the International Space Agency and the design of the ARIANNE tower in French Guyana, the GEOS, EURECA, IOC and ERS-1 satellites and the FIRST and MATRA telescopes.

His work also extended to the Aeronautics sector, as he patented several nozzles for gas turbine propellers, which were to give rise to SENER's first aircraft engines and would be the origins of ITP, Spain's only manufacturer of aeronautical engines and gas turbines.

He has 18 patents, several of them in the USA and in Japan. They include the system to perfect the supports for vertical axis revolving tanks on board vessels; the supporting structure that can be transported through floating for industrial facilities with large one-off loads; perfection of the frame for storing used radioactive fuel; the containment system for liquefied gases; perfecting of heliostats; a roof for circular public enclosures; and patents for space structures such as the sequential deployment structure; the synchronized deployment structure; the extendible tubular boom; and the high-precision adjustment mechanisms for correct positioning of deformable structures.