Rapporteur
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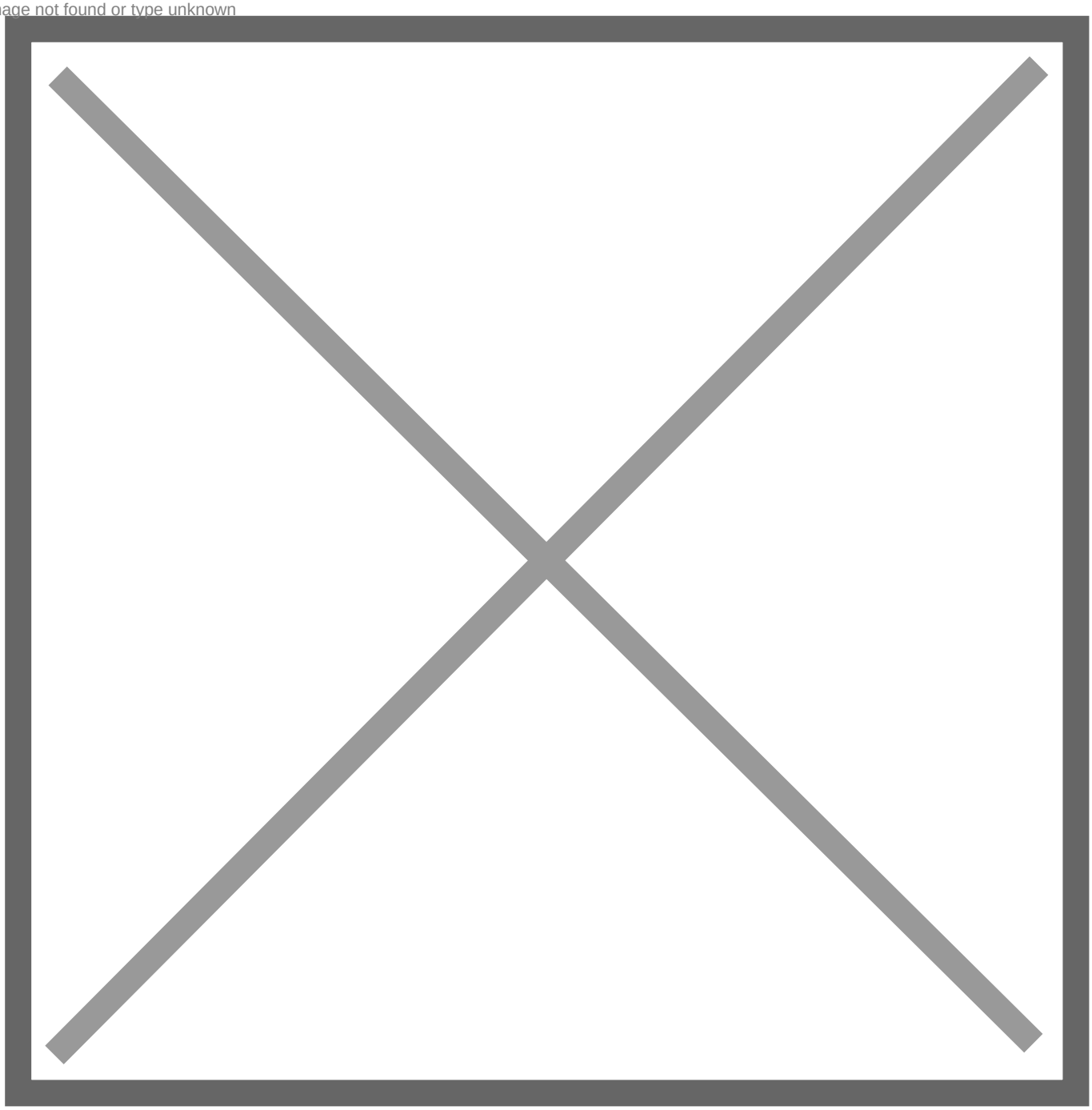

Ardnacrusha Power Station

Ireland

Headrace Canal
Clare P94P+6V Ballykeelaun

Commission

1925

Completion

1930

Original name

Shannon hydroelectric scheme, Ardnacrusha Power Station

Original use

Industry/power plant

Current use

Industry/power plant

Engineers

Siemens Schuckertwerke, Thomas Aloysius McLaughlin

Concrete by reinforcement

Plain concrete

Construction method

Cast-in-place concrete, in-situ concrete

Architectural concrete

Architectural concrete

Structural types

Three-dimensional/mass concrete, solid masses

Description

Ardnacrusha is one of the key elements in the Shannon Scheme: the infrastructure system that enables using the Shannon River for the production of electrical energy. This construction effort was one of the first undertaken by the Irish government after Ireland’s independence, in the 1920s, and it provided for the creation of an electricity distribution network for the whole island. The immense cost and the ambitious scope of the project helped the newly created state to demonstrate its management capabilities and build confidence both inside and outside the country. Despite the government’s broad involvement and the participation of a team of Irish engineers leading the project, the company chosen to carry out the construction was the German firm Siemens-Schuckert. At the height of activity, as many as 5,200 workers were involved. The need to create new communication networks, encompassing rail lines, roads and shipping docks, to handle the construction logistics ended up mobilizing, directly or indirectly, a large part of the country.

The Shannon Scheme, of which the Ardnacrusha dam is still the most emblematic element, included bridges, temporary canals to divert water, and other permanent and navigable canals that functioned as a bypass to get around the new dams. In total, 9 million cubic meters of earth were moved during the construction, making this one of the largest civil engineering projects in the world at the time.

In the Ardnacrusha dam, the engineering use of concrete is combined with the architecture of the turbine hall, which recalls the traditional constructions of the area, although translated onto a colossal scale.

Links

ETHW