

Aluminium Rolling Mill Impexmetal

Konin

Aluminium Rolling Mill Impexmetal is one of the largest producers of aluminium products in Poland. Most of Aluminium Konin products are used in automotive industry, packaging, electrical engineering and construction.



The project

The extension of the production plant with a new type WZ-5 rolling mill necessitated the construction of a new foundation for this equipment, meeting the rigorous technological standards of the manufacturer of the new rolling mill. In order to check whether the constructed foundation meets the requirements of the supplier of the device, it was necessary to design and execute the static test load of the entire foundation, which would enable verification of the adopted design assumptions.

The challenge

The design and assembly of the retaining structure for a static load of 640 tons of the entire foundation, and not just its single element. This method of load testing necessitated controlling the applied force at as many as four points of the foundation. An additional challenge was the force grading program, whose total duration was over 40 hours.

The solution

In order to exert a load of up to 640 tons, three special anchoring elements (shear walls) were designed with which the required force was exerted. Furthermore, in order to precisely control the induced load, 8 hydraulic load cells with a capacity of 1000kN each were used, i.e. 2 for each force application point. All used actuators were connected with

All actuators were connected to a DataLogger computer equipped with a modem for data transmission, which enabled automatic and remote control of the test process.

Project facts

Owner(s)

Impexmetal S.A.

Keller business unit(s)

GEO-Instruments Polska

Main contractor(s)

Warbud S.A.

Engineer(s)

Marta Szczepańska - Designer Assistant
Paweł Faryna - Foreman

Services

Deep foundations testing
Deformation monitoring

Markets

Industrial

Technologies

Deep foundation load tests