

Title: Continuous Casting Machine (CCM)

Scope: EPC

Location: Venezuela

About Sidor:

Venezuela's state-owned steel company Siderúrgica del Orinoco Alfredo Maneiro, Sidor, is focused on the production of steel products for the domestic and international markets. It sells semi-finished products (ingots, billets and plating), flat products (tinplate, flat rolled steel and chromium-coated steel), and long products (wire rods and bars). Sidor, the biggest steelmaker in Venezuela, has a production capacity of nearly 4Mt/y of liquid steel. The company is located in Bolívar state, Ciudad Guayana.

Executive Summary:

In 2015, Vepica commenced the engineering, procurement, construction and start-up process for a new continuous casting machine, as part of the “Technological Recovery of the Alfredo Maneiro Steel Mill (SIDOR) and Downstream Developments” in Venezuela. These new installations, which will be adjacent to SIDOR’s existing sheet steel mill, will have a yearly output of 800,000 tons of round and square steel bloom, the key input for the manufacture of seamless piping and structural profiles.

Vepica is carrying out the overall project management, procurement of minor equipment and bulk materials, and the construction of the new steel milling facility, as well as the infrastructure needed for the installation of the new continuous casting machine; supplied by Italian manufacturer DANIELI. An estimated 4.5 million man-hours of direct labor are required.

Challenges:

- Coordination of several stakeholders from different countries and different cultures (SIDOR from Venezuela- BANDES (Venezuelan project financing entity), China Found, Minmetals from China, Danieli from Italy,)
- Complex Interfaces with the existing and in-operation facilities.
- Lack of local availability of some raw and construction materials.
- Procurement of equipment and bulk material, coming mainly from China

Vepica Solutions:

To face the project’s challenges, VEPICA implemented the following strategy:

- Highly qualified and experienced engineering personnel and PMC organization, with presence in China, Italy and Venezuela, with a very clear division of the work.
- Integration of the client in most of the execution areas, to facilitate the approval of deliverables, PO and the construction interfaces with the existing operational plant.
- Early procurement of equipment, bulk materials and some construction raw materials such as rebar's, concrete, wires, paint, etc. in order to avoid delays in the construction.
- Early mobilization to the site for work in advance and to develop a very detailed construction strategy with the participation of all the stakeholders.
- Activation of our China offices to expedite and inspect all equipment and material purchased in China.
- Incorporation of the Environmental Discipline as an added value, developing a noise propagation model to assess the occupational noise levels outside the Control Building, in order to validate the control room window glass design and prepare recommendations.