Title: Second Line Pellet Plant – FMO

Scope: EPC

Location: Industrial Complex “Punta Cuchillo”, Matanzas, Bolívar State - Venezuela

About Ferrominera:

Venezuela's state owned iron company Ferrominera Orinoco C.A. (FMO) is part of the iron ore´s value chain. Mines and processing plants nearby, provide the 100% iron fines feedstock that are needed to produce pellets, a key primary material for steel and briquette plants. FMO commercializes and sells its product to a steelmaker and five direct reduction plants within Venezuelan territory. The company also exports to Europe, Asia and Latin America.

FMO has an installed capacity of 25Mt of ore and proven reserves totaling 4.18 Bt. It owns a transfer station that can store up to 180,000 t and handle 6.5 Mt/y of ore, and a 320-km rail network.

Executive Summary:

The “Second Line Pellet Plant - FMO” is a Travelling Grate Machine – Rotary Kiln process to produce 3 Million tons/year. Its feedstock is 100% iron fines, bentonite used as a binding agent and dolomite as aggregate. The process to produce Acid pellets of 9 -16 mm includes natural gas for drying, additional heating on the mobile grill and hardening in the rotary furnace.

VEPICA is responsible for completing the procurement of miscellaneous equipment and all the necessary materials. Additionally, to execute the construction and installation works on the plant up to Mechanical Completion plus Commissioning support to MCC "China Metallurgical Group Corporation”, who has contracted VEPICA to carry out these works. MCC has provided the Detail Engineering and Procurement of the main process equipment.

Second Line Pellet Plant key metrics include 60,000 m^3 of concrete, 11,000 tons of steel structure and 750kms of cables, approximately 70% of the process equipment is already on site, and an estimated 6.5 million man-hours of direct labor are required.

Challenges:

- Coordination and /or follow-up on several stakeholders from different countries and with different cultures (FMO from Venezuela- BANDES (Venezuelan project financing entity), China Found and MCC from China)
- Interpretation of engineering design with Asian standards and practices
- Some raw and construction materials are not locally available.

Availability/reliability of concrete supply in the area, for example.

- Storage of a high volume of process equipment early in the project
- Challenging schedule

Vepica Solutions:

- Comprehensive and early review of engineering design drawings and specs supplied by the client to minimize technical queries during preparation of purchase orders for materials and construction execution
- Highly qualified and experienced engineering personnel and PMC organization, with presence in China and Venezuela, with a very clear division of the work between them
- Identification of cement and its aggregates, national and international concrete sources, to import if required
- Plan to have own concrete plant at site
- Detailed plan of storage areas organized according to project area and construction sequence
- Aggressive procurement plan to ensure early arrival of Steel Structures
- Alliance with major construction sub-contractor to ensure availability of construction resources