Shahrazad Phase 2 (Sodium Carbonate Plant)

Client
Solvay Alexandria Sodium Carbonate SASC

Scope of Work
Project management
Detailed design
Tender documents
Tender action
Construction management
Construction supervision

Location
Alexandria, Egypt

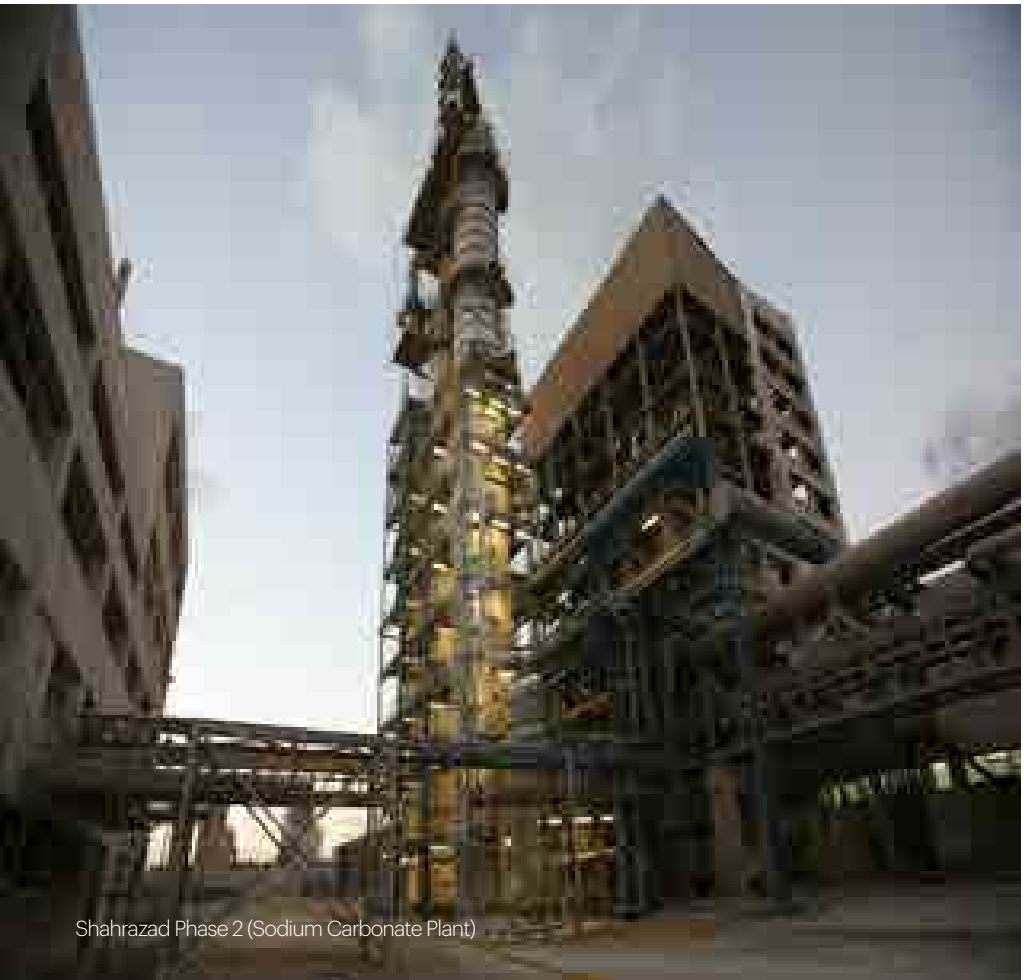
Types of Activities
Architectural
Electrical
Instrumentation
Mechanical
Piping
Static equipment
Structural

Alexandria Sodium Carbonate Plant was established in 1974 as a government Company, and was acquired by Solvay, Belgium in 2008. Solvay is a world known firm specialized in this field and is named after the Belgian industrial chemist Ernest Solvay who developed the production method in 1861. Solvay owns and operates several similar facilities worldwide.

Solvay planned to complete modernizing the old plant by 2014 as well as increase the production of the plant from 130,000 to 200,000 metric tons through a 3-phase development program.

ECG scope in phase II comprised Engineering, Procurement and Construction Management (EPCM) through the provision of the detailed engineering works for the new production facility including:

- Review of manufacturers' shop drawings for static production lines;
- Detailed design of the associated piping, instrumentation, rotating equipment and electrical power and lighting details, foundations of the production equipment ranging from 20 m to 43 m high and weighing 150 tons to 300 tons;
- Design and obtaining permits for the steel structure (7.5 m x 22 m x 36 m), access platforms and foundations; and
- Review of the existing steel structure (14 m X 30 m X 36 m) of the production plant in order to verify the requirements for replacement and reinforcement to enhance the building structure before the demolition of the connected adjacent older building as well as to determine the corrosion removal or treatment.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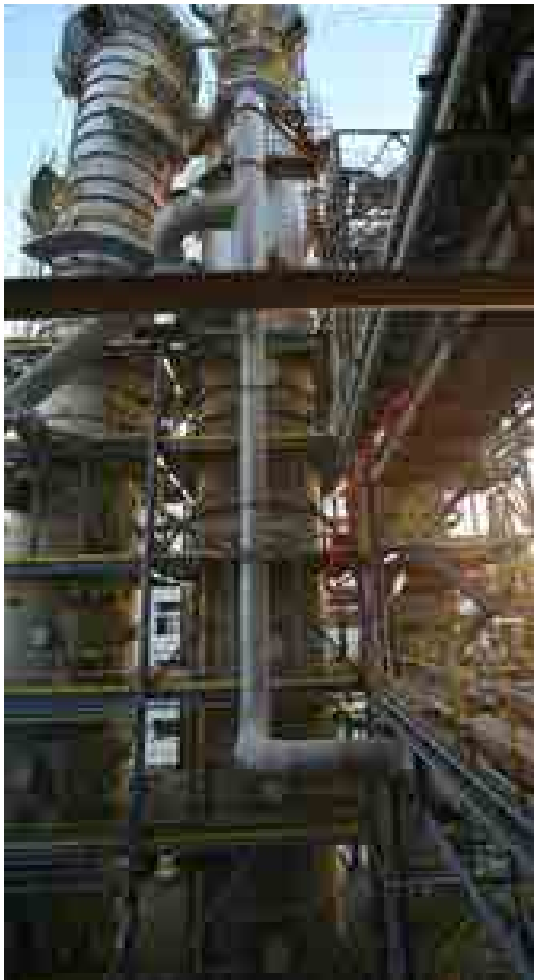

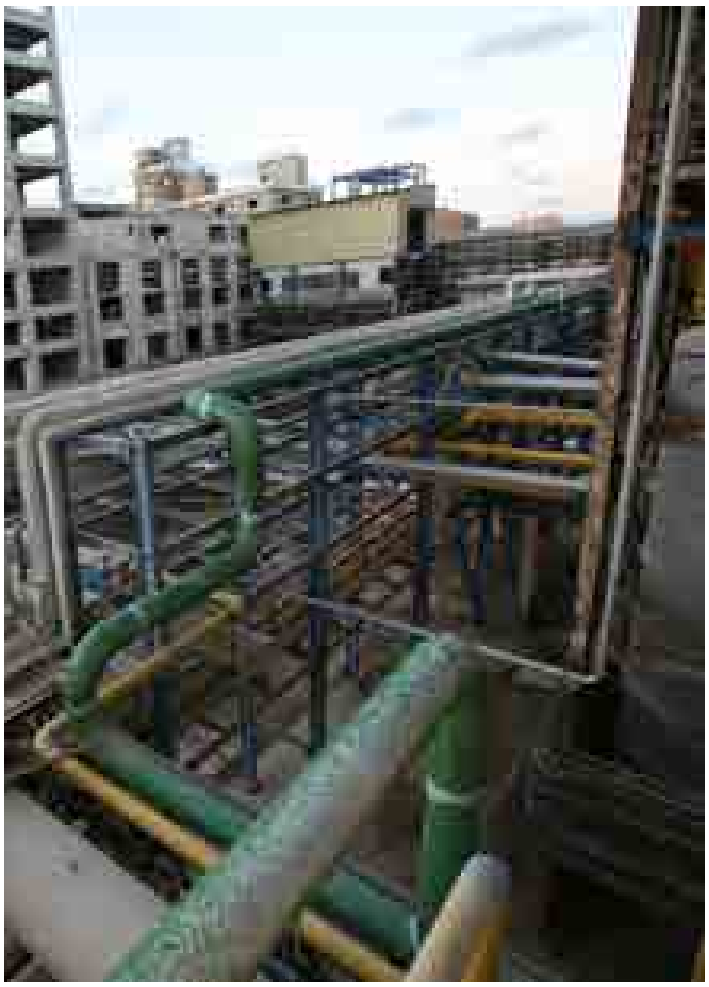

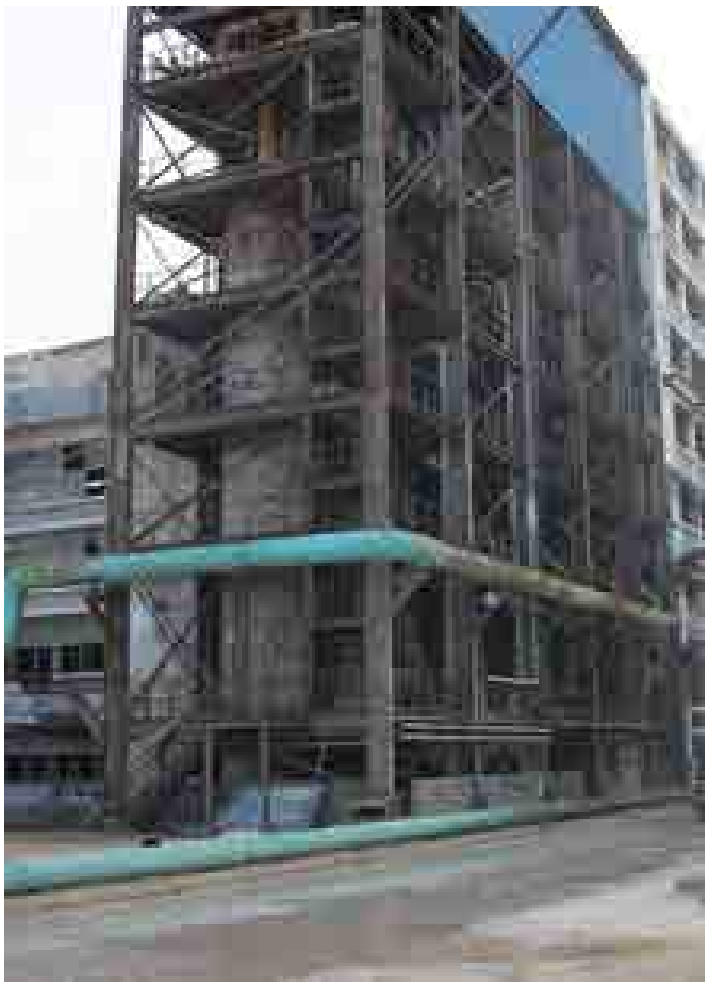

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ECG work required close coordination with Solvay representatives both in Brussels and Alexandria for the local and international procurement of Plant equipment, components and materials as well as local manufacturing services and construction contracting.

Our construction management team was tasked to complete the installation as a fast track project to meet plant operation, production plans and ultimately client financial commitments. Furthermore, the restricted plant space, hazards in operating a chemical plant, transportation and installation of heavy and large size pieces of imported equipment; all posed additional challenges necessitating accurate planning, close monitoring, immediate corrective actions and highly skilled construction management team.