

DELIVERED
PERFORMANCE

TECO
PROJECT
PROFILE



**GREENFIELD
FLOAT GLASS
PLANT**



CONFIDENTIAL CLIENT | USA

SUMMARY

A Greenfield project for a global float glass manufacturer, 600 ton per day float line to produce solar glass. Although the client has extensive in-house engineering and project management resources, they were fully occupied with other projects. The client trusted TECO with the design and construction of a plant that manufactures the highest value product in their portfolio.

TECO provided EPCM services, from site selection through to commissioning, including the integration of the client's proprietary technology and equipment. The client's project manager had an office in the TECO building, in a dedicated "war room" that kept the team isolated from other projects and other client confidential information.

The construction phase of the project was completed at the height of the COVID pandemic and was completed on time and under budget.

SCOPE

SITE DEVELOPMENT

- Site selection
- Infrastructure, road modifications, truck routes, bridge inspections
- Services/utilities, natural gas, oxygen, water, wastewater, electrical
- Regulatory & zoning compliance, liaison with local authorities

CIVIL

- Complete civil engineering responsibility
- Site layouts
- Earthworks
- Pre-engineered metal building
- Process buildings
- Oxygen plant civil engineering
- Offices
- Fire alarm & suppression system
- Emergency responder system

PROCESS ENGINEERING

- Process structural steel
- Furnace refractory
- Process mechanical, cooling water, cooling wind, combustion, safety skids, compressed air
- Integration of customer supplied equipment
- Integration of the pollution control system (supplied by McGill AirClean)
- Gas flow control skids, glass forming section engineering

ELECTRICAL ENGINEERING

- Primary power
- Medium voltage distribution, power conditioning
- Backup power, UPS system

BATCH PLANT & CULLET SYSTEM ENGINEERING

- Complete design and detailing of the raw material receiving, storage, dosing, mixing and delivery system
- Slip form concrete structure
- Complete cullet return system including ferrous and nonferrous detection and reject systems
- Rail unloading system
- Dust extraction systems
- External conveyor system with cullet storage barn

PROCUREMENT

- Procurement services
- Expediting, including customer purchased equipment
- QA/QC
- Freight consolidation
- International shipping, customs clearance, road haul within the USA
- Unloading and stacking of all equipment, including client's equipment

CONSTRUCTION

- Fabrication, installation & commissioning

STATS

- 150-acre site, 500,000ft² under roof
- Peak of over 500 personnel on site during construction
- 750,000 man hours worked, no lost time accidents
- 18 months from start of site work to completion
- 12 MW connected power, eight substations, two 2MW generators
- 2,000 tons of fabricated process support steel designed and installed
- 25,000 feet of piping modeled, designed and installed
- 35,000 cubic yards of concrete and 1 million pounds of rebar

HIGHLIGHTS

- Project completed on time and under budget
- Design work and site work continued through COVID
- Extensive use of 3D model coordination with customer and with overseas vendors. Full site 3D model created
- Site required extensive draining and dewatering systems
- Process equipment design was a hybrid of TECO technology and the clients' specific requirements and preferences
- The project was awarded the client's Presidents Award of Excellence