

Solar Glass Coating & Curing System

Anti-reflection coatings on the external surface of solar module glass can increase the energy output from the modules by letting more light from the sun enter and be converted to electricity. XeroCoat, in Redwood City, CA has developed a unique process for applying a layer of porous SiO₂ to glass where the porosity and the thickness of the layer can be tightly and independently controlled, creating a high performance anti-reflection coating. The patented XeroCoat process uses an all liquid starting solution which is coated onto the glass in a uniform and appropriate thickness and is then exposed to a gaseous catalyst during the curing stage. ATW was chosen to partner with Xerocoat to develop and produce the production system for application, curing and inspection of the material in a flexible cell. This effort required a significant amount of engineering study and integration of different technologies. ATW's broad engineering knowledge, expertise, and proven track record for on-time delivery and support around the world made them Xerocoat's choice.



System Values & Benefits

- Capable of accommodating a range of sizes.
- Custom designed for specific operations including variable cure process capabilities.
- 100% environmentally controlled with integrated scrubbers.
- Minimized floor space layout.

System Overview

Complete Turnkey Glass Handling System, including conveyors and manipulators to transfer the glass from the coating station, to the curing chambers, to the inspection area, and finally to the unload position.

- Roll Coating designed to provide uniform application to tight tolerances.
- Cure Chambers that provided the required designs for process integrity with safety from caustic and corrosive elements.
- 100% inspection by Lab Sphere light measurement.

System Highlights

- Flexible for handling of various product sizes.
- Integrated control system for standard and custom elements.
- Corrosion resistant material constructed for cure area.
- Interface for load/unload in manual or automatic mode.
- Turnkey enclosure / platform for environment and space optimization.