

## New Corning Museum of Glass uses DuPont™ Butacite® for astonishing special effects

### Feature story

The new Corning Museum of Glass (completion: 2000) in Corning, NY, (USA) blends science, art, history and technology to foster an intimate, challenging and unfamiliar look at the history of glass – and relies on applications in laminated glass with DuPont Butacite® PVB to help tell the story. Corning commissioned Ralph Appelbaum (interior and display architecture) and Smith-Miller+Hawkinson Architects, both of New York for the project.

#### **BENEDICTUS STORY**

The museum's creative director, Rob Cassetti, told LGN: "One of the key exhibits in our Innovation Center is the story of how Edouard Benedictus 'discovered' laminated glass. In the 'Windows' gallery we then show with dramatic effect how automotive windscreens have gradually become safer over the years." Rob Craig of WIN Manufacturing Inc. of Elmira, New York explained: "We took a number of windscreens, from a 1929 Chrysler, through a 1957 Ford Thunderbird to a 2000 Jeep Cherokee. We smashed them to show how laminated glass windscreens broke in each era of technology. The 1929 Chrysler windscreen broke in a pattern characteristic of acetate laminated glass of that time. Meanwhile, the 2000 Jeep windshield demonstrates laminated glass improvements by how well it stays intact. However, since the Museum wanted a long-term exhibit, we then re-laminated the broken windscreens to maximize safety and seal the broken glass. DuPont Glass Laminating Products gave us excellent technical support in this process, for which we used Butacite® PVB."

#### **GLASS FLOORS AND BRIDGE**

Corning's Rob Cassetti takes up the story: "What's exciting here is that while you're learning about Benedictus's discovery and seeing the benefits in terms of safer, laminated car windscreens, you're standing on a very contemporary application for laminated glass: a glass floor, two stories up in the air. You're experiencing first-hand the strength and safety of the material as you're learning about it, which makes the display pretty interactive." An acid-etched laminated glass staircase and bridge then conducts visitors to a 'Hot Glass Show'. Cassetti reports that laminated glass was chosen here "for strength, safety and drama!"

The laminated glass floors, stair and bridge were all supplied by Depp Glass Inc. of Long Island City, New York, using a series of large and complex laminated glass shapes incorporating Butacite® PVB.



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*Experiencing the safety and strength of laminated glass first-hand at the Corning Museum of Glass.*

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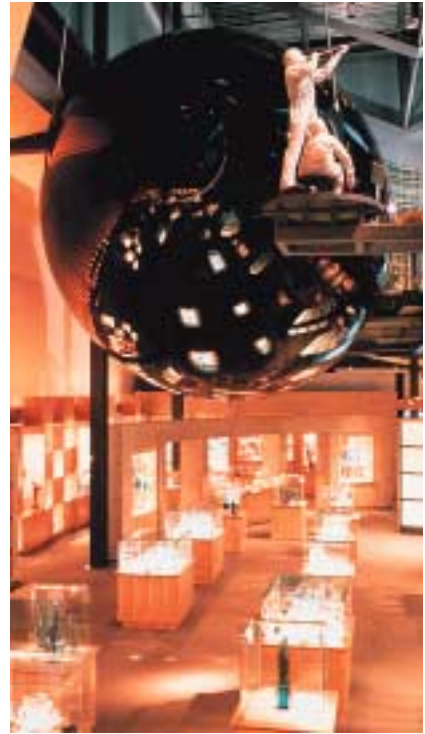
### GLASS EGG

An Audio-visual theatre in the ‘Vessels’ gallery traces the history of the glass container, from glass blowing to light bulbs to cathode ray tubes (CRTs). This display is actually situated inside a giant laminated glass ‘egg’ or ellipsoid, 12 m tall and 7.60 m in diameter, suspended from the museum’s ceiling.

Corning’s Cassetti says: “Laminated glass was the only possible choice of material, not only for safety reasons but to achieve the special effect we wanted. The grey glass shades the video displays inside. It is also intriguing, being opaque from the outside and transparent looking out from the inside. The excellent acoustic properties of laminated glass were another reason for our choice of the material.

“The sound is distributed wonderfully inside but the structure is also insulated so as not to disturb people touring the other exhibits.”

Dlubak Inc. of Blairsville, PA was the laminator for this project. Dlubak’s VP of Engineering, David Passarelli said: “It was quite a project! The 40-ton glass egg is suspended from the ceiling by four steel cables. We were always designing for safety – thus it was natural that the egg is 100% laminated with DuPont Butacite® PVB. The difficulty came because Ralph Appelbaum correctly insisted that the outside surface should be perfectly smooth with no imperfections in the perimeter, which involved cutting the glass after it’s bent – a complicated procedure. The low optical distortion and excellent acoustic properties in the oversize panes we wanted are only obtainable with laminated glass.”



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*A suspended ellipsoid audio-visual theatre in the Corning Museum of Glass is designed to contain 50 people. Its laminated glass structure is opaque from the outside but transparent from the inside.*

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