

Reference

PLEXIGLAS®

Hollow PLEXIGLAS® spheres for submersibles Triton Submarines LLC



Market segment

Aquariums and specialty glazing

Products

PLEXIGLAS® GS block Clear 0Z00 of initial thickness 220 mm

Processing

Evonik Performance Materials GmbH:
Shaping of blocks to half shells

Heinz Fritz Kunststoffverarbeitung:
Sanding and polishing, and bonding the half shells together into a sphere

www.heinz-fritz.de

Selection criteria

- Block material available in 220mm thickness with very high light transmission
- Certified by Germanischer Lloyd
- Appropriate adhesive available (ACRIFIX® special grade)

Description of the application

In a patent-protected process, Evonik Performance Materials shapes 220 mm thick PLEXIGLAS® blocks into half shells. At Fritz, the two half shells are reworked, sanded, polished, and bonded together into a sphere. Germanischer Lloyd has approved the shaping process, the subsequent bonding of the half shells to give a sphere, and the adhesive used for this purpose. This is a high-end application as regards the degree of shaping and the adhesive technology. The sphere has a diameter of 2100 mm and a wall thickness of 166 mm. Its weight is 2.2 metric tons.

It is authorized for a diving depth of 1000 meters. The PLEXIGLAS® hollow sphere permits an unrestricted all-round view, simultaneously serving as the protective pressure hull for the passengers.

www.tritonsubs.com

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