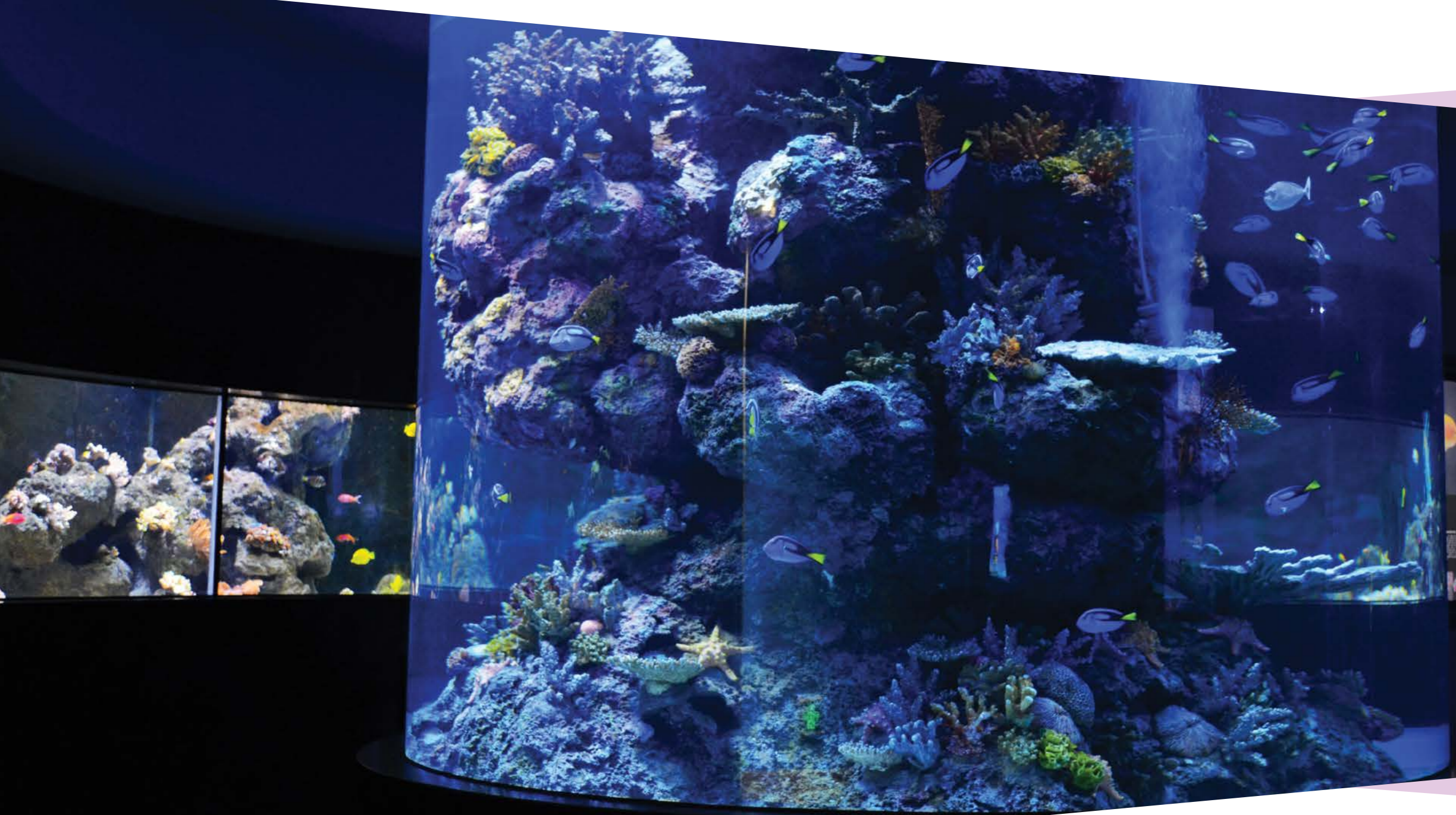


**HIGH QUALITY,
LARGE FORMAT,
PLEXIGLAS® ACRYLIC**



AAT ACRYLICS

LICENSED PLEXIGLAS® PARTNER



Large and innovative acrylic viewing windows, cylinders, domes and tunnels are central to the design and construction of modern aquaria and zoos.

From time to time, global supplies of high-quality, large format acrylic cannot keep pace with demand. When this happens, major construction projects requiring acrylic can be disrupted by frustrating and costly delays.

As the world's premier aquarium infrastructure services specialist, ADVANCED AQUARIUM TECHNOLOGIES® has witnessed this first hand.

The same supply issues also has the potential to disrupt other construction projects involving acrylic, such as swimming pools or buildings with acrylic architectural features.

To expand the world's supply of acrylic, in 2015 the Founding Directors of ADVANCED AQUARIUM TECHNOLOGIES® secured a license to manufacture PLEXIGLAS® acrylic from the material's original inventor Germany's Evonik Industries.

We know from our own experience in aquariums that the magic happens when creative talent collaborates with technical experts.

- John Langmead CEO

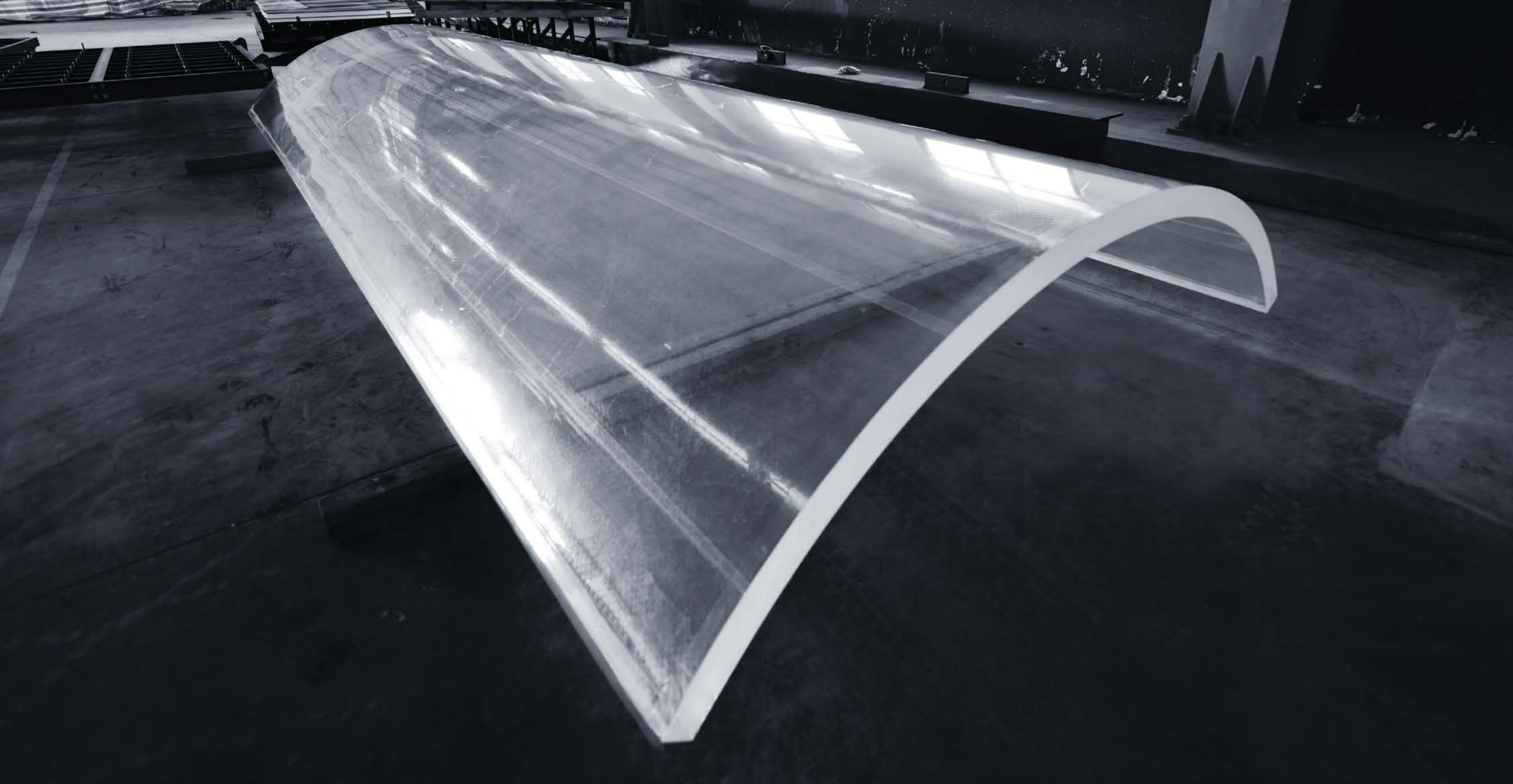
PLEXIGLAS® acrylic is one of the world's most precious and versatile plastics.

It provides a clear view, lends shape and brilliance to a variety of objects, protects against rain, hail and stormy weather, withstands extreme pressure and heat, is break resistant and faithfully reflects the world in all its colour.

AAT ACRYLICS – the moniker given to the new acrylic manufacturing, sales and distribution capability will specialise in the production of high quality, large format PLEXIGLAS® acrylic. The aim is to provide customers with control over the timing of their projects, by reducing the acrylic supply constraints for both cast block and value added panels, windows, domes and tunnels.



PLEXIGLAS® 



ACRYLIC MANUFACTURING

AAT ACRYLICS manufacture PLEXIGLAS[®] acrylic in a range of standard cast block sizes. These standard panels are available in thicknesses from 30 mm to 225mm. The PLEXIGLAS[®] cast blocks are produced from pure methacrylate (PMMA) providing the outstanding quality that provides a 30 year guarantee against yellowing. With the technical expertise and research of over 80 years, Evonik Industries has invented numerous processes to allow the cast blocks to be laminated and bonded to create the impressive value add options available today.



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Cube Oceanarium

Amazon Tunnel

The Cube Oceanarium is located in the heart of Chengdu's latest shopping precinct – Seaside City. AAT proudly supplied and installed a total of 105 PLEXIGLAS® acrylic panels produced by Evonik Industries. The 180° tunnel in the flooded Amazon tank provides visitors with a wonderfully immersive experience.

Acrylic Specifications

- Arc 180°
- Panel Length 6000mm
- Thickness 110mm





TRANSFORMING ACRYLIC

AAT ACRYLICS can transform cast block acrylic into domes, tunnels, cylinders, curved and corner panels using thermoforming, bonding and annealing techniques.

THERMOFORMING

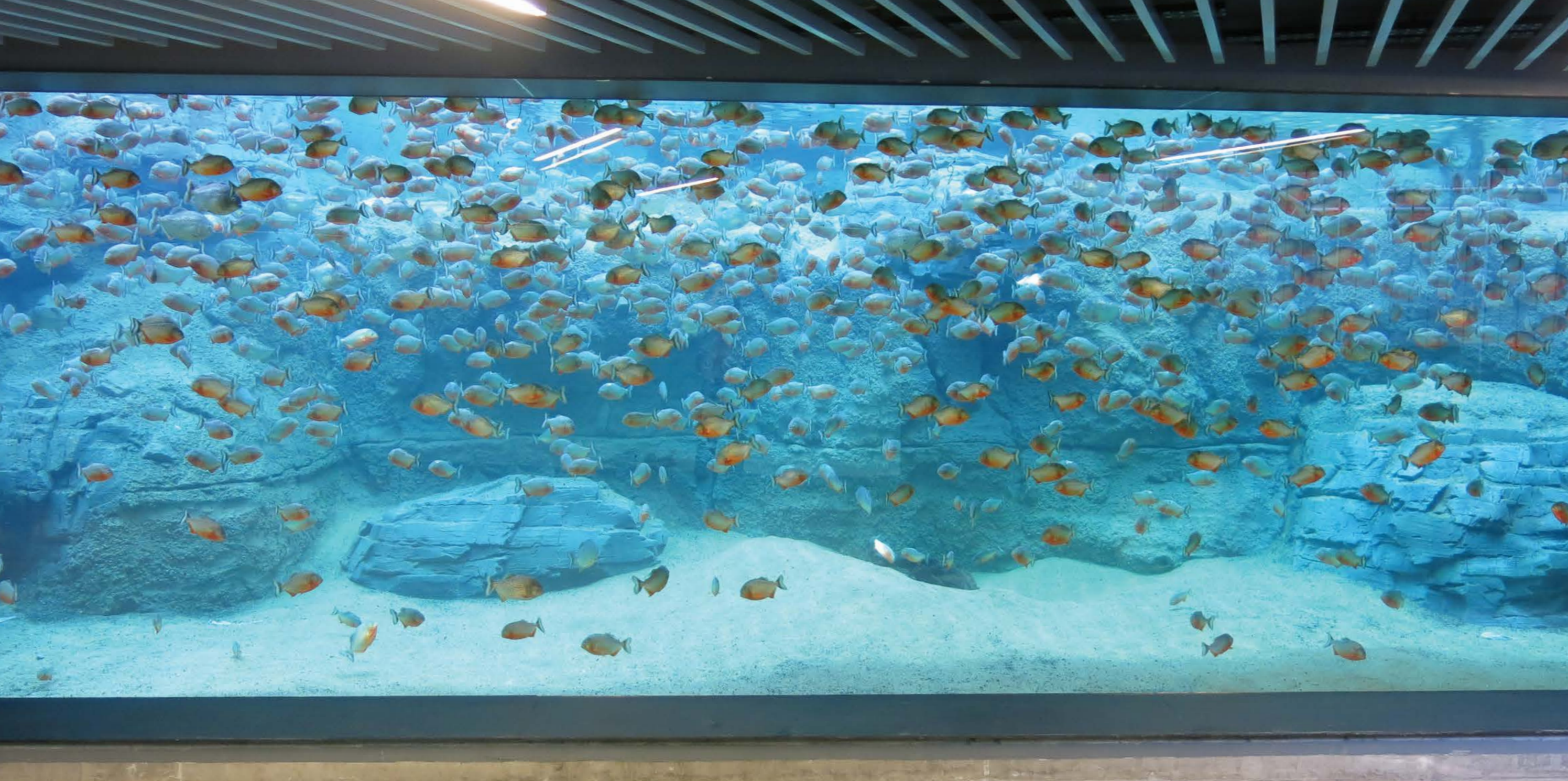
Thermoforming is a manufacturing process where the raw sheet is heated to a pliable forming temperature, then formed to a specific shape in a mould. This process is used to create tunnels and curved panels, along with other interesting shapes.

BONDING

Bonding is a process joining two or more panels to extend their length / size to achieve the impressive feature panels. More than just gluing, bonding is a chemical process which alters and resets the molecular structure of the acrylic panels. The bonding reaction is temperature and time controlled so that once complete provides a bond of excellent strength and clarity.

ANNEALING

Annealing occurs both during the original panel manufacturing and also following some of the value add processes of lamination and bonding. The process of slowly heating and cooling a panel to consume any rest monomer in the cast panel and to relieve any internal stress in the panel following value add production takes place in a low temperature oven. At the end of the process the internal chemical structure is cross-linked providing a structurally sound and quality product.



Piranha Aquarium Exhibit

Den Blå Planet is Northern Europe's largest aquarium and is one of the most prominent tourist attractions in Denmark. AAT supplied 44 tons of PLEXIGLAS® acrylic and installed 69 panels, including the Piranha exhibit. This panel measured in at 7.25m wide by 2.46m high and is 125mm thick.

Quality is the result of sustained hard work,
relentless attention to detail and insistence on
working together to meet the highest standards.





Oman Aquarium Tunnel

The Oman Aquarium project commenced in 2015 and will be opening in 2017. AAT have been contracted to supply and install 92 PLEXIGLAS® acrylic panels, bringing the total amount of acrylic in the aquarium to 81 tons. The facility will feature many fascinating exhibits including a walk through tunnel.



ACRYLIC VS GLASS

Where glass comes up against its technical limits, the special properties offered by PLEXIGLAS® give visitors a spectacular view below the water surface.

- Acrylic is approximately 17 times stronger and 50% lighter than glass.
- Acrylic is more impact resistant and is far safer than glass on impact.
- Acrylic is optically superior to glass, clarity is reduced in glass and affected by green tints.
- PLEXIGLAS® panels comes with a 30 year guarantee against yellowing.
- Acrylic is far more versatile than glass, and offers limitless design potential.
- Acrylic offers 20% more insulation than glass, which reduces condensation and temperature fluctuations.



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Cube Oceanarium

Penguin Exhibit

The Cube Oceanarium hosts over 10,000 different species of marine life including a captivating colony of penguins. AAT proudly supplied and installed the PLEXIGLAS® acrylic panels for the large penguin exhibit. The total amount of acrylic delivered by AAT for this aquarium project was an enormous 51 tons.

Acrylic Specifications

- Main Panel Size 10,000 x 5,000mm
- Water Depth 1300mm
- Thickness 110mm





Swimming Pool Window

This unique acrylic panel was created for a swimming pool overlooking the Brisbane River in Queensland, Australia. The u-shape was accomplished by joining three PLEXIGLAS® acrylic sheets and bonding two edges to achieve maximum strength. Owners of the private residence will enjoy stunning views for many years to come.



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