

Mirror-polish ceiling in Norman Foster Foundation Pavillion

Nestled in the courtyard of Norman Foster Foundation's headquarters in Madrid is a Pavilion that opened in the summer of 2017 to display objects and visual materials that have inspired Lord Foster and his work.

Text & images by Kikukawa

Implementation of the spatial concept required a high-quality mirror polished ceiling; an ethereal space for the artworks which are enhanced with bespoke spotlights. The resulting cuboid space is 4.5m in height, covered in a total of 138 m² of mirror-polished stainless steel ceiling panels with 48 bespoke spotlights that light up the display. The 2mm thick ceiling panels were constructed of stainless steel grade JIS G4304 SUS304 - USA (UNS) AISI304 (S30400) equivalent.

Lord Norman Foster and Kikukawa

As an integral part of realising the design concept, Lord Foster entrusted Kikukawa as the consultant and fabricator of the bespoke mirror polished stainless steel panels. This trust was based on an established partnership from other projects; metal craftsmanship displayed through our works; and a personal visitation by Lord Norman Foster to our factory in Chiba, Japan.

The strict standards of this project and its implementation is a testament to the close collaboration and our craftsmanship.

Mirror-polished stainless ceiling

Mirror polished stainless steel is said to be one of the most unforgiving finishes, and the selected typical width of the panel of 1435mm added to the challenge in meeting the high-quality standards of the project.

To ensure the flatness of the panels, Kikukawa's team proposed the 2.0mm thick mirror-polished stainless steel panels with honeycomb backing details. Other quality factors such as polishing consistency was ensured by comprehensively quality controlling the panels from the lot procurement,



The mirror-polished ceiling perfectly reflects the contents of the Pavillion.

Visit by Lord Norman Foster

Lord Foster, of the internationally recognised Foster + Partners studio for architecture and integrated design, toured Kikukawa's factory on March 28th, 2017. Lord Foster requested a visit to the factory as his firm has partnered with Kikukawa for some time.

Lord Foster viewed the facility, various samples and the fabrication process of the products. Upon Lord Foster's visitation, his main interest was Bloomberg London (Bloomberg's European Headquarters) at the time.

With the actual technology, craftsmanship and product in front of him, Lord Foster showed great interest, asking various questions while he felt the metal with his hands. He shared his impressions, saying, "I saw how the skilled manual work of craftsmen and cutting edge machinery was fused to produce these wonderful products."



An external view of the Pavillion.

material cutting, and hand-polishing when necessary by our experienced craftsmen.

By doing so, requirements such as the mirror-polishing surface of the bent edge detail were met (bent mirror-polished panels typically bare a white tinge due to the material elongation).

Invisible access panels

The continuity of the mirror-polished stainless ceiling was a key factor in the implementation of the design. The proposals extended from the panel details, sub-frames, and backing frames to a new locking system that conceals hardware and frames for the 18 access panels. This patent-pending access panel unlocks with a 2mm thick key plate. In addition to these solutions, the 2mm thin-joint requirement implied a precise installation requirement.

Although our area of responsibility did not include installation, Kikukawa's team conducted installation demonstrations during the mock-up stage, and provided detailed installation instructions to the site. An advisor was also sent to the location to ensure the high-quality standards of the project were met.

Metal crafting tradition, from Japan to the world

Kikukawa worked closely with the architect, designers and contractors to address every requirement of the project. In doing so, it was able to implement a ceiling that reflects our craftsmanship and commitment to the design. It was an honour for Kikukawa to participate in this highly regarded project in a way that displays Kikukawa's metal construction and craftsmanship overseas.