Case Study

Glass Polish® Removes Glass Distortion from Iconic CBD Landmark Project with Innovative Technique

Summary:

Over 20 glass large glass panels on the top floors of an exclusive CBD building were badly scratched. The scratch removal process caused significant distortion in the glass. No-one knew how to repair the damage, and to replace the panels was not feasible. ***Glass Polish*** researched, experimented and finally came up with a solution. When the innovative technique was trialled, the results were outstanding. The distortions were removed from the glass and a disaster had been averted.

The Project

Branded 'iconic', its design 'cutting edge', and the location 'a signature address', the Sydney CBD high-rise refurbishment project had certainly taken on epic proportions. But if one feature stood out above all the others, it was the curtain wall—a high-performance glass façade designed to reflect the summit of contemporary architectural achievement.

The Problem

During fit-out, significant scratching to glass panels on the top two levels of the building occurred. The project's insurer engaged a glass-polishing company to repair the damage.

"When they polished the panels, you could see that what they were doing was digging into the glass and gouging out obvious circular distortions," observed project manager, James Barta. "We went from high visibility, with scratches, to no scratches but almost zero visibility. It was a disaster."

With the deadline for completion fast approaching, the project-management team contacted the supplier. He confirmed that there was no known remedy for glass distortion, but if anyone could fix the problem it was *Glass Polish*.

The Process (I)

After inspecting the damaged panels, Reinhard — Reinhard Wollner, Operations Manager of *Glass Polish* — promised only one thing: that he would do his best. But, at the same time, he knew that history and technology were against him.

Reinhard applied a standard buffing process, using bigger pads, wider arcs and a lot more time and care. The results were promising, but still short of the mark.

The Process (II)

The *Glass Polish* team launched into an intense, month-long research phase that involved studying online tutorials in antique glass and gemstone polishing and consulting leading glass specialists from around the world. In his search for a suitable abrasive, Reinhard also spoke with metal industry engineers, who introduced him to a flattening process called 'lapping'. After sifting through the information acquired, *Glass Polish* then pieced together and trialled a new approach.

Reinhard takes up the story:

"The biggest challenge was sourcing plates that were totally flat to a tolerance of just a few microns. After experimenting with a few metal options, we discovered that the best available backing material was in fact glass itself. So, we tested a few different sizes of glass and various abrasives until we hit on the right combination."

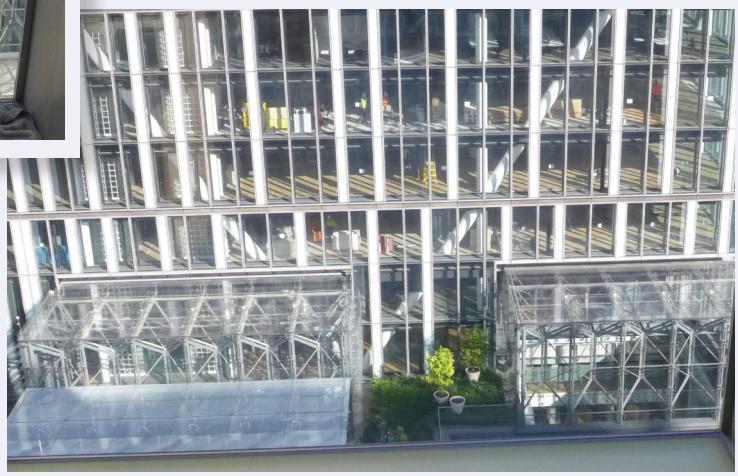
Confident they could get the required result, *Glass Polish* offered to trial the solution on a couple of panels free of charge. The process was slow and painstaking, but it was effective.

The Prize

With over 20 distorted panels to repair, and each panel measuring 3.0m x 1.6m, Glass Polish worked 12 hours a day for 5 weeks, flattening out each distortion by manually treating it with an abrasive slurry between two large glass plates.

"We were under enormous pressure," said Barta, "but Reinhard and his team stuck to the task, panel by panel, bay by bay, until near-perfect vision was restored. By rights, no-one ought to have been able to achieve what *Glass Polish* achieved. It was a fantastic result."

A glass panel showing almost the whole area flattened by abrasive slurry, there is only one small distortion remaining



Looking out from the completed project - visibility is near perfect!

The Proposition

The proposition *Glass Polish* presents is nothing less than a polished performance across every project. The success described in this case study may have been innovative, and even historic; but when it comes to glass distortion we want you to be clear – our unique, remedial process can be repeated whenever and wherever the need exists.

Our distortion-removal methodology:

- Works for all toughened glass and for glass panels of any size, big or small.
- Causes no significant negative impact on the structural integrity of the glass.
- Removes no more than 0.2mm (200 microns) of glass. To compromise the strength of the glass you would have to take off more than 3mm (3000 microns) of glass.
- Restores compliance with industry standards–AS 4667.

GLASS POLISH

If you have any enquiries, are seeking advice or would like an obligation-free consultation with one of our glass experts, call us on 1300 RENEWED or visit our website for more information – **www.glasspolish.com.au**