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SOHEIL MOSUN LIMITED

Builders in the 1940s used Japanese artists to patinate the copper cladding on the Bank of Canada building, which Soheil Mosun had to duplicate.

Building Restoration

Duplicating history is turned into an art form

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Building envelopes are often designed to meet the technical specifications of a project, but occasionally special projects come along in which aesthetics trump all.

Toronto's Soheil Mosun Ltd. is one of the world's leading custom architectural fabricators, a claim the company is quick to back up with a portfolio spanning the globe and more than 35 years in business.

The team of toolmakers, machinists, welders, cabinetmakers, model makers, etching artists and industrial designers has been contracted to work on projects ranging from the interior elements of the new Tiffany & Company Wall Street store in New York City, to the gates that surround The Prophet's Mosque in Medina, Kingdom of Saudi Arabia.

The company's signature work in building envelopes includes some of the most prominent historical structures in Ottawa.

"In 1995, we were contracted to fabricate and install a new bronze enclosure system for Canada's Peace Tower on Parliament Hill," said Darius Mosun, CEO of Soheil Mosun.

"The work included custom crafted bronze windows and the accompanying glazing system. It was necessary for the entire enclosure system to blend in with the original architecture of the observation deck."

While the architectural details of the window casings, including ribs, sills and trim, remained true to the original style of the building, the project required state-of-the-art glazing and sealing to complete the system, which is air-tight and condensation-resistant.

In 2002, the company was contracted to install more than 200 solid bronze windows for the restoration of the Library of Parliament in Ottawa.

Again, the project combined modern technology with attention to period detail, using custom-fitted, high-performance argon-filled glazing units set in solid architectural bronze.

A more recent project in 2005 involved the removal and replacement of all of the glazing at the Bank of Canada in Ottawa.

The company was contracted to manufacture and patinate more than 23,000 metres of copper mullion caps and trim to duplicate the original finish of the building envelope.

"The project was originally completed in the 1940s and they had a number of Japanese artists in the Ottawa area patinating the copper in a farmer's field," said Mosun.

"There are all sorts of ways to patinate copper involving acids, pregnant mare's urine and elephant's urine. Our company is not an expert in urine, but we are experts at creating accurate historical detail."

Much of the copper on the building had deteriorated significantly, with some of the metal turning to dust.

All of the copper exoskeleton was removed and the building readied for new copper cladding.

"The challenge was to match the original finish of the copper, patinated to its current form and now static, but to also provide some reassurance to the client that the new copper wouldn't change as it aged," Mosun said.

"It took some three to four months of R&D. We were finally able to create a formula to patinate the copper then applied the treatment with an old style cleaning mop to get the right strokes to match the finish. For a job this size we had to convert the entire shop to a patination line where we patinated, prepped and cured the metal."

That passion for design, materials and legacy drives the firm.

"It's most important for the architect, the designer and the owner to have a high degree of passion and appreciation for the work we're undertaking," he said.

"They need to focus on where the project is made, the materials and machinery used to undertake the work, how the material will be shipped and what forces will be used to install the elements in the building."

He's also clear the firm isn't interested in a disposable approach to building, with cheaper materials and a focus on cost cutting.

"Our projects need to have a vision and a passion to create something of substance that will last for a long time," he said.
