

Chicago project gives Edgetech a chance to introduce krypton units

(continued from p 1)

central heating, hot and cold running water, electricity and bathrooms.

Fame came soon after its completion in 1888, when as one of Chicago's most famous early skyscrapers, the Rookery heralded the start of a new era in American structural and commercial design.

Then in 1905, the most famous name in U.S. architectural history, Frank Lloyd Wright, entered the scene, adding his own flare of architecture while undertaking the building's first major renovation.

Designed to undo some of the changes made in a previous 1930 renovation, the 1990 retrofit highlights both the original work of Burnham and Root, and that of Frank Lloyd Wright, and "returns it to its former elegance," according to a recent article in Chicago's Metropolitan Review.

Super Spacer's role, while restricted to only 1,725 sq.ft. of curved glazing, was pivotal, nevertheless, in solving some major problems that had arisen, when it was discovered that virtually all the radius-top units required slightly different sizes of glazing.

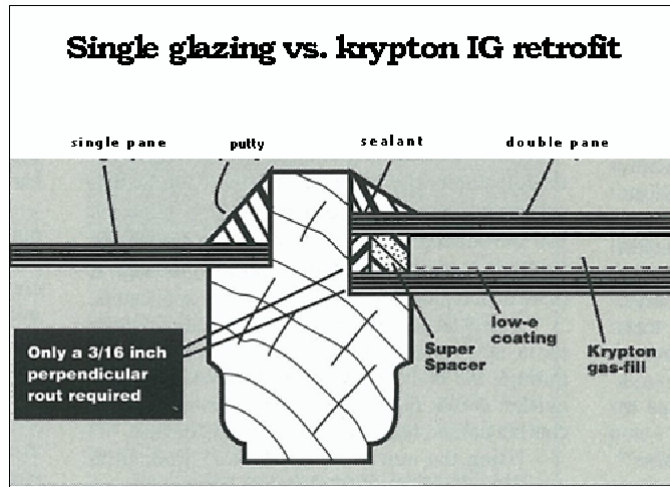
Sending one or two templates to an IG manufacturer, as the project's glazier, Specialty Glazing and Supply Inc., expected to do, was out of the question. So the Kankakee, Illinois company turned

to Edgetech's Super Spacer, and "a massive headache" became a "piece of cake," says Specialty Glazing president, Gail Wallace.

"In the past, we've worked with metal spacers, but bending them into shape is such a big pain," she says. "So the fact that Super Spacer was flexible enough for use with these unusual shapes, that you could size it perfectly, and that the spacer itself had a low profile, meant we solved a sticky problem, got the job done on time ... and they look sensational," says Wallace.

"It's a product that's got a lot of potential" in the field of heritage windows, she says, because, apart from ease-of-installation, "being non-aluminum, this warm-edge technology is the biggest thing it's got going for it."

For Edgetech, "It's a great project indeed," says technical director, Michael Glover. "It indicates the potential is there to become the spacer of choice in heritage upgrades, and a chance for us to promote our idea of slim-line, krypton-gas-fill units to the industry."



"We're big on krypton, when it comes to heritage windows," says Glover. It's low thermal conductivity, means that a quarter of an inch of air space is all that's required, he explains.

Testing work carried out by Edgetech shows, that, with "very little" routing, a single pane can be easily replaced with a low-e coated, double-paned, krypton unit, containing insulating spacers, and heat loss will be reduced by 75 percent.

The narrower quarter-inch airspace in the krypton units, compared to the half inch needed

for argon gas units, means the overall glazing channel can be much narrower.

"This keeps routing to an absolute minimum," Glover says, "an important fact when it comes to maintaining the structural integrity of the frame."

Apart from a 16-unit demonstration in Ottawa, undertaken three years ago by Edgetech "to show that the routing procedure works," no commercial use of krypton in a heritage installation has ever been tried, says Glover.

As far as modern-day structures go, relatively few krypton units have been installed either, "generally because of the cost," he says. At almost \$1.00 a square foot more than argon, and no overriding requirement for slim-line windows, the krypton option in contemporary buildings is "much more" expensive.

"That's why with heritage retrofits, where there's such enormously high labor costs in restoring the window frames, the added expense of krypton-gas units is so trivial," he says, "you might as well do it right, so you'll never have to do it again."

"Whether, or not, heritage designers can be sold on the merits of krypton is not our immediate or prime motive for our wanting to engage their thinking, though," says Glover.

"Super Spacer alone, or in any combination with low-e coatings and argon gas fill, still has lot to offer, as the Rookery goes to show, he says. "For obvious reasons, we're quite proud of the project, and are looking forward to working on other high-profile heritage projects"

"We've already had discussions with U S government heritage officials about restoration work and they'll soon decide whether to upgrade the existing single glazing on the White House in Washington to super-window standards."

Edgetech initiates computer design service

With the era of window labelling about to descend on the North American IG industry, Edgetech has established a new computer energy analysis and design service to assist manufacturers looking at various options to increase overall unit efficiency.

The new service, primarily based on the FRAME program is being provided by the company's research-and-development office in Ottawa. FRAME has been accepted by U.S. and Canadian standards writing bodies as the sole computer method for calculating window-perimeter heat-loss.

"It's an excellent program, but not that user-friendly for your average window manufacturer," says Edgetech's technical director Michael Glover. "We decided to provide the service, not only to highlight Super Spacer™ but to help manufacturers see the energy impact of whatever other high

performance components they're considering in their design."

This sort of information can make quite a difference to a manufacturer. "if they're looking for a quality product," says David Sargent, Edgetech's design engineer operating the service.

"We can make various design modifications and then do a lot of computer runs," he says. "It's especially good for overall R-values, which currently are not the industry standard, but will be in the next year or two."

Free to Edgetech customers, manufacturers must supply detailed shop drawings of their design. A detailed report summarizing window U-values, and other key properties of various design options, is then prepared, with an energy payback analysis that includes isotherm and heat-lflow plots.

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