

# REINFORCING NEWS

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## The beauty of the Parson's "Brick Step"

By George T. Biro, P.Eng.

Recently, Parsons Precast Inc. of Hamilton introduced a new pre-cast step assembly to the residential home building market. Historically precast steps have been large one piece units. Parsons identified a need for something lighter and more attractive and developed the "brick step" stair unit.



Pre-welded step assembly ready for shipment and immediate use.



Brick step stair comprised of two side brackets and one riser step assembly

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The Brick step is an engineered pre-cast step system that has been redesigned. The step has closed stringers which eliminate the greater than four-inch gap at the sides of the rise and run of each step.

The colour of the brick step has been changed to a light grey that closely matches the poured-in-place concrete of the porch cap.

Parsons identified a need for something more attractive and developed



Side brackets cradle the step assembly the brick step stair. The new design meets architectural control requirements.

# StelCrete presents paper at Precast Concrete Association of New York Annual Meeting

StelCrete joined the Precast Concrete Association of New York (PCANY) in 2004 to participate with its U.S. clients in building a better market for precast products and services. Through active participation in the association, StelCrete is able to stay abreast of issues related to standards development, competitive products and materials, evolving markets and technology, challenges affecting contractors and specifiers, and helping to affect change at the state and federal legislatures that favour precast concrete products.

StelCrete is the first Canadian Associate Member of PCANY, and now the first Canadian company to address the membership at an annual meeting of PCANY. When StelCrete offered to present a technical paper at the annual meeting about pre-welded assemblies and the benefits to precasters, we were warmly welcomed and invited to also speak about our company and its products and services. We were delighted to receive many questions following the presentation that had cross border business content.

As businesses on both sides of the border come to understand the details of the North American Free Trade Agreement and its impact on the flow of goods and services between Canada and the United States, American and Canadian businesses will continue to realize new opportunities that are driven by developing technologies. StelCrete was given a chance by its American clients and their association to show how we can contribute to profit margins. Now we have to build trust through Association work that proves that we truly strive for long term relationships with clients in Ontario, Québec and the states bordering the Great Lakes. StelCrete has volunteered its expertise to work on a task force with representatives of PCANY to solve a problem in New York State with precast slabs related to traffic loading and reinforcement. Our work on standards development in Ontario related to this issue will certainly contribute to the efforts of our U.S. colleagues.



**PRE- WELDED ASSEMBLIES**

PRODUCT QUALITY and REDUCED RISKS

Causes of lack of protection of steel

**Physical**

- Insufficient cover over reinforcement
- High permeability concrete
- Failure to protect concrete from chloride sources
- Damage to concrete (cracking, spalling, scaling)

**Chemical**

- Penetration of chlorides into concrete. (Passivation layer is destroyed when chloride ion content reaches 0.2 – 0.4% in region adjacent to steel)
- Carbonation of concrete leads to a reduction in pH.



Why Precasters like pre-welded reinforcing assemblies

- Enhance business
- Quality control
- Reduced floor space requirements
- Product delivered when needed
- Suppliers may have purchasing advantage for steel
- Reduced plant accidents and injuries



February 2005

G. T. Bro, P.Eng  
Precast Concrete Association of New York



# StelCrete joins Tubécon

Tubécon is an industry association of precast concrete pipe and box producers located in Québec. Established in 1970, Tubécon is recognized across Canada and throughout Québec for its mission to promote precast concrete products of the highest quality. Its members are the pre-eminent precast concrete pipe producers in that province. The association works closely with officials in the province's major urban centres and the Bureau de normalisation du Québec (BNQ) to develop and participate in the review of standards for the province. It also works closely with Transports Québec (MTQ), Québec's transportation ministry to ensure the proper application of drainage products and materials on the province's major roads.



StelCrete joined Tubécon in January, 2005, and immediately met with its executive officers to express its interests in the Québec market, and to reinforce existing business relationships through support of their association. Again, StelCrete is in the business of providing products and services based on long-term relationships.

In 2004, StelCrete shipped large quantities of connectors and reinforcing for highway barriers into the Québec market.



# Saint Gobain developing new product carrier

By Robert Nichols

Saint Gobain of Hamilton orders their concrete pulp stone reinforcing cages as complete units, consisting of assembled and loose components. The cage rings are held in position by metal strapping tabs that may come loose during delivery. To solve the problem, a sacrificial piece of bent rebar was wired to the cages to prevent them from falling. However, safety concerns surfaced when unwinding the tie wires. This challenge was met by designing and fabricating a specialized steel carrier to house the cage. The compact one-piece carrier was developed by StelCrete personnel along with Saint Gobain management and employees.



Specialized steel carrier houses cage

The customer's suggestions were incorporated into a second version of the carrier. The carrier unit is easy to remove with a forklift from the delivery truck. No tie wires, tools, or loose attachments are needed to safely secure all of the reinforcing components that go into a concrete pulp grinding stone.

Teamwork and customer consideration were key elements that went into the development of this useful shipping frame. The customer's

needs were identified and incorporated into the design of the unit.

The customer was very pleased to see the first prototype unit arrive just as the plant manager was giving a tour to a major buyer from overseas. Mr. McDonald, Saint Gobain's plant manager was also pleased to find that the delivered reinforcing cage came with a newly developed Quality Checklist. The checklist ensures that the cage has been given a final quality review, and that all of the information necessary to provide full product and material traceability is complete.

Work has started on another type of unit used to ship loose bar rings to Saint Gobain. The challenge this time was to develop a ring carrier that would secure the loose rings without damaging the product, make optimal use of truck bed space and allow Saint Gobain's workers to withdraw the rings in a good ergonomic position.



Ultimately; the final version of the ring carrier will be developed using the same method— working with the customer to meet and exceed needs.

[www.stelcrete.com](http://www.stelcrete.com)  
April launch

StelCrete's Web site is scheduled for an April launch. The new site features sections that support the business core of the company by describing products for buildings, custom assemblies, roads and bridges, and precasters. All pages of the site have contact information and quick links to email forms for immediate communications with StelCrete management. At all times, visitors to the site are no more than a phone call or click of the mouse away from StelCrete staff.

The site archives documentation of our product applications, and product sheets that detail major assemblies. The site has links to other sites that include StelCrete's partners, agencies and industry associations. The site even can take the specifics of project inquiries on a form specially created to save response time in setting up accounts.

Articles published by StelCrete in industry media, and every issue of Reinforcing News are archived on the site. This kind of information is important to track the history of our company, and to facilitate searches for applications of the products we make.

StelCrete's Web site adds value to the company and its staff, as it was built to inform, store information and to communicate with clients and prospects.

Watch for a bulletin announcing that the site has been posted on the 'net and is ready for use.

StelCrete

# Salit group of companies join forces in the latest expansion project of Salit Steel Corporation

By George T. Biro, P.Eng.

Accompanying constant growth in product demand experienced by Salit Steel Corporation (SSC) in 2004, was the need for additional storage space. To manage this relationship between supply and demand, and to offer a wider selection of beams, Salit commissioned the installation of a new 82-foot span outdoor crane runway. SSC supplied all of the steel to O'Brien's Installations of Stoney Creek, the structural fabrication and erection contractor for the project. Salit Rebar supplied the rebar for the concrete foundations, while StelCrete pre-welded rebar for the concrete footings and piers. Newman Bros. Limited of St. Catharines provided job site layout, supervision, and concrete forming and pouring. Preparation of the foundation and backfilling work progressed well, even with some poor weather days that occurred in October. By using pre-welded reinforcing assemblies, the contractor was able to make up lost time and more tightly schedule concrete pours.

The teamwork continued when it was time for Ryko Electric to bring power to the new crane runway. The supply lines run almost 300 feet in an



underground concrete duct bank from the south-east corner of the rebar shop to the new outdoor crane runway. Because there are heavy trucks that pass over top of the supply lines, the concrete was reinforced. StelCrete fabricated the duct bank reinforcing in two halves and in 10 foot lengths. The cages even had pre-welded cross bars to ensure the plastic conduit would be spaced away from the bottom of the rebar cage.

Installation was simple. The lower cage assembly was placed on concrete bricks, the electrical ducts were placed and secured, the top

half of the cage was placed and tied, and the concrete was poured. The next day the trench was backfilled, compacted, and voila; an efficient way to construct underground duct banks.

In all, it was a great effort on the part of everyone in effectively bringing together this important expansion for the Steel Service Centre.



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WE REINFORCE YOUR BUSINESS... THAT'S A PROMISE CAST IN CONCRETE

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*StelCrete's core business is to supply precasters with fully pre-assembled, pre-welded reinforcing cages for all types of products*