

Expertise and innovation in construction services help Aluma Systems stay on top in its chosen marketplace.

Ruari McCallion speaks to president Stephen Tisdall

It's not that often that something comes around in the construction industry that has what could be described as a transformational effect. But it does happen from time to time, and the Hi-Flyer from Aluma Systems looks like it fits the bill. Users have spoken of productivity increases in the

region of 30 percent—quite a stunning change in a well-established business like construction.

“The Aluma Hi-Flyer is a column-hung system that's designed for creating large tables, using fewer transverse trusses,” says Stephen Tisdall, president of Aluma Systems, Inc. “There are a lot of products that have been around a while that have been enhanced over the years. The basic concept of Hi-Flyer is something that was put in place in the 1970s. Our innate strength is that we have people who are experts in high-rise construction and understand the needs of our customers. Hi-Flyer capitalizes on the advantages of standard column-hung systems and incorporates new features, particularly adjustable aluminum trusses, which offer greater efficiencies in use. The end result is that construction companies using the system can complete floors at the rate of one every three days.”

Let's pause for a moment, just to remind ourselves how high-rise buildings are erected. The steel frame forms the structure and supports the floors, which are made of concrete. The challenge is pouring the concrete and giving it time to cure. If it's not going to fall all the way back down to the ground, it needs a mold, into which concrete is poured. The traditional way of doing this is to support the next floor up on the one below. But in order to do that, the lower floor must be completely cured in order to carry the load. Hi-Flyer, however, bolts into the vertical columns, so as soon as the column is in place and secured, the floor activity can commence—no need to wait until everything has dried out below.

Where Aluma has moved things forward further is with its modular design and adjustable trusses; it also has innate strength, which allows the trusses to be spaced further apart—as much as 80 inches, rather than the traditional 30—which means it takes less time to assemble. There's less to haul up the building as well.

Hi-Flyer is mounted by heavy-duty screw jacks, which are bolted to the column. As the load is transferred down the column, it eliminates the need for reshoring. Its modular design allows more freedom for architects to design unusual and eye-catching buildings

also. The Absolute Tower in Mississauga, Ontario, will be the highest building in the city, at 50 stories. But that isn't the end of it. The architects, Yansong Ma of Beijing, have dispensed with the traditional four-walled box

Concord, Ontario, but it has representation and facilities across North America and operates globally, including the

Leland Industries, Inc.

Leland Industries Inc., is a domestic manufacturer of bolts, nuts and screws for industrial, commercial and agricultural markets. Accredited under ISO 17025 and also A2LA for mechanical testing, Leland produces bolts to 5/8" and nuts to provide "spin-free" fit. Leland products receive a basic JS500 plating for corrosion resistance. With over 300 manufacturing and support machines, and a reputation of "quality and service," we are a "single-source" to many companies.

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concept and created a building that seems to have been shaped by the winds of southern Ontario or by long-departed tides; it seems almost fluid. But Aluma was able to supply a standard set of tools that enabled the vision to be cast into solid reality.

“That building is a challenge for a construction system to be used bottom to top, without making many changes,” says Tisdall. “In the event, we worked with the project managers and contractors to supply a system that was standard for 90 percent of the construction. It was moved, floor to floor, from below ground level to the top with minimum changes. That saves time and labor, eliminates mistakes and is easier to manage.” Another landmark building, the Aqua in Chicago, is the tallest residential building in the city. It is slightly different on each floor and features an exterior that catches the eye even in the home of the skyscraper tower.

“Aqua is listed as one of the top 10 most unique buildings in the world,” Tisdall says. “No two floors are exactly the same, which means that the support profile was different on each floor, but what we supplied was still 90 percent standard product, with 10 percent customized. Hi-Flyer is comparable to Lego or Meccano, the old kids' building toy. It's made up of standard products, but within itself, it's very flexible. We put into action the notion of using standard products to make unique buildings. We allow architects to express themselves artistically but without losing productivity.”

Aluma Systems' headquarters are in



United Kingdom, Southeast Asia, the Far East and the Middle East. It became part of Brand Energy parent, First Reserve Corporation, in 2005. Since the company was founded in Toronto in 1972, it has gained a reputation as an innovator and a company with a commitment to excellence. It was originally involved with high-efficiency thermal products in concrete construction. It achieved that through the innovative use of aluminum, hence the name Aluma Systems.

"What we do now is specialty design and support of highly engineered, safe and smart construction products," says Tisdall. "We are synonymous with high-rise, but we also have a big presence in heavy infrastructure. In any concrete structure, be it a high-rise building or a bridge, we supply the beams,

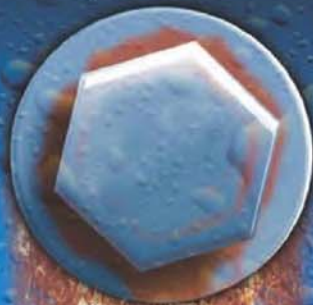
frames and structures to support and finish the job." Its annual revenues are in the region of \$245 million, and it employs around 400 permanent staff.

"In 95 percent of cases, our role is to provide initial engineering support, including drawings and engineering for the application, including a site engineer," Tisdall says. Some require on-site support, such as engineers through the first cycle. "Aluma's greatest strength is our people. A lot of companies say that, but I mean it. We have one of the strongest teams in the industry, we have good products, and we get a lot of good results whenever we benchmark ourselves against others. We recruit people with construction experience and we hold on to them. Our people are the Aluma advantage."

— Editorial research by Tim Conlon ■

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