

PROJECT PROFILE



AIL builds solid foundation for wind power project

Expanding Canada's wind power capacity is a chief priority for EPCOR, a leading developer of non-regulated power plants in North America. But when it was given final regulatory approval to build a 40-MW wind farm near Goderich, Ontario, the power development corporation needed some expertise to help it get the project off the ground, literally.

The materials that form the bases of the massive individual windmills presented a number of engineering, manufacturing and logistical challenges. AIL rose to the task by engineering and manufacturing the inner and outer rings (17 of each) that formed the base of each wind turbine. The outer rings were made from Bolt-A-Plate Structural Steel Plate while the inner rings were made of Corrugated Steel Pipe. A narrow working window and the soil conditions of the site on the eastern shoreline of Lake Huron were also significant factors.

Structure specifications for Kingsbridge Wind Power Project

Outer Rings which comprised the form for footings: AlL Bolt-A-Plate (152 x 51 mm) corrugation profile; 56R structure; Diameter: 4300 mm round; Length: 9.756 m

Inner Rings: AlL Helical CSP (125 x 26 mm) corrugation profile; Diameter: 3000 mm round; Length: 9.756 m



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Efficient manufacturing and pre-assembly allowed for accelerated schedule

From the time of order, it took just 45 days for all of the inner and outer rings to be manufactured and pre-assembled at AIL's plant in Ayr, Ontario. The inner rings were nested safely in the 4300 mm pipe during the 3.5-hour trip to the site by truck, where installation was completed upon arrival.

"AIL reacted quickly and efficiently to ensure the ever-changing schedule was met. Assembly of the large Bolt-A-Plate structures would typically take place on-site, but AIL was able to assemble these at their plant, making it more efficient for the site personnel to install. This efficiency allowed us to accelerate our schedule," says Michael Doupe of McLean Taylor Construction Limited.

Access roads through farm lands were built in advance, using AIL Corrugated Steel Pipe strong enough to support the weight of the loads. On-site, the outer and inner rings were placed and concrete was poured between them. The lifting and placing of the 17 structures was particularly difficult since they had to be lifted into place vertically, but the installation was completed safely and successfully.

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