

**NIAGARA
CANADA**

Met mast 1



Met mast 2



Met mast 3

INSTALLATION OF THREE PERMANENT MET MASTS IN NIAGARA

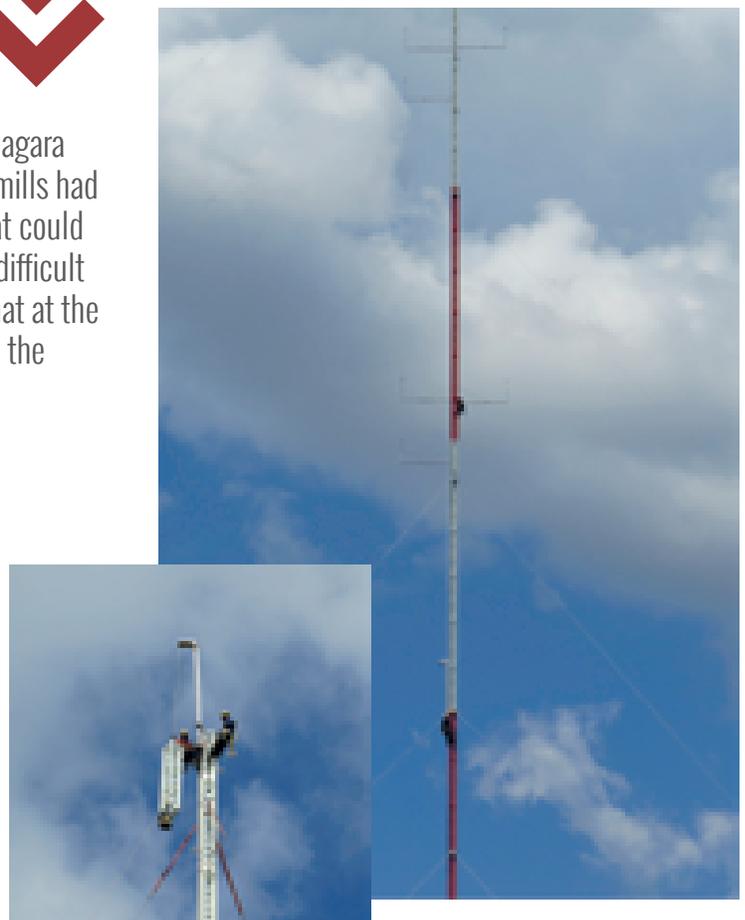


THE CHALLENGE

Boralex needed to install 3 permanent met masts for its Niagara Region Wind Farm (NRWF) in Canada. Their existing wind mills had a hub height of 124m so they need to install met masts that could reach that height and be robust enough to go through the difficult Canadian weather without failing. It is important to note that at the time of installation, a 124m met mast would be considered the highest in North America.

3 criteria were considered:

- “Safety first” approach meant that regardless of the met mast chosen, installation should be conducted with the highest safety standards in mind.
- The met mast must comply with the design requirements of IEC 61400-2-1:2005 international standard.
- Respecting the installation schedule was extremely critical given the specifics of the project.



THE SOLUTION

SBB wind measurement towers are modular guyed structures made of aluminium alloy and designed to the highest standards (CSA, IEC, CE, etc.). They require no maintenance, are corrosion free and have a lifespan of over 50 years. Moreover, they were specifically designed to allow quick and safe installation by a small team, even in the most difficult terrain.

Given the requirement of the project, SBB towers were a perfect fit. They were made of light sections (under 135Kgs) that could be assembled by a team of 6 people, within a very limited time frame. The highest level of safety is maintained by using reliable equipment, such as a CE-certified Fall Arrest Device.



The Fall Arrest Device allows the climbers/riggers to safely climb the tower while being secured every step of the way (no interruption from bottom to top), which makes it a much more efficient solution than some “life lines” found on the market.

THE RESULTS

An experienced crew of 6 workers was able to install 3 separate 124 m masts in 11 days:

- 3 days to prepare the terrain (foundations and anchors)
- 7 days to prepare the material, install the masts and tension the guy wires
- 1 day to install the instruments

This impressive result was made possible thanks to the support of SBB engineering team and the advanced design of the SBB met mast, which allowed the following advantages:

- Movement around the site was made easy by the light components
- Components are all standard and are simple to assemble.
- No heavy equipment needed to be operated. All the lifting was done by the SBB integrated ginpole
- The climbers/riggers were able to work fast without sacrificing safety thanks to the advanced Fall Arrest Device.



We were not only the lowest bidder, we delivered on time!

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