SAPA EXTRUSIONS

By Russ Willcutt

A global leader in the production of extruded aluminum profiles, this company provides lightweight components to OEMs designing larger, more powerful turbines.

AS WIND TURBINES GROW LARGER, the weight of related component parts increasingly becomes a concern, and when considering the remote sites with extreme weather where wind farms are often located—and especially as offshore development begins gaining traction in North America—corrosion-resistant materials are beneficial, as well. That's why Sapa Extrusions is positioned so well to meet the market's evolving needs.

"Sapa is the world's leading producer of extruded aluminum profiles," according to Jason Weber, manager of business development, renewable energy, North America, "and with 16 manufacturing facilities located strategically around the United States, we're in an excellent position to support the needs of the wind energy market."

For nearly a decade Sapa has been adding to the list of component parts it manufactures for wind OEMs. Beginning with bus connectors the list now includes nacelle support structures, turbine mounting brackets and frames, and profiles for ladders and lifts, as well as platforms, stairways, railings, and elevator components. The company also offers hydraulic manifolds, rigid conduit, inverter housings and components, and thermal management systems base on its vast experience in heat transfer technologies.

One hallmark of Sapa's approach to doing business is its ability to respond quickly to its customer's needs. "What typically happens is that an OEM will contact us requesting a quote on a part they've designed," Weber explains. "In that instance we're working from their plans and manufacturing the part for them, should we be awarded the contract. In other situations we may get involved a bit earlier in the process, meeting with the client to discuss their goals and then providing design services ourselves. And the beauty of having so many locations around the country is that we can offer rapid prototyping services, and also quick delivery of components to their destination since we'll handle manufacturing at the plant that's closet to the customer's facilities. Not only does that help with supply chain issues, it also lowers shipping costs."

Savings are realized in other ways, as well. With a technical center located in Portland, Oregon, Sapa metallurgists and engineers of all specialties—which are also found at the company's facilities—will consider a customer's overall application and make suggestions as to how parts could be manufactured more economically. This often results in attributes such as greater strength achieved by extruding multiple parts as one piece, rather than attaching them together by welding or fasteners. Another example of a value-added benefit is found in a design suggestion that resulted in bus conductors being preinstalled in the towers one of its customers manufactures. "And that's actually a safety feature," Weber says, "because one of the most dangerous aspects of making a turbine operational once it's been erected is installing the cables that connect the nacelle to the grid. We're always trying to develop new and better approaches to how things have traditionally been done."

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That dedication is evident at its extruding facility in Louisiana, where Sapa has established a custom process for one of its large wind OEM customers. "For this customer we mount these extremely long structural parts on our 10-meter CNC machining center where we machine them, drill holes in them, and then we apply a special coating that protects against corrosion and enhances electrical conductivity," Weber says. "We keep stock on the floor for them, which we release to them on an as-need basis. So that's a situation where we're not only meeting their requirements in terms of the parts they need, but also providing quick shipment from a location near to their plant."

Part of the Sapa Group—which was founded in 1963 in Vetlanda, Sweden, and is now wholly owned by Norwegian Orkla ASA—Sapa Extrusions is also heavily involved in solar energy, manufacturing aluminum frames for panels and other related components. Dedicated to innovation and the ability to respond quickly to its customer's needs, Sapa stands as a reliable resource for the growing wind energy industry. "With the resources we have throughout North America, we are able to meet our customer's needs quickly, efficiently, and fully," Weber says. "Whether they're based in the United States, Mexico, or Canada, we're in a great position to service this growing market."

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