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KONECRANES®
Lifting Businesses™

WinWinD Assembly Plant, Hamina, Finland

CREATING A STANDARD FOR A NEW TYPE OF PLANT



The Challenge

WinWinD manufactures and supplies one- and three-megawatt wind turbines for the global markets. The WinWinD assembly plant in Hamina came into operation in October 2009 and was the first of its kind in Finland. It manufactures nacelles and hubs for three-megawatt WWD-3 wind turbines for the European market.

Konecranes got a unique opportunity to be a part of creating a standard for a new type of plant when it was involved in the construction and design project of the Hamina plant.



The most important needs for WinWinD were capacity and safety. Because the wind turbine nacelle weighs about 130 tons, and the hub about 30 tons, the lifts constitute a safety issue for personnel and materials. The magnitude of the lifts, on the other hand, required lifting equipment with an extremely effective lifting capacity. Accuracy of the lifts was the most critical factor in the lifting and safety was the highest priority.

Lifting speeds and a maximum free space under the crane as well as minimum approach dimensions horizontally were also essential factors in the equipment criteria. These are standard values with Konecranes products.

The Solution

Konecranes provided the Hamina plant with eight standard industrial-duty cranes and nearly thirty wall console cranes and wall jib cranes, which shared the CXT electric wire rope hoist

technology. For the heaviest lifts, the plant was provided with a high-capacity SM crane with a lifting capacity of 130 tons. It had the Extended Speed Range (ESR) feature to speed up the lift when the hook is empty or with a small load.

Due to the scope of the lifts and lifted objects, the remote control system was selected as the main control method to help the crane operators perform their job faster and safer.

Konecranes was involved in the building design phase by offering its expertise on the building layout. As a result, the Hamina plant now has three equally-sized bays, allowing the switching of cranes between bays in case more lifting capacity is needed elsewhere.

The Results

With Konecranes lifting solutions, the most compact and functional plant possible could be built. The cost-effective use of space brought savings in construction costs as well as in the maintenance. The plant layout was designed so that the production line can be placed anywhere, since the cranes are used in workstations. The layout flexibility will be useful as the industry develops.

The bridge crane with its stepless lifting motion has been well received by the production workers. It enables smooth lifts and controlled descents faster. Work safety is improved, as the operator is able to concentrate on load positioning.

When production increases in the future, streamlining the time used in production processes will become vital. The cranes can then be upgraded with new features, such as positioning control and sway control – both part of Konecranes Smart Solutions – to speed up the process.

WinWinD Oy

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