



# CASE STUDY

## LOADING SUPERVISION

East and South East Asia are the destinations for wind turbines from Schleswig-Holstein in Germany. The route to Japan or South Korea via ship across the ocean is far and the freight is valuable: every component of a wind turbine is custom-made for the wind park at site. The vital function of the SGS inspectors is to secure the cargo during the transport against all possible damages. Every step of the loading process is accompanied, checked and documented by our employees at the port of loading. It would be difficult and costly if clients from Asia would supervise the loading of their wind turbines themselves. SGS specialists are available at almost all ports around the globe. They know the contact people and the regulations in every country, they speak the local language, and particularly they know how to avoid damages in transit.

Our experts are present in the port of Hamburg when the barge with the wind turbine sections on board docks next to the container vessel. After they have assured that the components of the wind turbines have been delivered correctly according to the freight papers, they check if the cargo area on the container vessel has been prepared according to the transport specifications. In the meantime, the harbour crane operator makes arrangements for the huge turbine blades to be lifted from the barge into the hull of the container ship. The turbine blades are lifted carefully into the clamps on board under the SGS inspector's watchful eyes. At the same time, our expert checks if the packaging with the insulation material and the foil stays intact. After that, the protective covers that were taken off for loading are wrapped around the turbine blades again. Then the securing starts: every blade is securely bound to clamps in the vessel's hull to prevent them being damaged by a shift of cargo whilst at sea.

A floating crane prepares the transfer of the nacelles from starboard. 16 mm steel cables fasten each nacelle – that weigh about 60 tons a piece – on 14 hold points that have been calculated beforehand. Also the harbour crane lifts the rotor hubs into the prepared bracings on board the container vessel. The hubs are carefully adjusted to the assigned position on board and roped down as well. Every step is accompanied by an SGS employee. When our inspector is convinced that the heavy freight weighing a hundred tons will reach its destination safely, he will authorise the further loading activities. The hatch is closed on the wind turbines. Lifting and securing on board have taken almost all night during drizzling rain. Regardless of the time of day, regardless of the weather: the SGS specialists make sure that the wind turbines are properly secured before they start their long journey to their destination. The advantages for our customers are quite obvious. Only a wind turbine that has been delivered correctly can be assembled on time and produce electricity. Our service makes sure that economic risks arising through conflicts with the freight carrier or insurance companies can be avoided, e.g. the high follow-up costs if a wind turbine cannot be commissioned in time.

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