Windpark Casimcea

SHORT DESCRIPTION

In the wind farm, several construction teams set up different Enercon wind turbines with different tower heights up to about 135 m. The towers consist of individual, pre-produced, one-piece or multi-part precast concrete elements that were placed on top of one another on the construction site.

THE PROJECT

The Casimcea wind farm is located on the Romanian Black Sea coast, approx. 250 km east of Bucharest. From 2011 to 2013 a total of 88 wind turbines with a total output of 230 MW were built in 3 construction phases.

These systems are supposed to feed 640 GWh of electricity into the Romanian grid per year and thereby reduce Co2 emissions by approx. 600,000 tons per year. The tendons with up to 12 strands were manufactured in Bobenheim-Roxheim and delivered to the construction site on steel drums ready for installation. There, the tendons were embedded in the dummy tubes running vertically in the tower wall and the segments were connected to the foundation. Subsequently, BBV employees tensioned the tendons from the foundation cellar with special hollow piston presses to a total force of approx. 8,000 tons.

Immediately afterwards the tendons were injected with a special mortar, which ensures the bond with the surrounding concrete and the corrosion protection of the prestressing steel strands. Special equipment was also used for this work step, which mixed the pre-mixed, very low-shrinkage grout and pressed it into the vertical, up to 90 m long tendons from the lowest point in the foundation cellar. For this project, BBV Systems processed 1,700 tons of prestressing steel into

2,816 tendons, delivered them to the wind farm, prestressed and injected 900 tons of special cement.

FACTS

Location	Casimcea , Romania
Status	completed
Start of construction	January 2009
Completion	December 2009

SERVICES

Post-tensioning system

Wind power