



Case Study

Isolating Coal Mills with a Fully Decoupled Inertia Slab



Problem:

Electrabel, one of the top ranking power companies in Europe and the leader in the Benelux decided in 2008 to build the first coal fired power plant in Germany. The 800 MW power station located in Wilhelmshaven will begin operation by 2012. Since the mill foundation was embedded in the boiler house, an elastic bedded design of the foundation employing Sylodyn® was proposed. This elastic bedding is necessary in order to separate the mill foundation from the boiler house. Doing so will reduce the transmission of vibrations and forces to the boiler and boiler house.

Solution:

After selection of the proper Sylodyn® material for the bottom side of the inertia slab, an air gap was proposed at the side, sweep frequency calculations were done to identify the natural frequencies for all 6 degrees of freedom. Based on the technical characteristics given in the datasheets for each of the polyurethane products it was possible to predict the performance of the mill during operation. Furthermore suitability of the measure taking into consideration the piling and support of the mill was verified in accordance to local standards for machines of this type.



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