

FIRST APPLICATION OF THE SELF-ADJUSTING CHAIN SPROCKET AT THE ENSDORF POWER PLANT IN 2001

The power plant in Ensdorf near Saarlouis is a coal-fired power station. In the past, manned wheel loaders were used to shovel the coal from the piles for further transport onto the belt conveyors in order to supply coal to the heating blocks. Economic reasons forced the plant management to proceed to the automation of this part of the material transport and invested in a new portal reclaimer and the modernization of the conveyor systems. The company Koch Transporttechnik won the bid for its realization. At that time, the Koch group of companies was concerned with the development and the realization of solutions in the field of industrial plant construction, material handling systems engineering and processing systems engineering.

The top priority at the Ensdorf power plant was the least possible noise generation. The coal piling area, where the portal reclaimer would be working all around the clock, was located no more than 800 m from a residential zone. Correspondingly, the requirements for the noise immission reduction were strict. Dr. Wilhelm Zerressen, head of the production department, special functions, at the Ensdorf power plant and responsible for the project, said: "The portal reclaimer must only make a negligibly small contribution to the admissible noise level at the stipulated immission sites in the neighborhood; in fact, it must be inaudible."

The self-adjusting chain sprocket has complied with this requirement without any problems, in fact without any particular noise protection measures.



The self-adjusting chain sprocket mounted on the portal reclaimer

The reached sound values are hard to achieve with a "normal" reclaimer. This is why Mr. Wolfgang Bertele, Technical Director of Material Handling Systems Engineering with the company Koch, had been looking for noise-reducing solutions and came across the self-adjusting chain sprocket reading current trade publications. The company Koch then ordered the production of two drive sprockets and two return rollers based on the information provided by Karl Herkenrath and, in fact: the investment paid off. Since the summer 2001, the new chain sprockets are in operation on the portal reclaimer at Ensdorf, and to the present day without showing any signs of wear and tear.



The noise level generated by this equipment is well below the allowed values thanks to the self-adjusting chain sprockets.