



Anwenderbericht

Sampling at Maasvlakte Power Plant in Rotterdam

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In the commercial operation of coal-fired power stations it is essential that a constant supply of coal with known characteristics be available. Thus sampling of the various grades of coal used to make up the blending beds and also the final, blended feed is of utmost importance. The author describes arrangements used at a modern power plant in Holland.

1. Introduction

In the early seventies the Maasvlakte power-plant "GEB Rotterdam" became operational with two units of max. 540 MW each, which were fired with natural gas and oil.

However, due to increasing gas and oil prices and the related tendency to favour the utilization of coal, plans were initiated in 1981 to reconstruct this plant in order to make coal firing possible.

To this purpose the present boiler house will have to be dismantled almost completely and consequently rebuilt, including a desulphurizing plant for stack gases, a fly ash disposal system and a coal transportation system.

In July 1981 ESTS B.V., a consultancy and engineering company and a subsidiary of Hoogovens in IJmuiden, was assigned to prepare a feasibility study to determine the best suitable coal supply system.

Mainly due to the fact that this power plant is located close to the EKOM-terminal (coal and iron ore stevedores) and also near the planned MCT-terminal (Maasvlakte Coal Terminal) it appeared technically and economically feasible to make a direct transport connection between both terminals and the GEB power plant.

In January 1982 ESTS was further assigned to define the coal transport and storage systems and to execute the basic engineering, including the subsystems and components.

More than 2 million tons of coal per year must be transported from either the EKOM or the MCT terminal via a conveyor belt system with a rated initial capacity of 2,000 t/h.

Each unit will consume approximately 24,000 t/week and will operate continuously.