

Reconstruction of the operating unit 204 Transport of return grits to mills 3 and 4

Client: Cement Hranice, a. s.

Realization: July 2009

Z 5032



New condition



Customer's requirement

The reconstruction of transport of grits from the grinding circuit of mills no.1 to no. 4 equipped with an air separator VTP 2400 and following return of grits back to arbitrary combination of mills.

Task, final formulation of the design

To design and technically solve equipment for a fluid transport of grits from VTP 2400 to a weighing bin and new route by fluid slides with grits weighing into mills 3 and 4 via MULTICOR S 80 with a weighing range min. 2 t/h - max. 60 t/h.

Description of the final design discussed and approved by the customer

The whole project was realized in two stages:

- 1st stage transport from VTP 2400 to the bin
- 2nd stage transport to mills no. 3 and 4

It was necessary to implement the whole project with minimum stoppages of the cement grinding plant. The existing feeding of return grits by worm conveyors from VTP 2400 to a weighing bin for mills no. 1 and 2 was removed. The mechanical transport is replaced by a fluid conveyor incl. a separator of strange elements. The grits transport leads over the bin with a branch to the bin and with a branch to mills no. 3 and 4 where it gets behind the columns of the cement grinding plant via a circular branch towards a dosing balance. The pneumatic transport inclination is designed $10^{\circ}30'$ in the whole length. Over the bin behind the circular branch the rotary dosing cylinders dia. 250 mm that will divide the amount of cement grits to mills no. 1 and 2 and to mills no. 3 and 4 are positioned. There will be another branch over the mill no. 3 leading to mills no. 3 and 4 via a circular branch with a rotary dosing cylinder dia. 200 mm behind which the transport continues through a chute to Multicor S80 to the mill no. 3 and through a transport slide dia. 200 to Multicor S80 to the mill no. 4.



Final evaluation of the order

With this design the cement grinding plant can have an independent transport and dosing of the return grits to mills no. 1 to 4 in any combination of mills. This way brings reduction of cost for energy in comparison with the mechanical transport and arranging the separator of strange pieces decreases wear of single parts of the transport and cement mills.

