

Neutralisation compound 2; Rasselstein GmbH

The Rasselstein GmbH (a subsidiary of ThyssenKrupp) in Andernach/Germany is the only producer of tin foil in Germany on one of the leading producer in Europe. 2.400 employees produce approx. 1,5 million tons packing steel per year in Andernach/Germany. Their own sewage treatment should have been revised in first and second quarter of 2010. Therefore, new plant components had to be planned and built. As the used medias caustic soda and hydrochloric acid would react with metallic standard pipes, the decision was to use PE and PP plastics. To use special alloyed pipes would have been much more expensive. The exception is the third medium used: milk of lime. Milk of lime means more abrasion than chemical reaction. The special requirement was the exact control of the partial aggressive neutralization medias hydrochloric acid, caustic soda and milk of lime.

These are the reasons why the control valves has been designed specially:

For the hydrochloric acid, Exner control valves type 650 made of PVDF with FKM sealing are used, as the material characteristics of PVDF stops diffusion of the hydrochloric acid and to warrant the chemical resistance in perpetuity.

As this material combination is firstly relatively upscale and secondly not resistant against caustic soda, Exner control valves type 640 made of PP with EPDM sealing were used for caustic soda. PP and EPDM are long term resistant to this medium.

For the regulation of milk of lime, the Exner valves type 680 made of stainless steel 1.4571 with EPDM sealing is used. Due to their special construction of the outlet probe they are less affected by abrasion as other valves.

All valves have two commodities: The possibility to change plug and seat separately without changing the complete valve and the pneumatic actuator including a positioner to control the flow by a PCS. So the valves type 640 and type 650 are not coated or lined but complete made of a resistant plastic material there will be no corrosion even if a wetted surface is damaged anyhow. Even after years all necessary spare parts are available what increases the life circle of the valves and reduces the costs of process.



pic. 1 milk of lime control valve type 680



pic. 2 PVDF valve type 650 DN 50 to control flow of HCl (35%)

Service of FRANK

- ✓ Cv calculation of the valves
- ✓ Assistance to choose the material
- ✓ Assistance to establish spare part lists
- ✓ Mounting and adjusting of the positioner (incl. Profibus)
- ✓ Production of valves and delivery

Time frame

1. half of 2010

Partner

entis systemtechnik gmbh

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All described control valves and further valves in various material combinations can be offered. For further information please contact us via

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