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Industrial Valves

Foodstuffs and Beverage Industry

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Application: CO_2 Supply for Bottling Plants

Mankenberg's Solution
DM652FSo DN 32

Description of the Plant
CO_2 is used for the fabrication of drinks. Gas is generated by evaporation of liquefied CO_2 from a set of pressure cylinders.

Task of the Valve
Two evaporators having a performance of 2000 kg/h each (2 x 1080 Nm³/h of CO_2 gas) are used.
A pressure reducing valve reduces this performance from 15 through 17 bar to 11 through 12 bar process pressure. As requested by the customer two valves that are identical in construction are operated in parallel. A regulating valve is to take over the entire performance of 2 evaporators temporarily in case the parallel run fails in order to ensure a continuous production process.

Your Advantage
The particularly high-performance and reliable valve is a lightweight one featuring a compact design. For reasons of better handling the conventional control line for the downstream pressure was replaced by an internal control bore, and a manometer was installed in the valve head.

Application: Bottle Washing Plant

Mankenberg's Solution
DM652F DN 50

Description of the Plant
The empties have to be cleaned in the bottle washing plant prior to be re-filled again during drink production.

Task of the Valve
The pressure reducing valve reduces 10 m³/h water from 6.5 through 7 bar to 0.8 through 1.0 bar. A pipeline size of DN 65 was specified by the designers. In addition the pipeline system is sterilised in intervals with pressureless saturated vapour of 100°C.

Your Advantage
At a given nominal diameter the DM 652F is a particularly high-performance valve featuring a lightweight and compact design. Thanks to the clamp system the valve is easy to maintain.

Application: Sterile Air Supply for a Beer Storage Tank

Mankenberg's Solution
DM582F DN 25

Description of the Plant
Beer storage tanks are disinfected with sodium hydroxide solution (NaOH). Owing to the storage process the tank always contains carbon dioxide (CO_2), too. Sodium hydroxide solution reacts with CO_2 to form sodium carbonate (soda) and water
($2\ NaOH + CO_2 \rightarrow Na_2CO_3 + H_2O$). Thus unwanted soda sludge precipitates at the bottom of the tank. This can be avoided if the tank is flushed with (sterile) air prior to using NaOH. The CO_2 is blown off and the formation of soda is avoided.

Task of the Valve
The sterile air pipeline system of the brewery features a pressure of 7 through 8 bar. The tank is flushed

with 165 Nm³/h sterile air - at a pressure reduced to 1 through 2 bar. This is done by the used pressure reducing valve.

Your Advantage

This application is a standard case of application for the valve of the DM 502 type, an economically priced alternative if a lower performance is required (limited KVS value). Since special hygienic requirements must be fulfilled in the foodstuffs industry, a valve entirely made of stainless steel is used in this case (type DM 582). A manometer can be installed directly at the valve.

The deep-drawn CrNiMo valves feature high corrosion resistance and surface finish (electro-polishable). In addition, the reliable regulating valve that requires no external energy is very easy to maintain thanks to the used clamp system.