

Additional safety for ammonia refrigeration plants

Emergency scrubbers bind the poisonous gas in the case of accidents and thereby avoid serious injury to persons

Ammonia, a chemical compound of nitrogen and hydrogen, is a popular coolant in large refrigeration plants. In the case of accidents, however, the poisonous gas represents serious risks. It can lead to chemical burning in the eyes, the respiratory organs and on the skin, and in cases of major contamination can have fatal consequences. Special air washers minimize the risk of injury to persons.

Ammonia (NH₃) distinguishes itself by virtue of its excellent cooling performance with a relatively small quantity of coolant. Hence it is suitable, in particular, for larger refrigeration plants in an industrial context. However, the use of ammonia does require special safety measures since it is a health danger for human beings. Despite strict safety stipulations accidents can never be totally excluded.

The largest Swiss pharmaceutical concern Roche sets very high safety standards. In addition to the legally stipulated emergency ventilation Roche installs cost-effective NH₃ washers made by COLASIT from corrosion-resistant synthetic material. These are integrated into the existing emergency ventilation system.

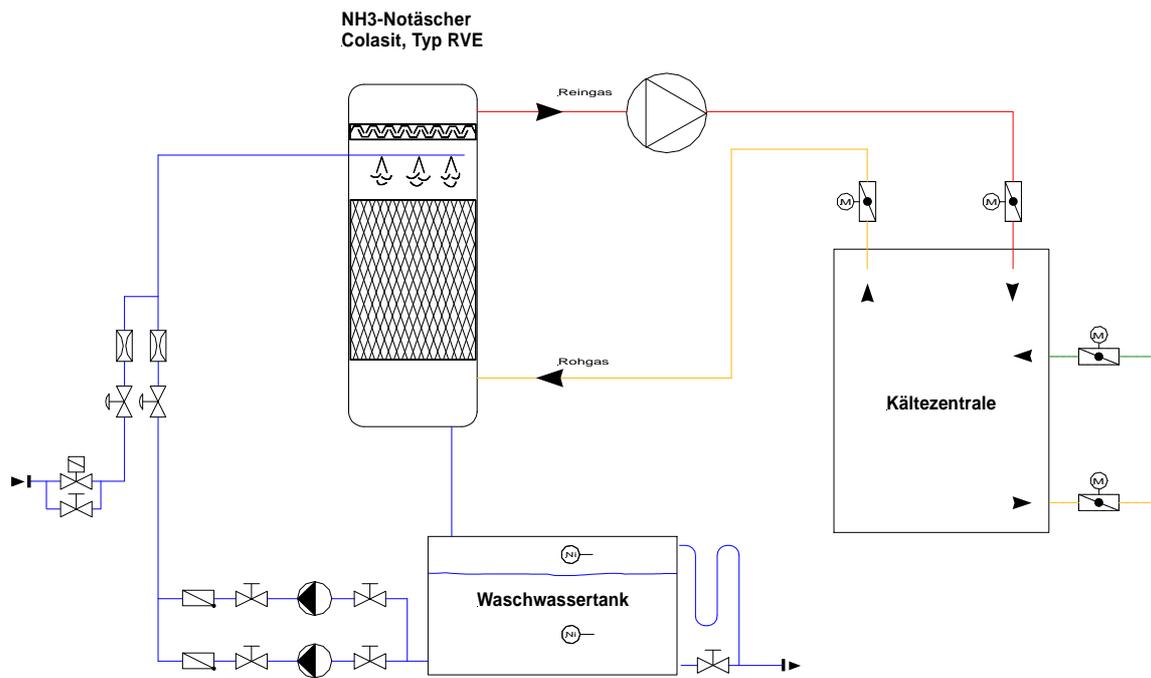
The washer goes into operation on a completely automatic basis as soon as it registers that the coldness containment has too high a concentration of NH₃. By means of absorption the escaping ammonia is instantly bound by the jet inflow of water. The contaminated waste water is collected and constantly blown down. The after-treatment takes place in the company's own water treatment plant. Alternatively there is the possibility of collecting this in an integrated tank for later treatment.

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COLASIT AG located in Spiez is respected worldwide as a leading company for the construction of plant from corrosion-resistant synthetics for process ventilation treatment. In container and piping construction the company provides individual solutions custom-made to suit the customer's wishes and requirements. The synthetics construction experts from the Berner Oberland provide complete, tailor-made solutions ranging right from the initial consultation up to the project planning and the construction and then commissioning



NH₃ emergency scrubbers made of PP with constant blow-down



Principal plan of an emergency washing plant

Glossary:

Waschwassertank

= washing water tank

Kältezentrale

= central refrigeration

Rohgas

= raw gas