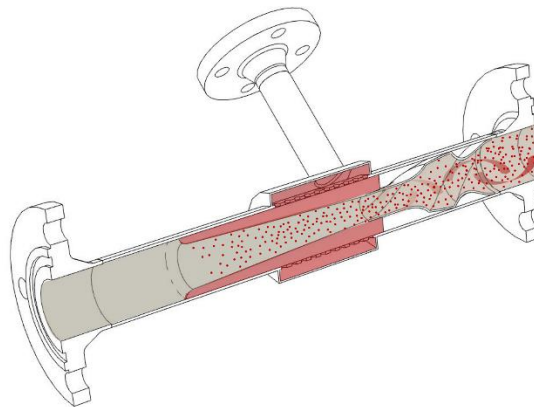
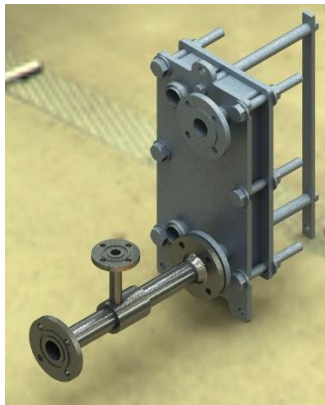


Technology Offer

Dispersion device

» This device converts multiphase media into homogeneous dispersions with fine bubbles, so they are able to undergo more efficient heat transfer in absorption refrigerators.



Technology

In absorption or resorption refrigerators, gas is mixed with liquid and passed as a multi-phase medium through a heat exchanger. In case of inadequate mixing the resulting two-phase flow must be passed through large and expensive shell-and-tube heat exchangers. The solution proposed here consists of a dispersion device upstream of the heat exchanger, i.e. with porous metal and a geometry generating turbulence. Thus, the gas is introduced into the liquid phase forming a homogeneous mixture with finely distributed gas bubbles. The increased efficiency of the system due to optimized heat transfer, now allowing the use of simple heat exchangers.

The generation of a homogeneous mixture can also be used in other applications.

Advantages

Unwanted separation in large single-phase areas is avoided with this fine-bubble, homogeneous dispersion, which makes heat transfer more efficient. With this upstream dispersion device, complex special designs at the heat exchanger can be avoided and compact, standard products such as plate heat exchangers can be successfully used.

Development

The technology is offered for sale or licensing by the Dresden University of Technology. We are also looking for project partners to develop the application of this technology further. Mr. Löser agrees to support future projects on this topic in the future.

Patent

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Applications

absorption & resorption
refrigeration units

ammonia/water

disperse bubbling

mix gassing of liquids

revitalization

foam production

Homogeneous bubble flow

ozonation flotation

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