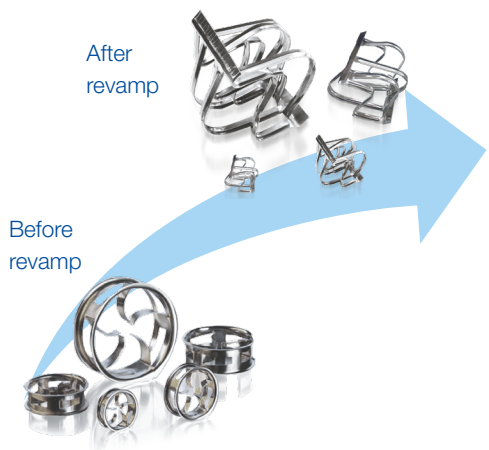
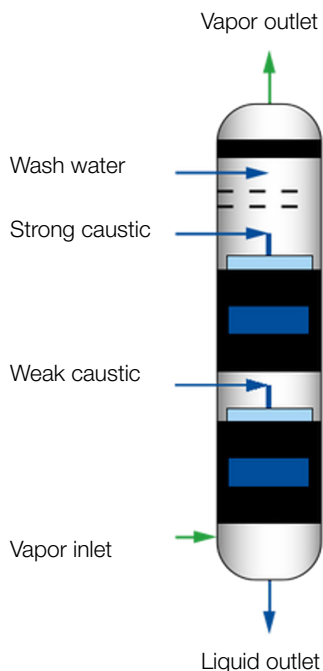


Case study

Caustic tower revamp



NeXRing™
The NeXt generation random packing



A customer contacted Sulzer to increase capacity while improving the CO₂ removal in the existing CO₂ absorption column of their ethylene plant. This was the third revamp for this particular column and continued improvements can be hard to find. A proper caustic tower design requires a proper understanding of CO₂ absorption with caustic.

$\text{CO}_2 + 2\text{NaOH} \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O}$ Sulzer replaced the conventional random packing with NeXRing and modified the operating parameters to match the packing performance. The result was a 20% increase in capacity and a vapor outlet CO₂ concentration of less than 0.32 ppm, well exceeding expectations.

	Before revamp	After revamp
Inlet gas, t/h	Base Case	+ 20%
CO ₂ inlet, ppm mol	Base Case	Base Case
Strong caustic concentration, wt%	Base Case	Base Case
Weak caustic concentration, wt%	Base Case	< Base Case
CO ₂ outlet, ppm mol	1.25	< 0.32

Revamp objectives:

(I) Improve column capacity (II) CO₂ outlet < 1 ppm

For more information, please contact your local Sulzer Chemtech sales representative

How can we help you?
Contact us today to find your best solution.

sulzer.com

E10900 en 3.2024, Copyright © Sulzer Ltd 2024

This brochure is a general product presentation. It does not provide a warranty or guarantee of any kind. Please contact us for a description of the warranties and guarantees offered with our products. Directions for use and safety will be given separately. All information herein is subject to change without notice.