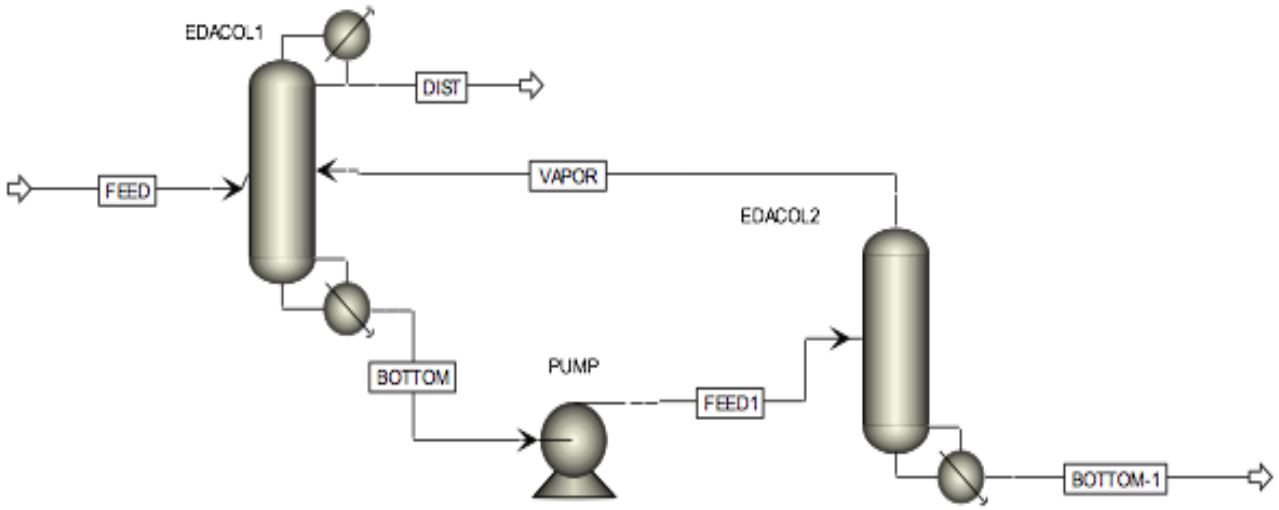
Description -

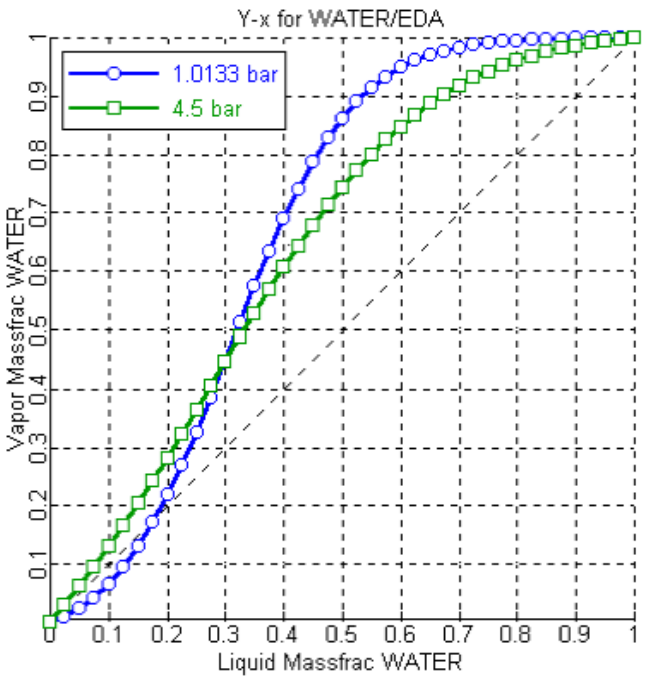
Ethylene Diamine (EDA)-Water Separation System

Process Flow Diagram



Process Description

Ethylene di-amine (EDA), water, along with small quantities of other amines is fed to the first column and bottom of the first column is fed to the second column. Vapours of second column are recycled to the first column.This is typical coupled column is employed for this separation. The ethylene di-amine concentration typically varies from 7-10 % (wt.)



Operating Conditions

EDA-water azeotrope shifts as pressure is increased. This azeotrope completely breaks at 4.5 bar. The Y-X curve shows this behaviour of EDA/water system. Hence column top is set at 4.5 bar to achieve complete separation.

Experience

Finepac® Structures has supplied separating a number of systems involving azeotropic distillation. EDA-water is one of such systems, which is designed and supplied with process guarantees. EDA-water system is simulated and designed using regressed laboratory data.