

53.- Fully coupled heat integrated distillation column

Title and name of product or technology	
Fully coupled heat integrated distillation column	
Abstract	
<p>The invention is a heat integrated distillation column with a new method to control and cooling the distillation process. Also included is a method to optimize distillation columns, which are "state of the art".</p> <p>The heat integrated column can be coupled with a solar thermal power plant, to build for example, an autonomous seawater desalination plant.</p>	
Description including main features/advantages	
<p>The distillation process is cooled internally in counter current, to win the process energy back. The energy content of the cooling medium is increased by the heat integration to a utilizable size. For the purpose of treatment of water are two stages as a middle size plant (500 m³/d) suitable.</p>	
Innovative aspects	
<p>The inventions can reduce the energy consumption from 30% till 95 %. For this a Patent Cooperation Treaty (PCT)-application (WO 2009/010250 A2) is filed.</p>	
Current and potential industrial users/domains of application	
<p>Chemical industry, seawater desalination, cleaning waste water, energy supply companies</p>	
Current state of development	
<p>Two technologies are tested in the production (Fatty alcohol distillation plants), but the heat integrated distillation column must be developed.</p>	

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