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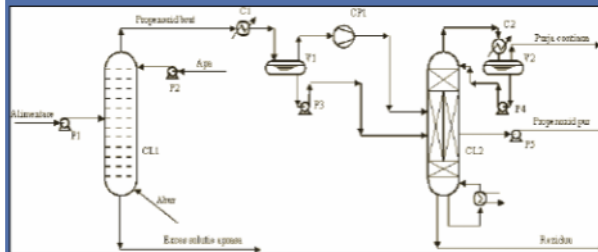
B-dul București, nr. 39, cod 106680,
Ploiești, România, PO BOX 52



**SEPARATION PROCESS OF PROPENOXIDE
IN DIVIDING-WALL COLUMN**

Florin Oprea, Elena-Mirela Fendu, Marilena Nicolae, Alexandru Dragomir
Patent application OSIMA/00541, 15 July 2014

Invention relates to energy consumption reduction by a new propylene oxide (PO) separation process from the propylene oxide plant, applicable in the propylene oxide plants based on propylene chlorination. **The process uses a dividing-wall column for separation of the reaction mixture, which can lead to significant operation cost reduction up to 1,5 million euro.**



- > The effect of the stream separation in the two sections consists in significant decrease of the separation effort
- > The global effect is a substantial reduction in the steam consumption in the bottom of the column up to 25%

Acknowledgment: The authors would like to thank Societatea de Chimie din Romania



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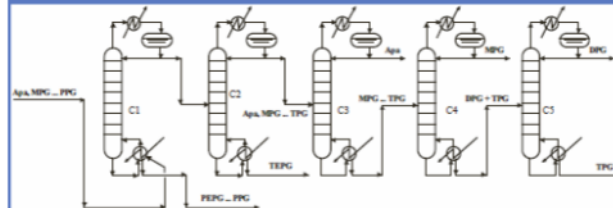
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**PROCESS FOR SEPARATION OF PROPYLENE GLYCOLS FROM
THE MIXTURE RESULTED BY PROPYLENE OXIDE HYDROLYSIS**

Oprea Florin, Fendu Elena Mirela, Nicolae Marilena
Patent application OSIM A/00076, 22 January 2013

The invention refers to a separation process of propylene glycols from their mixture resulted from the propylene oxide hydrolysis reaction. The process consists in successive separations of the water and propylene glycols mixture (monopropylene glycol, isomers of di-, tri-, tetra-, penta- and hexapropylene glycols- and other superior isomers) by distillation at operating pressure of 3...1000 mbar and temperatures between 40 and 220°C according to the invention. **The first separation column is fed in the reboiler to take advantage of the effect similar to inert gas effect exercised by the presence of water and inferior glycols in the mixture.**



- > The main advantage of the proposed process consists in decreasing of the temperature in the bottoms of the distillation columns, with approximately 15°C compared with the direct variant
- > This fact allows the distillation to be performed in temperature ranges under the decomposition temperatures of the superior propylene glycols

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