

EFFICIENT PROCESSES TO PRODUCE NITROGEN BY CRYOGENIC AIR SEPARATION

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ABSTRACT

Pressurized single distillation column nitrogen generators have been in wide spread use since the 60's for small to medium size plants producing nitrogen at 6-10 Bar abs. Through exergy analysis, a series of new processes have been developed which reduce energy consumption by 20-30% and require no nitrogen product compressor. The paper presents these results, and discusses the systematic progression of concepts which led to this large energy efficiency improvement.

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