

Title (en)
METHOD AND CRYOGENIC PRODUCTION ARRANGEMENT FOR PRODUCING A LIQUI LIQUID NITROGEN PRODUCT

Title (de)
VERFAHREN UND KRYOGENE PRODUKTIONSANORDNUNG ZUR HERSTELLUNG EINES FLÜSSIGSTICKSTOFFPRODUKTS

Title (fr)
PROCÉDÉ ET AGENCEMENT DE PRODUCTION CRYOGÉNIQUE POUR LA PRODUCTION D'UN PRODUIT D'AZOTE LIQUIDE

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Application
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Abstract (en)
A method for producing a liquid nitrogen product using a cryogenic production arrangement (1000) comprising one or more air separation units (100), the or each of the air separation unit(s) (100) comprising a rectification column system (10), a main heat exchanger (3), and a nitrogen compressor (5) is proposed, wherein nitrogen is, in the order indicated, withdrawn from the rectification column system(s) (10), heated in the main heat exchanger(s) (3) and fed to the nitrogen compressor(s) (5) of the air separation unit(s) (100) in a first compressor feed amount. The arrangement (1000) further comprises one or more and one or more nitrogen liquefaction units (300), and in that the arrangement (1000) is operated in a first mode of operation and a second mode of operation, wherein the first compressor feed amount is made to be larger in the second mode of operation as compared to the first mode of operation by increasing a production capacity of the air separation unit(s) (100), wherein nitrogen withdrawn from the nitrogen compressor(s) (5) of the air separation unit(s) (100) is, in the first mode of operation, partially fed to the to the nitrogen liquefaction unit(s) (300) in a liquefaction feed amount, wherein, in the first mode of operation, the liquefaction feed amount is partially liquefied in the nitrogen liquefaction unit(s) (300) forming the liquid nitrogen product and leaving an unliquefied remainder, and wherein the unliquefied remainder is at least in part fed to the nitrogen compressor(s) (5) of the air separation unit(s) in a second compressor feed amount. A corresponding arrangement (1000) is also part of the present invention.

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