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AIR SEPARATION USED A CRYOGENIC SYSTEM

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Cryogenic air separation involves the use of a cold generation or a cold source. It is known to relax with external work pressurized gases introduced into a machine at temperatures well above their dew point. At the moment, we try to do a separation of neutralized a multi-gas as a Nitrogen +Argon +Oxygen, on sew and others frantic gases, to obtain an ensure for environmental protection during all steps of production. A cryogenic air separation process for producing high purity of argon is utilized in 1992 but at this time the purity of a multi-gases (mixed gases) is not available So, our research is based on neutralized of multi-gases (Nitrogen +Argon+ oxygen): 1- compressing and purifying the air: cooling the purified and compressed air to a temperature suitable for its rectification; rectifying the cooled air in a rectification column so as to produce an oxygen enriched liquid and a nitrogen vapour. 2-separating a stream of Nitrogen-oxygen: containing liquid lean in Argon within a Nitrogen column (new technology) to form a liquid Nitrogen and high purity of oxygen vapour; the nitrogen stripper column with a stripper gas and thereby producing said argon-Nitrogen containing liquid lean in nitrogen; taking said stripper gas from the argon column; operating the Nitrogen liquid under stripper. Our research is based on use of liquid nitrogen (LN2) in an industry as for example in a coolant during machining and other application's.

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