

Title (en)
PURIFICATION OF A H₂/CO MIXTURE WITH HEATER-SKIN TEMPERATURE CONTROL

Title (de)
REINIGUNG EINER H₂/CO-MISCHUNG MIT HEIZWAND-TEMPERATURSTEUERUNG

Title (fr)
PURIFICATION D'UN MELANGE H₂/CO AVEC CONTROLE DE LA TEMPERATURE DE PEAU DU RECHAUFFEUR

Publication
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Application
EP 07871905 A 20071211

Priority
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• FR 0655586 A 20061218

Abstract (en)
[origin: FR2909898A1] The process for purification or separation of a flow of supply gas with impurities e.g. carbon dioxide and a mixture of water and methanol, comprises contacting the supply gas with a first and a second adsorbent for eliminating the impurities, recuperating the purified or separated gas, heating a regenerated gas (30) using an electric vapor heater (80), and periodically regenerating the adsorbent with the regenerated gas. The heater has a skin temperature of = 175[deg] C and a pressure of 8-12 bars, and is equipped with a unit for controlling the skin temperature. The process for purification or separation of a flow of supply gas with impurities e.g. carbon dioxide and a mixture of water and methanol, comprises contacting the supply gas with a first and a second adsorbent for eliminating the impurities, recuperating the purified or separated gas, heating a regenerated gas (30) using an electric vapor heater (80), and periodically regenerating the adsorbent with the regenerated gas. The heater has a skin temperature of = 175[deg] C and a pressure of 8-12 bars, and is equipped with a unit for controlling the skin temperature. The temperature of regeneration is >= 150[deg] C. The vapor used in the heater is obtained by vapor expansion with high pressure. The first adsorbent is mixed in an absorption bed. Partial pressure of carbon monoxide in the regeneration gas is lower than 0.5 bar. The supply gas is obtained by vapor reforming process, partial oxidation and/or gasification of carbon or residues, and undergoes a pretreatment such as washing of amines or methanol before its purification.

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Citation (search report)
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