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(54) **Title :** A Temperature Swing Adsorption Process for Dehydrating Ethanol

(57) **Abstract :**

The present invention relates to a temperature swing adsorption process for dehydrating ethanol, comprising the steps of: providing an adsorption bed (50) packed with zeolites (20) as adsorbent in an adsorption column; regenerating the adsorption bed (50) by flow of inert gas under atmospheric pressure at 200°C; contacting a feedstream comprising an ethanol-water mixture with the adsorption bed (50) at an adsorption temperature and a feed flow rate to produce a dehydrated ethanol; and repeating the cycle by regenerating the adsorption bed (50); characterized in that the adsorption temperature is in a range of 25-50°C and the feed flow rate is in a range of 200-600 ml/min. Said process produces ethanol with 99.5% purity and 91% efficiency of recovery.

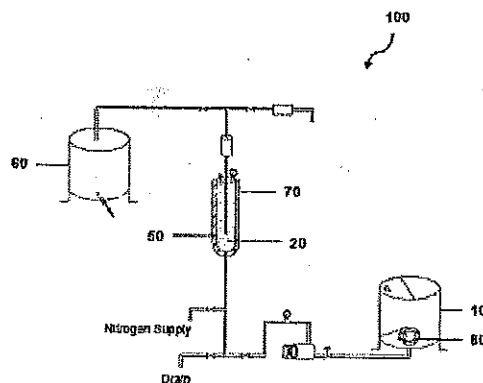


Fig. 1