

The Prospect of Producing Hydrogen by Electrolysis of Idle Discharges of Water from Reservoirs and Recycling of Waste-Gas Condensates

Authors : Inom Sh. Normatov, Nurmakhmad Shermatov, Rajabali Barotov, Rano Eshankulova

Abstract : The results of the studies for the hydrogen production by the application of water electrolysis and plasma-chemical processing of gas condensate-waste of natural gas production methods are presented. Thin coating covers the electrode surfaces in the process of water electrolysis. Therefore, water for electrolysis was first exposed to electrosedimentation. The threshold voltage is shifted to a lower value compared with the use of electrodes made of stainless steel. At electrolysis of electrosedimented water by use of electrodes from stainless steel, a significant amount of hydrogen is formed. Pyrolysis of gas condensates in the atmosphere of a nitrogen was followed by the formation of acetylene (3-7 vol.%), ethylene (4-8 vol.%), and pyrolysis carbon (10-15 wt.%).

Keywords : electrolyze, gascondensate, hydrogen, pyrolysis

Conference Title : ICHPS 2017 : International Conference on Hydrogen Production and Storage

Conference Location : Berlin, Germany

Conference Dates : May 21-22, 2017