

Title (en)

METHOD AND SYSTEM FOR THE PRODUCTION OF SYNTHETIC GAS MADE FROM BIOGAS

Title (de)

VERFAHREN UND ANLAGE ZUR HERSTELLUNG VON SYNTHESSEGAS AUS BIOGAS

Title (fr)

PROCÉDÉ ET INSTALLATION POUR LA PRODUCTION D'UN GAZ DE SYNTHÈSE À PARTIR DE BIOGAZ

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2009021710A2] The invention relates to a method for the production of synthetic gas made of biogas and a system suitable for carrying out the method. Based on the disadvantages of the known prior art, the invention seeks to provide a method characterized by means of a more economic process control and a higher yield. For this purpose the invention provides the solution that hydrogen sulfide and carbon dioxide of the biogas are nearly completely separated in separate cleaning steps before the catalytic conversion of the biogas, wherein hydrogen sulfide is biologically removed by means of the admixture of oxygen and/or oxidation agents containing oxygen. The oxygen, or the oxidation agent, is dosed such that an excess of oxygen of at least 1.0 vol.-% is present in the cleaned biogas (methane gas). The biogas is concentrated without any dehumidification, heated, and mixed with superheated steam. Due to the excess of oxygen thermal energy is additionally created during the reforming process by means of an exothermal oxidation of oxygen contained in the biogas together with hydrogen in the catalyst bed for the endothermal conversion of methane to synthetic gas.

IPC 8 full level

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