Title (en)

MANGANESE-DOPED NICKEL METHANIZATION CATALYSTS HAVING ELEVATED SULPHUR RESISTANCE

Title (de)

MANGANDOTIERTE NICKEL-METHANISIERUNGSKATALYSATOREN MIT ERHOEHTER SCHWEFELRESISTENZ

Title (fr)

CATALYSEURS DE MÉTHANISATION À BASE DE NICKEL DOPÉS AU MANGANÈSE PRÉSENTANT UNE MEILLEURE RÉSISTANCE AU SOUFRE

Publication

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Application

EP 19711029 A 20190306

Priority

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Abstract (en)

[origin: WO2019170779A1] The invention relates to a method for the methanization of carbon monoxide and/or carbon dioxide in a reactant stream containing carbon monoxide and/or carbon dioxide, hydrogen and more than 1 ppb sulphur, using a catalyst containing aluminium oxide, an Ni active mass and manganese, characterized in that the molar Ni/Mn ratio in the catalyst lies in the range between 1.0 and 15.0, preferably between 2.0 and 12.0. The invention further relates to a method for the methanization of carbon monoxide and/or carbon dioxide in a reactant stream containing carbon monoxide and/or carbon dioxide, hydrogen and more than 1 ppb sulphur, wherein the reactant stream is passed through a reactor with a catalyst and the catalyst contains an Ni active mass and manganese, with a molar Ni/Mn ratio in the catalyst in the range between 1.0 and 15.0, preferably between 2.0 and 12.0, characterized in that the catalyst absorbs the sulphur contained in the reactant stream and simultaneously catalyses the methanization reaction.

IPC 8 full level

C07C 1/04 (2006.01); **C07C 1/12** (2006.01); **C07C 9/04** (2006.01)

CPC (source: EP US)

B01J 21/04 (2013.01 - US); **B01J 23/8892** (2013.01 - EP US); **B01J 37/0205** (2013.01 - US); **B01J 37/035** (2013.01 - US); **B01J 37/088** (2013.01 - US); **C07C 1/045** (2013.01 - EP); **C07C 1/12** (2013.01 - EP US); **C10L 3/08** (2013.01 - EP); C07C 2521/04 (2013.01 - EP US); C07C 2523/755 (2013.01 - EP US); C07C 2523/889 (2013.01 - EP US)

C-Set (source: EP)

1. **C07C 1/12** + **C07C 9/04**
2. **C07C 1/045** + **C07C 9/04**

Citation (search report)

See references of WO 2019170779A1

Designated contracting state (EPC)

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Designated extension state (EPC)

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DOCDB simple family (publication)

WO 2019170779 A1 20190912; CN 111819163 A 20201023; EP 3762350 A1 20210113; JP 2021516612 A 20210708; JP 7152495 B2 20221012; US 11261137 B2 20220301; US 2021047246 A1 20210218

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