

Title (en)
IMPROVED SEPARATION OF HEAVY HYDROCARBONS AND NGLS FROM NATURAL GAS IN INTEGRATION WITH LIQUEFACTION OF NATURAL GAS

Title (de)
VERBESSERTE TRENNUNG VON SCHWEREN KOHLENWASSERSTOFFEN UND NGLS AUS ERDGAS BEI DER INTEGRATION MIT ERDGASVERFLÜSSIGUNG

Title (fr)
SÉPARATION AMÉLIORÉE D'HYDROCARBURES LOURDS ET NGL À PARTIR DE GAZ NATUREL DANS UNE INTÉGRATION AVEC UNE LIQUÉFACTION DE GAZ NATUREL

Publication
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Application
EP 16000122 A 20160120

Priority
US 201514604030 A 20150123

Abstract (en)
Described herein is a method of and system for fractionating and liquefying a natural gas feed stream. The natural gas is first fractionated in a scrub column. The overhead vapor from the scrub column is cooled, condensed and divided to form a first, a second and at least one further stream of liquefied first overhead. The first stream of liquefied first overhead is returned to the scrub column as a reflux stream. The second stream of liquefied first overhead forms an LNG product. The further stream of liquefied first overhead is used to provide or generate reflux for a de-methanizer column used to fractionate the bottoms liquid from the scrub column.

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Citation (applicant)
• US 2012090350 A1 20120419 - MAK JOHN [US]
• US 6662589 B1 20031216 - ROBERTS MARK JULIAN [US], et al
• US 2006260355 A1 20061123 - ROBERTS MARK J [US], et al
• US 2008115532 A1 20080522 - JAGER MARCO DICK [NL]
• US 2008016910 A1 20080124 - BROSTOW ADAM ADRIAN [US], et al
• US 2013061632 A1 20130314 - BROSTOW ADAM ADRIAN [US], et al
• US 4065278 A 19771227 - NEWTON CHARLES L, et al
• CA 1059425 A 19790731 - AIR PROD & CHEM
• US 5659109 A 19970819 - FERNANDEZ DE LA VEGA FELIX J [US], et al
• US 4445917 A 19840501 - CHIU CHEN-HWA [US]
• US 5956971 A 19990928 - COLE ERIC T [US], et al
• US 2007012071 A1 20070118 - HUANG SHAWN S [US], et al
• US 5588308 A 19961231 - DAUGHERTY TAMARA L [US], et al
• US 2004200353 A1 20041014 - BRAS EDUARD COENRAAD [NL], et al

Cited by
EP3252408A1

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