

(12) PATENT APPLICATION PUBLICATION

(21) Application No.5324/DELNP/2011 A

(19) INDIA

(22) Date of filing of Application :11/07/2011

(43) Publication Date : 31/08/2012

(54) Title of the invention : DIRECT CONTACT CONDENSING IN AN ACID GAS REMOVAL PROCESS

(51) International classification :B01D 53/40
(31) Priority Document No :12/354,916
(32) Priority Date :16/01/2009
(33) Name of priority country :U.S.A.
(86) International Application No :PCT/US2009/067861
Filing Date :14/12/2009
(87) International Publication No :WO 2010/082994
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)UOP LLC

Address of Applicant :25 EAST ALGONQUIN ROAD, P.O.
BOX 5017, DES PLAINES, ILLINOIS 60017-5017, UNITED
STATES OF AMERICA; U.S.A.

(72)Name of Inventor :

1)PAN, JUNFENG

2)HUANG, RICHARD

3)DAVIS, LAMAR A.

(57) Abstract :

Systems and processes disclosed herein relate to the utilization of direct contact condensing to provide heat to a solvent regeneration loop in an acid gas removal process. A first direct contact condenser can be included in the upper section of a concentrator that removes acid gas from a rich solvent stream. A first slip stream can be heated in the first direct contact condenser and can be combined with the rich solvent stream in the lower section of the stripper. A second direct contact condenser can be included in the lower section of an absorber that removes acid gas from a feed gas. A second slip stream can be heated in the second direct contact condenser, and can be combined with the rich solvent stream before the rich solvent stream is provided to the concentrator.

No. of Pages : 15 No. of Claims : 10