

Title (en)
PRETREATING BIOMASS USING STEAM EXPLOSION BEFORE GASIFICATION

Title (de)
VORBEHANDLUNG VON BIOMASSE MITTELS DAMPFEXPLOSION VOR DER VERGASUNG

Title (fr)
PRÉTRAITEMENT DE BIOMASSE PAR VAPOCRAQUAGE AVANT GAZÉIFICATION

Publication
EP 2864037 A1 20150429 (EN)

Application
EP 13806846 A 20130604

Priority
• US 201213531318 A 20120622
• US 201361823360 P 20130514
• US 2013044143 W 20130604

Abstract (en)
[origin: WO2013191897A1] An integrated plant that includes a steam explosion process unit and biomass gasifier to generate syngas from biomass. A steam explosion process unit applies a combination of heat, pressure, and moisture to the biomass to make the biomass into a moist fine particle form. The steam explosion process unit applies steam with a high pressure to heat and pressurize any gases and fluids present inside the biomass to internally blow apart the bulk structure of the biomass via a rapid depressurization of the biomass with the increased moisture content. Those produced moist fine particles of biomass are subsequently fed to a feed section of the biomass gasifier, which reacts the biomass particles in a rapid biomass gasification reaction to produce syngas components.

IPC 8 full level
B01J 19/00 (2006.01); **C08J 3/12** (2006.01); **C10L 5/44** (2006.01); **D21B 1/36** (2006.01)

CPC (source: CN EP)
C07C 29/1518 (2013.01 - CN EP); **C10J 3/485** (2013.01 - CN EP); **C10J 3/62** (2013.01 - CN EP); **C10K 1/004** (2013.01 - CN EP); **C10L 5/442** (2013.01 - CN EP); **C10L 9/083** (2013.01 - CN EP); **C10J 2300/0906** (2013.01 - CN EP); **C10J 2300/0909** (2013.01 - CN EP); **C10J 2300/0916** (2013.01 - CN EP); **C10J 2300/092** (2013.01 - CN EP); **C10J 2300/0976** (2013.01 - CN EP); **C10J 2300/1246** (2013.01 - CN EP); **C10J 2300/1269** (2013.01 - CN EP); **C10J 2300/1665** (2013.01 - CN EP); **C10J 2300/1853** (2013.01 - CN EP); **C10J 2300/1884** (2013.01 - CN EP); **C10J 2300/1892** (2013.01 - CN EP); **C10L 2290/02** (2013.01 - CN EP); **C10L 2290/04** (2013.01 - CN EP); **C10L 2290/06** (2013.01 - CN EP); **C10L 2290/08** (2013.01 - CN EP); **C10L 2290/28** (2013.01 - CN EP); **C10L 2290/562** (2013.01 - CN EP); **D21B 1/36** (2013.01 - EP); **Y02E 50/10** (2013.01 - CN EP); **Y02E 50/30** (2013.01 - CN EP); **Y02P 20/145** (2015.11 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2013191897 A1 20131227; **WO 2013191897 A8 20140710**; AU 2013277608 A1 20141127; AU 2013277608 B2 20160204; CA 2873484 A1 20131227; CN 104519991 A 20150415; EP 2864037 A1 20150429; EP 2864037 A4 20160224; JP 2015527425 A 20150917

DOCDB simple family (application)
US 2013044143 W 20130604; AU 2013277608 A 20130604; CA 2873484 A 20130604; CN 201380040145 A 20130604; EP 13806846 A 20130604; JP 2015518422 A 20130604