

Title (en)

METHOD AND APPARATUS FOR THRUST COMPRISING A LIQUID OXIDANT AND A SOLID PROPELLANT

Title (de)

VERFAHREN UND VORRICHTUNG FÜR EINEN ANTRIEB MIT FLÜSSIGEM OXIDATIONSMITTEL UND EINEM FESTOFF-TREIBSTOFF

Title (fr)

PROCÉDÉ ET DISPOSITIF DE PROPULSION COMPRENANT UN LIQUIDE OXYDANT ET UN COMPOSÉ SOLIDE

Publication

EP 2516324 A1 20121031 (FR)

Application

EP 10810862 A 20101221

Priority

- FR 0959314 A 20091221
- FR 2010052848 W 20101221

Abstract (en)

[origin: WO2011083252A1] One subject of the present invention is a propulsion method comprising: the injection of at least one liquid oxidant (OX) and hydrogen (H₂) into at least one combustion chamber (1); the combustion of said at least one liquid oxidant (OX) and hydrogen (H₂) in said at least one combustion chamber (1) in order to generate combustion gases; and ejection of said combustion gases. Said method comprises, upstream of said injection: the generation of at least some of said hydrogen (H₂), advantageously all of said hydrogen (H₂), from at least one solid compound (5'); said generation from said at least one solid compound (51) comprising a combustion reaction between said at least one solid compound (51), chosen from alkali metal borohydrides, alkaline-earth borohydrides, borazane, polyaminoboranes and mixtures thereof, and an oxidizing charge (5"). Another subject of the present invention is also a propulsion device suitable for implementing said method.

IPC 8 full level

C01B 3/02 (2006.01); **C06D 5/06** (2006.01); **F02K 9/50** (2006.01); **F02K 9/72** (2006.01)

CPC (source: EP US)

C01B 3/065 (2013.01 - EP US); **C06B 47/02** (2013.01 - EP US); **C06D 5/06** (2013.01 - EP US); **F02K 9/50** (2013.01 - EP US); **F02K 9/72** (2013.01 - EP US); **F05D 2270/08** (2013.01 - EP US); **Y02E 60/36** (2013.01 - EP US)

Citation (search report)

See references of WO 2011083252A1

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

DOCDB simple family (publication)

FR 2954411 A1 20110624; **FR 2954411 B1 20121102**; EP 2516324 A1 20121031; JP 2013515196 A 20130502; JP 5674810 B2 20150225; US 2013019586 A1 20130124; WO 2011083252 A1 20110714

DOCDB simple family (application)

FR 0959314 A 20091221; EP 10810862 A 20101221; FR 2010052848 W 20101221; JP 2012545384 A 20101221; US 201013518282 A 20101221