

Title (en)

COUPLING CLOSURES AND DOCKING DEVICES COMPRISING SAID COUPLING CLOSURES

Title (de)

KUPPLUNGSVERSCHLÜSSE SOWIE ANDOCKEINRICHTUNGEN ENTHALTEND DIESE KUPPLUNGSVERSCHLÜSSE

Title (fr)

FERMETURES D'ACCOUPLEMENT ET DISPOSITIFS D'ADOSSAGE RENFERMANT CES FERMETURES D'ACCOUPLEMENT

Publication

EP 1648773 B1 20091111 (DE)

Application

EP 04762565 A 20040730

Priority

- DE 2004001720 W 20040730
- DE 10335325 A 20030801

Abstract (en)

[origin: WO2005012104A2] The invention relates to a multiple coupling closure (120, 120') which ensures a reversible substantially tight with respect to environment closure and is used for substantially tight with respect to environment filling and/or transferring of bulk products from flexible and/or rigid containers or conveying means, in particular pipe sections comprising at least two coupling closures (101, 101'; 110, 110') which are assembled or assembleable to each other, in particular in a manner substantially tight with respect to environment, respectively through at least partially flexible and/or rigid conveying means (102, 202), in particular through a pipe, wherein the opening surface, in particular of the inner diameter of the first open coupling closure (101, 101'), is larger than the external and/or internal peripheral surface of the second coupling closure (110, 110'). When the first coupling closure (101) is open, said second coupling closure (110) is docked, in particular in a manner substantially tight with respect to environment associated with the formation of a docking device, to the corresponding coupling closure (110') inside conveying means (102, 202), and/or during at least partial pass through the opening of the first coupling closure (101). Said invention also relates to a multiple docking device comprising said multiple coupling closure and a container and conveying means each of which also comprises said multiple coupling closure. The invention also relates to a method for filling, transferring and/or emptying, in particular substantially tight with respect to environment, flexible or rigid containers and to a method for using the inventive multiple coupling closure.

IPC 8 full level

B65B 1/28 (2006.01); **B65B 51/04** (2006.01); **B65D 21/02** (2006.01); **B65D 33/16** (2006.01); **B65D 33/25** (2006.01); **B65D 81/32** (2006.01)

CPC (source: EP US)

B65B 1/28 (2013.01 - EP US); **B65B 51/046** (2013.01 - EP US); **B65D 21/02** (2013.01 - EP US); **B65D 33/16** (2013.01 - EP US); **B65D 33/2541** (2013.01 - EP US); **B65D 81/32** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

HR

DOCDB simple family (publication)

WO 2005012104 A2 20050210; **WO 2005012104 A3 20050512**; AT E411943 T1 20081115; AT E448144 T1 20091115; CN 100391795 C 20080604; CN 100391796 C 20080604; CN 1829630 A 20060906; CN 1829631 A 20060906; DE 10335325 A1 20050317; DE 10335325 B4 20070503; DE 10362131 A1 20060614; DE 502004008325 D1 20081204; DE 502004010353 D1 20091224; EP 1648773 A2 20060426; EP 1648773 B1 20091111; EP 1648780 A2 20060426; EP 1648780 B1 20081022; JP 2007500659 A 20070118; JP 2007500660 A 20070118; RU 2006106055 A 20080227; US 2007191167 A1 20070816; US 2007277478 A1 20071206; US 7770936 B2 20100810; US 8122924 B2 20120228; WO 2005012089 A2 20050210; WO 2005012089 A3 20050317

DOCDB simple family (application)

DE 2004001721 W 20040730; AT 04762565 T 20040730; AT 04762566 T 20040730; CN 200480021530 A 20040730; CN 200480021701 A 20040730; DE 10335325 A 20030801; DE 10362131 A 20030801; DE 2004001720 W 20040730; DE 502004008325 T 20040730; DE 502004010353 T 20040730; EP 04762565 A 20040730; EP 04762566 A 20040730; JP 2006522225 A 20040730; JP 2006522226 A 20040730; RU 2006106055 A 20040730; US 55769304 A 20040730; US 56601704 A 20040730