

Title (en)  
Marine riser tensioner.

Title (de)  
Spannvorrichtung für Unterwasser-Steigrohr.

Title (fr)  
Dispositif de mise sous tension d'une colonne montante immergée.

Publication  
**EP 0088608 A2 19830914 (EN)**

Application  
**EP 83301178 A 19830304**

Priority  
US 35492382 A 19820305

Abstract (en)  
Motion compensating apparatus maintains a tension load on a marine riser supported from a floating platform which is subject to movement by wave action and the like. Bending movements induced by the roll and pitch of the vessel are decoupled by a resilient bearing member (38) having an annular section of a substantially spherical or conical laminated body of superposed layers of an elastic material (74) and 3 relatively inelastic material (76). A tension load is applied to the riser by a hydraulic actuator (40) which is supported by the resilient bearing member (38). The actuator includes a displacement compensating cylinder chamber (55) having an adjustable volume of hydraulic fluid presented to a piston (52) in the cylinder for supporting the upper end (72) of the marine riser. The displacement of fluid in the cylinder (55) varies in response to the heave of the vessel to maintain a positive lifting force on the marine riser. An accumulator assembly (88) is connected to the pressure chamber (55) of the hydraulic actuator for supplying hydraulic fluid to and for receiving hydraulic fluid from the pressure chamber in response to changes in its volume. Hydraulic fluid leakage past the actuator seals (56, 60, 67, 68) is monitored through a fluid circuit (65 84) including pressure switches (95, 97) and leakage flow indicators (103, 101).

IPC 1-7  
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IPC 8 full level  
**B63B 21/00** (2006.01); **E21B 7/128** (2006.01); **E21B 19/00** (2006.01); **E21B 19/09** (2006.01)

CPC (source: EP)  
**E21B 7/128** (2013.01); **E21B 19/006** (2013.01); **E21B 19/09** (2013.01)

Cited by  
EP2863005A1; US11598161B2; GB2533783A; GB2533783B; FR2584449A1; US4712620A; US9845654B2; WO2010090531A1; US8496409B2; US8875794B2; US10174566B2; US7988385B2; US8011858B2; US8123438B2; US8215872B2

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DOCDB simple family (application)  
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