

Title (en)
Safety device for load-hoisting equipment.

Title (de)
Sicherheitsvorrichtung für Hebezeuge einer Last.

Title (fr)
Dispositif de sécurité d'un appareil de levage d'une charge.

Publication
EP 0155217 A1 19850918 (FR)

Application
EP 85400486 A 19850313

Priority
FR 8404054 A 19840316

Abstract (en)
1. A safety device for a load hoisting apparatus comprising at least one winch (1) whose pulley is a chain pulley, a hoisting chain (18) returned in the lower part of its path by a second chain pulley (24) rotatively mounted on a horizontal shaft in the body of a pulley-block (21) to which the load (20) is hooked, and means (2) for taking up the vertical portion (18b) of the chain (18) opposed to the portion (18a) connecting the winch (1) to the second pulley (24), the safety device comprising at least one roller for wedging the second pulley (24) relative to the pulley-block (21) disposed within the pulley (24) and movable between an inoperative position, the pulley (24) being then free to rotate in the body of the pulley-block (21) for the displacement of the load (20), and an operative position in which the pulley (24) is locked against rotation in the pulley-block (21), characterised in that the wedging roller disposed in a cavity (28) of a support (26) integral with the body of the pulley-block (21) inside the pulley (24), and biased toward the inner surface of the pulley (24) by a spring (31) is actuated by a control unit comprising at least one load sensor (15-16) against which the weight of the load (20) is applied in the normal operation of the winch (1) through the portions (18a, 18b) of the chain (18) and which is released from the load (20) in the case of the breakage of one of the portions of the chain (18), and a pivotal arm (32) associated with at least one electromagnet (35) whose supply is controlled by the load sensor (15-18) maintaining the roller (30) in the retracted position relative to the inner surface of the pulley (24), when it is supplied with power, the load sensor (15-16) bringing about the cutting off of the supply of the electromagnet (35) and the locking of the pulley (24) of the pulley-block (19) when the release of the load (20) effectively corresponds to a breakage of one of the portions of the chain (18), the load being then hooked to the remaining portion (18a, 18b).

Abstract (fr)
L'invention concerne un dispositif de sécurité d'un appareil de levage comportant au moins un treuil (12) à chaîne et une moufle (21) portant une poulie à chaîne (24). Le dispositif comporte au moins un moyen de blocage (30a) de la poulie (24) par rapport à la moufle (21), mobile entre une position hors service et une position de blocage. Un ensemble de commande comprenant au moins un capteur de charge (15-16) sur lequel s'applique le poids de la charge (20) par l'intermédiaire des brins de la chaîne (18a, 18b) permet de déclencher le blocage de la poulie (24) en cas de rupture d'un des brins (18a, 18b) de la chaîne (18). L'invention s'applique, en particulier, aux treuils de manutention dans une centrale nucléaire à neutrons rapides.

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B66D 3/10; **B66C 15/02**

IPC 8 full level
B66C 15/02 (2006.01); **B66D 3/10** (2006.01)

CPC (source: EP)
B66C 15/02 (2013.01); **B66D 3/10** (2013.01)

Citation (search report)
• [A] US 2780318 A 19570205 - OWENS ROY A
• [A] FR 2359780 A1 19780224 - LORRAINE LAMINAGE [FR]
• [A] GB 2110633 A 19830622 - ACUSHNET CO

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