

Title (en)  
CONTROLLER FOR EXCAVATORS

Title (de)  
STEUERSYSTEM FÜR EINEN BAGGER

Title (fr)  
CIRCUIT DE COMMANDE D'EXCAVATEUR

Publication  
**EP 0790356 A1 19970820 (EN)**

Application  
**EP 96928698 A 19960830**

Priority  
• JP 9602431 W 19960830  
• JP 22371395 A 19950831

Abstract (en)  
In order to improve the durability of a tooth edge of an excavator and thereby an excavation efficiency thereof as well, a penetration force control unit (70) controls a hydraulic winch HWD so that a detected penetration force attains a set level, whereby the speed of the excavator (10) is controlled. A descending speed control unit (50) is adapted to control the hydraulic winch HWD so that a detected descending speed attains a set level, whereby the speed of the excavator (10) is controlled. When a detected level of the descending speed exceeds a predetermined level during a control operation of the penetration force control unit (70), a selection unit (80) shifts the control operation to that by the descending speed control unit (50). The descending speed control unit (50) is adapted to control the descending speed by a proportional integration control operation, while the penetration force control unit (70) is adapted to control the penetration force by a proportional differentiation control operation. <IMAGE>

IPC 1-7  
**E02F 5/14**; **E02F 5/02**; **B66D 1/44**

IPC 8 full level  
**E02F 5/02** (2006.01); **B66D 1/44** (2006.01); **E02F 3/20** (2006.01); **E02F 3/26** (2006.01); **E02F 9/22** (2006.01)

CPC (source: EP KR)  
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Cited by  
EP2573275A1; ITTO20110834A1; CN102153027A; EP1247778A3; EP2924174A1; US9850637B2; US9206586B2; WO2023192958A3; EP3819434A1; WO2021089603A1; EP3819434B1

Designated contracting state (EPC)  
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DOCDB simple family (application)  
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