

Title (en)

NUCLEAR POWER PLANT REACTOR CONTROL ROD ADDRESSING APPARATUS AND METHOD

Title (de)

VORRICHTUNG UND VERFAHREN FÜR REAKTORSTEUERSTANGE EINES KERNKRAFTWERKS

Title (fr)

APPAREIL ET PROCÉDÉ D'ADRESSAGE DE TIGE DE COMMANDE DE RÉACTEUR DE CENTRALE NUCLÉAIRE

Publication

EP 3836163 A4 20211215 (EN)

Application

EP 19920615 A 20191108

Priority

- CN 201910199423 A 20190315
- CN 2019116776 W 20191108

Abstract (en)

[origin: EP3836163A1] The present disclosure relates a nuclear power plant reactor control rod addressing device and the method thereof. The device includes a plurality of control rods, a driving power, lifting coils LC, and a voltage detector. The control rod includes a rod position probe and a rod stroke cover. The rod position probe and the lifting coil LC are disposed on the rod stroke cover. The rod position probe and the lifting coil LC are coaxially disposed. The rod position probe includes a secondary coil. The driving power is respectively connected to each of the lifting coils LC. The voltage detector is respectively connected to the secondary coil of each of the rod position probes. The driving power is configured to selectively energize one lifting coil LC such that the one lifting coil LC generates a first induced magnetic field. The secondary coil arranged coaxially with the one lifting coil LC is configured to generate a first induced voltage under the action of the first induced magnetic field. The voltage detector is configured to detect the first induced voltage to complete addressing of the control rod. The implementation of the present disclosure may reduce workload of the operator, reduce risk of human failure, reduce risk of communication failure, and greatly improve work efficiency and safety.

IPC 8 full level

G21C 17/10 (2006.01)

CPC (source: EP)

G21C 17/00 (2013.01); **G21C 17/10** (2013.01)

Citation (search report)

- [A] US 5999583 A 19991207 - PYSNIK JOSEPH [US], et al
- [A] CN 103474111 A 20131225 - NUCLEAR POWER INST CHINA
- See references of WO 2020186776A1

Designated contracting state (EPC)

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