

Title (en)

SYSTEM FOR DAMPING MECHANICAL OSCILLATIONS TRANSMITTED FROM THE STRUCTURAL PART OF BUILT STRUCTURES TO THE ELECTRICAL EQUIPMENT AND/OR SOFTWARE AND HARDWARE SYSTEMS OF NUCLEAR POWER STATIONS

Title (de)

SYSTEM ZUR DÄMPFUNG VON MECHANISCHEN SCHWINGUNGEN, DIE VOM STRUKTURELLEN TEIL VON GEBAUTEN STRUKTUREN AUF DIE ELEKTRISCHEN GERÄTE UND/ODER SOFTWARE- UND HARDWARE-SYSTEME VON KERNKRAFTWERKEN ÜBERTRAGEN WERDEN

Title (fr)

SYSTÈME D'ATTÉNUATION D'OSCILLATIONS MÉCANIQUES TRANSMISES DEPUIS UNE PARTIE DE CONSTRUCTION D'ÉDIFICES VERS UN ÉQUIPEMENT ÉLECTRIQUE COMPLEXE ET/OU DES COMPLEXES INFORMATIQUES TECHNIQUES DE CENTRALES ÉLECTRIQUES NUCLÉAIRES (CEN)

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Application

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Abstract (en)

[origin: EP3992369A1] The invention relates to means for protection of packaged electronic and electrical equipment, as well as automated control system software and hardware systems (ACS SHS), mostly for NPP, from earthquakes and man-made impacts that lead to mechanical oscillations of foundations of structures, as well as to means of protection against the effects of industrial vibration, which leads to mechanical aging of elements of devices making part of ACS SHS and electrical equipment. The system for damping mechanical oscillations transmitted from the structural part of built structures to packaged electrical equipment and/or software and hardware systems of the NPP automated control system comprises a base on which electrical equipment and/or software and hardware system of the NPP automated control system are installed and/or placed, where the base is a bearing and/or supporting unit, which includes 3D-compensators. The system additionally comprises at least one load-bearing girder, at least one low-frequency oscillation damping unit mounted between the foundation of the structure for installing the base of the structure and the load-bearing girder(s) on which the 3D-compensators are mounted. The low-frequency oscillation damping unit has a vertical oscillation damper pre-compressed by a predetermined amount, blocked with a lock of the vertical damping activator, and a horizontal oscillation damper in the form of a movable support mounted on a supporting plate through spherical supports, and where the activator is designed in such a way that the vertical oscillation damper is released when the threshold value of the vertical oscillation amplitude is reached. The technical result consists in maintaining the functioning of the electronic equipment and software and hardware systems of the NPP automated control system under man-made impacts and earthquakes with a large scale of the amplitude of oscillations of the foundation, on which the structure with the equipment is located or installed. 2 dependent claims, 5 illustrations.

IPC 8 full level

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CPC (source: EP RU)

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Citation (search report)

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- [A] WO 2018079673 A1 20180503 - MITSUBISHI ELECTRIC CORP [JP]
- [A] JP 2005282247 A 20051013 - HINO EISAKU, et al
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- See also references of WO 2020263123A1

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