

Title (en)

VARIABLE-STIFFNESS ENERGY DISSIPATION MEMBER AND METHOD FOR INSTALLING SAME

Title (de)

ENERGIEABLEITENDES ELEMENT MIT VARIABLER STEIFIGKEIT UND VERFAHREN ZUR INSTALLATION EINES SOLCHEN ENERGIEABLEITENDEN ELEMENTS

Title (fr)

ORGANE DE DISSIPATION D'ÉNERGIE DE RIGIDITÉ VARIABLE ET PROCÉDÉ D'INSTALLATION D'UN TEL ORGANE DE DISSIPATION D'ÉNERGIE

Publication

EP 3643855 B1 20210616 (EN)

Application

EP 19794859 A 20190702

Priority

- CN 201810818668 A 20180724
- CN 2019094446 W 20190702

Abstract (en)

[origin: EP3643855A1] The present invention relates to seismic resistances of buildings, and more particularly to an assembled energy dissipator with variable stiffness for lateral connection of shear walls, including an energy-dissipating zone, a stiffness enhancing zone and end plates for connecting shear walls. The shear walls are connected by the end plates via high-strength binding stay bolts. The stiffness enhancing zone includes a plurality of steel plates and buckling-restrained plates which are respectively arranged on two sides of adjacent steel plates and are connected to the steel plates via bolts. A gap is provided between the adjacent steel plates. The stiffness enhancing zone is provided with a threshold control device. The assembled energy dissipator realizes a reliable lateral bolt connection of shear wall components, and is easy to be assembled and disassembled. The present invention adopts a configuration that the steel plates of the energy-dissipating zone are arranged outside and the steel plates of the stiffness enhancing zone are arranged inside. Under a small or moderate earthquakes, the mild steel of the damper yields to dissipate energy while the steel plates in the enhancing zone are not required to work. When a strong or super strong earthquake occurs, the steel plates in the enhancing zone begins to work to enhance the structural performance.

IPC 8 full level

E04H 9/02 (2006.01); **E04B 1/98** (2006.01); **E04B 2/56** (2006.01)

CPC (source: CN EP)

E04B 1/98 (2013.01 - EP); **E04B 2/56** (2013.01 - CN); **E04H 9/021** (2013.01 - CN EP)

Cited by

CN112411806A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3643855 A1 20200429; **EP 3643855 A4 20200701**; **EP 3643855 B1 20210616**; AU 2019261749 A1 20200213; AU 2019261749 B2 20210617; CN 108952283 A 20181207; CN 108952283 B 20210323; WO 2020019948 A1 20200130

DOCDB simple family (application)

EP 19794859 A 20190702; AU 2019261749 A 20190702; CN 201810818668 A 20180724; CN 2019094446 W 20190702