

Title (en)
Vibration absorber for vibration-endangered structural parts and structures

Title (de)
Schwingungsdämpfer für schwingungsgefährdete Bauteile und Bauwerke

Title (fr)
Amortisseur de vibrations pour éléments de construction et constructions mis en danger de vibrations

Publication
EP 0686733 B2 20030226 (DE)

Application
EP 95105685 A 19950414

Priority
DE 4418916 A 19940531

Abstract (en)
[origin: EP0686733A1] The equipment is esp. for chimneys, masts, industrial tanks etc. with quasi-rotational-symmetrical-vibration characteristics. It comprises a liquid-filled tank whose weight, sloshing frequency and inherent damping characteristics are matched to the natural frequency of the building. The distance (A) from each enclosing wall (W) of the tank to the mid-point (M) of the surface of the liquid at the central perpendicular is approximately the same. The height to which the tank is filled can be less than the distance (A), and typically less than half of it. The tank may be square or can have a circular bottom (G), or it can be annular and divided by radial partitions. <IMAGE>

IPC 1-7
E04B 1/98

IPC 8 full level
E04B 1/98 (2006.01)

CPC (source: EP)
E04H 9/0215 (2020.05)

Citation (opposition)
Opponent :

- US 4783937 A 19881115 - SATO TAKANORI [JP]
- T. Miyata, H. Yamada, Y. Saitoh. "Feasibility Study on Damping of Wind-induced Vibrations of Structure By. Breaking of Sloshing Water" Journal of Wind Engineering No. 32, May 1987 (in Japanese)
- K. Fujii, Y. Tamura, T. Wakahara: "Wind-induced Vibration of Tower and Practical Applications of Tuned Sloshing Damper", Journal of Wind Engineering, No. 37, October 1988.

Cited by
DE102014113145A1; EP1677003A3; US6695588B1; US8051625B2; EP2899397A1; CN104806449A; WO2008153489A1; DE102021121874A1; WO2023025780A1; WO2016037958A1; US10161387B2

Designated contracting state (EPC)
AT BE CH DE DK FR GB IT LI NL SE

DOCDB simple family (publication)
EP 0686733 A1 19951213; EP 0686733 B1 19990616; EP 0686733 B2 20030226; AT E181389 T1 19990715; DK 0686733 T3 20000117; DK 0686733 T4 20030623

DOCDB simple family (application)
EP 95105685 A 19950414; AT 95105685 T 19950414; DK 95105685 T 19950414