

Title (en)
MOBILE WINDOW INSULATION

Title (de)
BEWEGBARE FENSTERISOLATION

Title (fr)
MOBILE ISOLATION DE FENÊTRE

Publication
EP 3091166 A1 20161109 (EN)

Application
EP 15461528 A 20150504

Priority
EP 15461528 A 20150504

Abstract (en)
Mobile window insulation in the form of blinds, preferably horizontal or vertical, made of strips 3 with rotation ability up to 90° in both directions 9 vs. the longitudinal axis of the strip, where the inside of the strip 3 encloses a filling 5 of phase change material (PCM) of organic origin, with phase change heat value of 90-230 kJ/kg and phase change temperature (solid body - fluid) in the range of 17-25°C. Change phase materials (PCM) were selected out of: the esters of carboxylic acids, preferably the ester of palmitic acid and propanol and/or mixtures of saturated fatty acids, preferably the mixture of caprylic and lauric acid and/or PEG600 ethylene glycol polymers and/or the mixture of alkanes.

IPC 8 full level
E06B 7/096 (2006.01); **E06B 9/24** (2006.01); **E06B 9/386** (2006.01)

CPC (source: EP)
E06B 7/096 (2013.01); **E06B 9/386** (2013.01); **E06B 2009/2417** (2013.01)

Citation (applicant)
• SOARES N; COSTA J.J; GASPAR A. R; SANTOS P.: "Review of passive PCM latent heat thermal energy storage systems towards buildings' energy efficiency", ENERGY AND BUILDINGS, vol. 59, April 2013 (2013-04-01), pages 82 - 103
• W GRYNNING S; GOIA F; ROGNVIK E; TIME B: "Possibilities for characterization of a PCM window system using large scale measurements", INTERNATIONAL JOURNAL OF SUSTAINABLE BUILT ENVIRONMENT, vol. 2, no. 1, June 2013 (2013-06-01), pages 56 - 64
• KAMAL A.R. ISMAIL; CARLOS T. SALINAS; HENRIQUEZ J.R.: "Comparison between PCM filled glass windows and absorbing gas filled windows", ENERGY AND BUILDINGS, vol. 40, no. 5, 2008, pages 710 - 719
• SILVA T; VICENTE R; RODRIGUES F; SAMAGAIO A; CARDOSO C: "Development of a window shutter with phase change materials: Full scale outdoor experimental approach", ENERGY AND BUILDINGS, vol. 88, 1 February 2015 (2015-02-01), pages 110 - 121
• ESAM M.; ALAWADHI E. M: "Using phase change materials in window shutter to reduce the solar heat gain", ENERGY AND BUILDINGS, vol. 47, April 2012 (2012-04-01), pages 421 - 429

Citation (search report)
• [XAYI] EP 1541797 A1 20050615 - ALBISRIEDEN FENSTER [CH]
• [YA] WO 2013191554 A2 20131227 - AUTARKIS B V [NL]
• [A] WO 2006028366 A1 20060316 - BOSSELAAR JACOB ADRIAAN [NL]
• [A] DE 202011002337 U1 20110505 - EUROLAM GMBH [DE]
• [A] US 4739748 A 19880426 - STICE JAMES D [US]
• [A] WO 2009011656 A1 20090122 - WIDROTH ROLF [SE]

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

Designated extension state (EPC)
BA ME

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