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(54) Title: HIGH STRENGTH BIOSOLUBLE INORGANIC FIBER INSULATION MAT

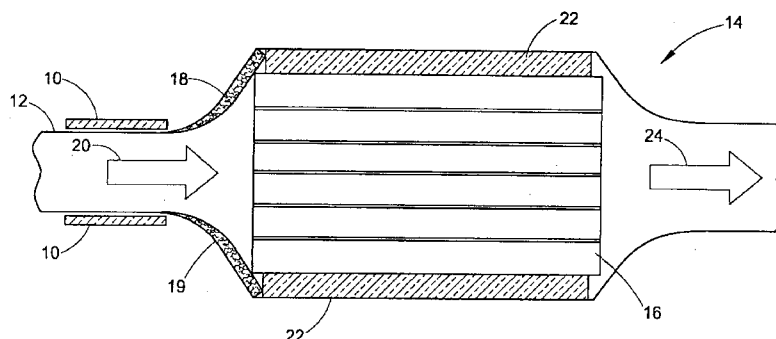


FIG. 1

(57) Abstract: A high strength inorganic bio-soluble fiber insulation mat (10) contains high temperature resistant alkaline earth silicate fibers (42) and optionally additional non-respirable inorganic fibers, wherein the insulation mat (10) has a structure of partially interlocking fibers (42) and an organics content of less than 20 weight percent prior to exposure to temperatures of at least 600°C. A process for producing the insulation mat (10) includes preparing a wet paper (30) or sheet comprising the high temperature resistant fibers (42) and optionally at least one of organic binders or inorganic binders; and intertwining or entangling the fibers (42) in the wet paper (30) or sheet prior to drying.

A. CLASSIFICATION OF SUBJECT MATTER***B01D 39/00(2006.01)i, B01D 53/94(2006.01)i, B01J 21/14(2006.01)i, F01N 3/035(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B01D 39/00; B01D 53/04; B01D 53/34; B01D 53/94; B01D 9/00; C03C 13/02; C03C 13/06; F01N 3/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: insulation, material, fiber, binder, biosoluble, non-respirable

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2006-055188 A1 (3M INNOVATIVE PROPERTIES COMPANY et al.) 26 May 2006 See page 5, lines 3 - 30	1-23
Y	US 2004-0234436 A1 (HOWORTH GARY F) 25 November 2004 See paragraphs [0031] - [0042] and [0065]	1-23
Y	US 6953757 B2 (BRUCE K. ZOITOS et al.) 11 October 2005 See column 4, line 14 - column 5, line 30	1-23
A	US 6726884 B1 (DILLON; KENNETH R. et al.) 27 April 2004 See abstract	1-23
PY	US 2009-0060802 A1 (BEAUHARNOIS MARK) 05 March 2009 See claims 1 - 18	1-23



Further documents are listed in the continuation of Box C.



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INTERNATIONAL SEARCH REPORT

Information on patent family members

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