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(54) Title: MANUFACTURING OF BIOORGANIC-AUGMENTED HIGH NITROGEN-CONTAINING INORGANIC FERTILIZER

(57) Abstract: The invention describes a new method for the production of high nitrogen organically-augmented inorganic fertilizer that incorporates municipal biosolids or organic sludges that can compete with traditional fertilizers such as ammonium phosphate, ammonium sulfate and urea on the commodity fertilizer marketplace. The method creates a thixotropic paste-like material from the biosolids or organic sludge that is blended with hot or molten ammonium salts, especially a mixture of ammonium phosphate and ammonium sulfate. The invention can be an add-on to commercial production of ammonium salts or it can stand alone by manufacturing ammonium salts prior to their introduction to the conditioned biosolids. The invention is oriented to be tailored to production facilities for individual municipal waste treatment plants in order to keep manufacturing plants small with a minimization of logistics and liability.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/06220

A. CLASSIFICATION OF SUBJECT MATTER

USPC: 71/11

IPC(8) : C05D 9/00 (2007.01)

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)

USPC: 71/11

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

IPC(8) : C05D 9/00(2007.01);C05F(2007.01)

USPC: 71/11,28,27,31,30,28 (see key words below)

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

PUBWEST(PGPB,USPT,USOC,EPAB,JPAB). Serach terms: sludge, fertilizer, melt, molen, thixotropic, paste, gel, viscous, thick, semisold, sludge, biosolid, sewage, ammonium.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/0120867 A1 (Dahms et al.) 24 Jun 2004 (24.06.2004) paragraphs [0002], [0016], [0026], [0027], [0028], [0031], [0039], [0041], [0042], [0045], [0046], [0047], [0048], [0050], [0053], [0057], [0058], [0062], [0063], [0064].	1-52
Y	US 6,398,840 B1 (Orta-Castro) 04 Jun 2002 (04.06.2002) col 2, ln 42-46, col 4, ln 25-40 and 53-58, col 5, ln 16-18 and 24-33, and claim 1	1-52
Y	US 4,154,593 A (Brown et al.) 15 May 1979 (15.05.1979) col 1, ln 10-16, col 6, ln 68-col 7, ln 4, col 7, ln 37-38.	4, 17-29
Y	US 5,238,480 A (Rehberg et al.) 24 Aug 1993 (24.08.1993) col 1, ln 67-col 2, ln 5	32, 36-46

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