

12

EUROPEAN PATENT APPLICATION

21 Application number: **81300152.6**

51 Int. Cl.³: **C 10 L 9/10**
B 03 D 1/00

22 Date of filing: **14.01.81**

30 Priority: **22.01.80 US 114414**
22.01.80 US 114357

43 Date of publication of application:
29.07.81 Bulletin 81/30

88 Date of deferred publication of search report: **14.10.81**

84 Designated Contracting States:
AT BE DE FR GB IT NL SE

71 Applicant: **GULF & WESTERN CORPORATION**
1 Gulf & Western Plaza
New York, N.Y. 10023(US)

72 Inventor: **Burgess, Lester E.**
848 Springhaven Road
Springfield Pennsylvania(US)

72 Inventor: **Fox, Karl M.**
309 Yale Avenue
Swarthmore Pennsylvania(US)

72 Inventor: **McGarry, Phillip E.**
518 Columbia Avenue
Palmerton Pennsylvania(US)

72 Inventor: **Herman, David E.**
Box 50B Star Route
Jim Thorpe Pennsylvania(US)

74 Representative: **Lambert, Hugh Richmond et al,**
D. Young & Co. 10 Staple Inn
London WC1V 7RD(GB)

54 **A process for the beneficiation of coal and beneficiated coal product.**

57 An improved beneficiated coal product is disclosed comprising coal particles which have been rendered hydrophobic and oleophilic by forming a polymer coating thereon. According to the process an aqueous slurry containing the coal particles is admixed with a fuel oil and a polymerisation mixture preferably containing one or more long chain carboxylic acids which are polymerised *in situ* on the coal particles. The hydrophobic coal particles are then separated from the aqueous medium by froth flotation preferably in several steps by atomising the flocculated coal particles onto the surface of a mass of wash water. Hydrophilic ash particles separate into the wash water whilst the flocculated hydrophobic, oleophilic coal particles are recovered. Following recovery the flocculated particles are de-watered mechanically. Additional but optional treatments include neutralisation and admixing with oil to form coal-in-oil mixtures, and subjecting the particles to a second graft polymerisation procedure.

EP 0 032 811 A3



European Patent
Office

EUROPEAN SEARCH REPORT

0032811

Application number

EP 81 30 0152

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. 1)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<u>FR - A - 2 393 053</u> (AB SCANIA-INVENTOR) * Claims 1-32 * & US - A - 4 217 109 --	1,3-5, 8,14- 17	C 10 L 9/10 B 03 D 1/00
D	<u>US - A - 4 101 293</u> (KRAUSE et al.) * Claims 1-17 *	1-8, 18,19	
	--		
D	<u>US - A - 4 033 852</u> (HOROWITZ) * Claims 1-12 *	1-13, 18-23	TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
	--		
	<u>US - A - 2 913 349</u> (NEESLEY) * Claim 9 *	1-5,8, 9	C 10 L 9/10 B 03 D 1/00

			CATEGORY OF CITED DOCUMENTS
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
			&: member of the same patent family, corresponding document
X The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29-07-1981	Examiner MEERTENS