

Title (en)
METHOD OF PRODUCING FINE PARTICLES

Publication
EP 0298777 B1 19920708 (EN)

Application
EP 88306282 A 19880708

Priority
GB 8716213 A 19870709

Abstract (en)
[origin: EP0298777A2] This invention relates to a method of reducing the particle size of solid particles and is applicable to the production of very fine particles of a wide variety of solids, including relatively hard solids. The method comprises milling a liquid suspension of solid particles in an agitated media mill (13), pumping the milled suspension through a particle size classification device (16) to separate the slurry into a coarse fraction (17) and a fine fraction (18), the particles of the coarse fraction having a greater median particle size than the particles of the fine fraction, recycling the coarse fraction (17) from the particle size classification device to the input of the mill (13), and recycling the fine fraction (18) by pumping (15) it to the classification device, wherein recycling of both coarse and fine fractions are continued until solid particles of the desired reduced particle size are produced. Preferably a single classification device and a single mill can be used, and particles having a median particle size of 0.3 microns or less and a relatively narrow particle size distribution can be produced, even using a hydrocyclone as the classification device.

IPC 1-7
B02C 21/00; **B02C 23/12**; **B02C 23/36**

IPC 8 full level
B02C 17/00 (2006.01); **B02C 21/00** (2006.01); **B02C 23/12** (2006.01); **B02C 23/22** (2006.01); **B02C 23/36** (2006.01)

CPC (source: EP)
B02C 21/00 (2013.01); **B02C 23/12** (2013.01); **B02C 23/36** (2013.01)

Cited by
US5171631A; EP1645334A4; EP0326121A3; WO2020190235A1

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

DOCDB simple family (publication)
EP 0298777 A2 19890111; **EP 0298777 A3 19900207**; **EP 0298777 B1 19920708**; AT E77974 T1 19920715; AU 1891088 A 19890112; AU 605886 B2 19910124; BR 8803484 A 19890131; CA 1323015 C 19931012; DE 3872610 D1 19920813; DE 3872610 T2 19930218; GB 8716213 D0 19870812; IE 61937 B1 19941130; IE 882089 L 19890109; IN 171515 B 19921031; JP H01104354 A 19890421; NO 174282 B 19940103; NO 174282 C 19940413; NO 883051 D0 19880708; NO 883051 L 19890110; ZA 884970 B 19890329

DOCDB simple family (application)
EP 88306282 A 19880708; AT 88306282 T 19880708; AU 1891088 A 19880708; BR 8803484 A 19880711; CA 571405 A 19880707; DE 3872610 T 19880708; GB 8716213 A 19870709; IE 208988 A 19880708; IN 485MA1988 A 19880711; JP 16913788 A 19880708; NO 883051 A 19880707; ZA 884970 A 19880711