

Title (en)  
NOVEL COLLECTORS FOR THE FROTH FLOTATION OF MINERAL VALUES

Publication  
**EP 0174866 B1 19930310 (EN)**

Application  
**EP 85306521 A 19850913**

Priority  
US 64989084 A 19840913

Abstract (en)  
[origin: EP0174866A2] A collector and process for recovering metal values from a metal ore by subjecting the metal ore, in the form of an aqueous pulp, to a froth flotation process in the presence of a collector wherein the collector comprises a compound corresponding to the formula <CHEM> and n is an integer from 1 to 6 or  $\text{R} \text{---} \text{CH}_2 \text{---} \text{mC IDENTICAL}$  where m is an integer from 0 to 6; R<1> and each R<2> are independently C1-22 hydrocarbyl or a C1-22 hydrocarbyl substituted with one or more hydroxy, amino, phosphonyl, alkoxy, imino, carbamyl, carbonyl, thiocarbonyl, cyano, carboxyl, hydrocarbylimino groups, with the proviso that R<2> can be a divalent radical with both valencies bonded directly to the atom X is -S-, -O-, -N-R<3>, <CHEM> R<3> is H or a C1-22 hydrocarbyl; a is an integer of 0, 1 or 2; b is an integer of 0, 1 or 2; with the proviso that the sum of a and b equals 2 except when R<2> is a divalent radical with both valencies bonded directly to the N atom, in which case, b=1 and a=0 or when  $\text{R} \text{---} \text{CH}_2 \text{---} \text{mC IDENTICAL}$  in which case, a+b=0, and with the further proviso that when X is <CHEM> the carbonyl moiety is bonded to R<1>. y

IPC 1-7  
**B03D 1/02**

IPC 8 full level  
**B03D 1/001** (2006.01); **B03D 1/004** (2006.01); **B03D 1/008** (2006.01); **B03D 1/01** (2006.01); **B03D 1/012** (2006.01); **B03D 1/014** (2006.01); **B03D 1/02** (2006.01); **C01G 1/00** (2006.01); **C01G 3/00** (2006.01); **C01G 39/00** (2006.01); **C01G 53/00** (2006.01); **C09K 3/00** (2006.01)

CPC (source: EP KR)  
**B03D 1/008** (2013.01 - EP); **B03D 1/01** (2013.01 - EP); **B03D 1/012** (2013.01 - EP); **B03D 1/014** (2013.01 - EP); **B03D 1/02** (2013.01 - KR); **B03D 2201/02** (2013.01 - EP); **B03D 2203/02** (2013.01 - EP)

Cited by  
WO2022034047A1; EP0320783A3; AU2006317498B2; DE3716012A1; CN113245064A; US2023302464A1; US5061459A; WO2007059559A1; US6833460B2; US10522883B2; US12036286B2; US9630937B2; US10112897B2; US10358414B2; US10961187B2

Designated contracting state (EPC)  
BE DE FR GB IT LU NL SE

DOCDB simple family (publication)  
**EP 0174866 A2 19860319; EP 0174866 A3 19890906; EP 0174866 B1 19930310**; AR 242135 A1 19930331; AU 4739785 A 19860320; AU 562083 B2 19870528; BR 8504419 A 19860715; CA 1265877 A 19900213; CN 1006689 B 19900207; CN 1020551 C 19930512; CN 85106476 A 19870325; CN 85107378 A 19870318; CN 85109643 A 19870415; DE 3587166 D1 19930415; ES 546919 A0 19861016; ES 8700699 A1 19861016; FI 79951 B 19891229; FI 79951 C 19900410; FI 853490 A0 19850912; FI 853490 L 19860314; JP H0152063 B2 19891107; JP S6186960 A 19860502; JP S63107761 A 19880512; KR 860002300 A 19860424; KR 900002702 B1 19900423; MX 169955 B 19930802; MY 101975 A 19920229; NO 166846 B 19910603; NO 166846 C 19910911; NO 853580 L 19860314; PH 21358 A 19871015; PL 146943 B1 19890429; PL 255363 A1 19871019; RO 95694 A 19890130; RO 95694 B 19890131; SU 1419507 A3 19880823; TR 25780 A 19930728; YU 144085 A 19871231; YU 45741 B 19920720; ZA 856955 B 19870527; ZM 6585 A1 19870430; ZW 15285 A1 19870408

DOCDB simple family (application)  
**EP 85306521 A 19850913**; AR 30159785 A 19850912; AU 4739785 A 19850912; BR 8504419 A 19850912; CA 489953 A 19850904; CN 85106476 A 19850828; CN 85107378 A 19850827; CN 85109643 A 19851012; DE 3587166 T 19850913; ES 546919 A 19850912; FI 853490 A 19850912; JP 20188685 A 19850913; JP 20763486 A 19860903; KR 850006709 A 19850913; MX 20662885 A 19850913; MY P119871262 A 19870810; NO 853580 A 19850912; PH 32772 A 19850912; PL 25536385 A 19850913; RO 12010385 A 19850913; SU 3957505 A 19850912; TR 380085 A 19850913; YU 144085 A 19850913; ZA 856955 A 19850911; ZM 6585 A 19850913; ZW 15285 A 19850913