

Title (en)

COMPOSITION, METHOD AND APPARATUS FOR REMOVAL OF HYDROGEN SULFIDE

Publication

**EP 0398952 A4 19910522 (EN)**

Application

**EP 89902134 A 19890113**

Priority

US 14440988 A 19880115

Abstract (en)

[origin: WO8906675A1] This invention provides a process and apparatus for removing H<sub>2</sub>S from the gaseous stream by contacting the stream with an aqueous solution of a water soluble oxidized polyvalent metal chelate catalyst in the presence of oxygen whereby the metal chelate catalyst oxidizes the hydrogen sulfide to produce elemental sulfur and the oxygen present oxidizes the reduced metal chelate catalyst to its oxidized form. This process is performed in a single reaction vessel and forms a suspension or slurry of the precipitated elemental sulfur. This invention also provides a composition for H<sub>2</sub>S removal comprising a polyvalent metal chelate catalyst, a buffer and a dispersing agent. The process can be carried out in separate reaction zones, one zone for the oxidation of H<sub>2</sub>S and reduction of the metal chelate catalyst (22) and a second zone for the oxidation of the reduced catalyst to its oxidized form (23).

IPC 1-7

**C09K 3/00**; **B01D 47/02**; **C01B 17/16**; **C01B 31/20**

IPC 8 full level

**B01D 53/14** (2006.01); **B01D 53/52** (2006.01); **B01D 53/77** (2006.01); **C01B 17/05** (2006.01); **C09K 3/00** (2006.01)

CPC (source: EP KR)

**B01D 47/02** (2013.01 - KR); **B01D 53/1418** (2013.01 - EP); **B01D 53/1468** (2013.01 - EP); **B01D 53/1493** (2013.01 - EP); **B01D 53/52** (2013.01 - EP); **C01B 17/05** (2013.01 - EP)

Citation (search report)

- No further documents have been revealed.
- See references of WO 8906675A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**WO 8906675 A1 19890727**; AU 3043789 A 19890811; CN 1036545 A 19891025; EP 0398952 A1 19901128; EP 0398952 A4 19910522; JP H03503856 A 19910829; KR 900700176 A 19900811

DOCDB simple family (application)

**US 8900181 W 19890113**; AU 3043789 A 19890113; CN 89100244 A 19890116; EP 89902134 A 19890113; JP 50198689 A 19890113; KR 890701707 A 19890916