

Title (en)

PRODUCTION OF HYDROGEN GAS FROM SULFUR-CONTAINING COMPOUNDS

Title (de)

HERSTELLUNG VON WASSERSTOFFGAS AUS SCHWEFELHALTIGEN VERBINDUNGEN

Title (fr)

PRODUCTION D'HYDROGÈNE GAZEUX À PARTIR DE COMPOSÉS CONTENANT DU SOUFRE

Publication

**EP 2167423 A1 20100331 (EN)**

Application

**EP 08768528 A 20080617**

Priority

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Abstract (en)

[origin: WO2009014584A1] The described invention is a process for producing hydrogen gas comprising (a) combusting sulfur (S) or hydrogen sulfide (H<sub>2</sub>S) with oxygen (O<sub>2</sub>) to obtain sulfur dioxide (SO<sub>2</sub>) and water (H<sub>2</sub>O), plus heat; (b) adding water to the product of (a) to obtain a sulfurous acid solution (H<sub>2</sub>SO<sub>3</sub> and H<sub>2</sub>O); (c) applying electrical current to the sulfurous acid solution of (b) to obtain sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) and hydrogen gas (H<sub>2</sub>); and, (d) using gas-liquid separation to separate the sulfuric acid from the hydrogen gas to obtain separated components of the sulfuric acid and the hydrogen gas; and, wherein the heat generated in (a) is used to generate at least a portion of the electricity for the electrical current of (c).

IPC 8 full level

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