Title (en)

METHOD FOR THE ELECTROLYTIC REGENERATION OF CONTAMINATED RHODIUM SOLUTIONS

Title (de)

VERFAHREN ZUR ELEKTROLYTISCHEN REGENERATION VERUNREINIGTER RHODIUMLÖSUNGEN

Title (fr)

PROCEDE DE REGENERATION ELECTROLYTIQUE DE SOLUTIONS DE RHODIUM CONTAMINEES

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Application

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Abstract (en)

[origin: WO9940238A2] The invention relates to a method for electrically regenerating rhodium solutions, designed especially for regenerating rhodium solutions containing sulphuric acid and/or phosphoric acid or rhodium chloride solutions. The solution to be regenerated is introduced in the anode area (12) of an electrolytic cell (10), which is separated from the associated cathode area (14) by an ion exchange membrane (16), said cathode area being filled with a dilute acid having a good conductivity. The rhodium solution pH is increased so as to reach a value greater than 10, preferably in the range from 10 to 14, by adding an alkaline solution, i.e. a concentrated hydroxide potassium solution. Electrolysis is carried out at electric densities that are so high that the trivalent rhodium of the rhodium solution is oxidised to form an hexavalent rhodium, and possible impurities are depleted by the ion exchange membrane (16) in the catholytes. Hexavalent rhodium is transferred in the cathode area at a speed slightly smaller than trivalent rhodium, and therefore no noticeable rhodium depletion can be observed. This is particularly true when pH during electrolysis is maintained at a value permanently greater than 1.5 by means of proper addition of alkaline solution.

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