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54 **Production of chlorine dioxide in an electrolytic cell.**

57 Chlorine dioxide is produced electrolytically in the cathode compartment of an electrolytic cell using a three-dimensional high surface-area cathode. The cathode compartment is separated from an anode compartment by a cation-exchange membrane. Sodium chlorate is reacted with hydrogen ions and chloride ions in the cathode compartment and chlorine dioxide is vented from the cathode compartments. Chlorine co-produced with the chlorine dioxide is reduced at the cathode to provide chloride ions for the reaction while electrolytically-produced hydrogen ions are transferred across the membrane from the anode compartment to the cathode compartment to provide hydrogen ions for the reaction.



EP 88 31 1380

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
P,Y	EP-A-0 293 151 (TENNECO CANADA INC.) * Page 4, lines 37-41; page 5, example 2; page 7, claims 1-9 * ---	1	C 25 B 1/26
P,Y	EP-A-0 266 127 (TENNECO CANADA INC.) * Whole document * ---	1	
A	FR-A-2 504 559 (DIAMOND SHAMROCK) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			C 25 B 1
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22-09-1989	Examiner GROSEILLER PH.A.
<div>CATEGORY OF CITED DOCUMENTS</div> <div><div>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</div><div>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document</div></div>			