

Title (en)  
ELECTROCHEMICAL CONVERSION OF ANHYDROUS HYDROGEN HALIDE TO HALOGEN GAS USING A CATION-TRANSPORTING MEMBRANE

Title (de)  
ELEKTROCHEMISCHE UMWANDLUNG VON WASSERFREIEM HALOGENWASSERSTOFF IN HALOGENGAS MITTELS EINER KATIONENAUSTAUSCHERMEMBRAN

Title (fr)  
CONVERSION ELECTROCHIMIQUE D'HALOGENURE D'HYDROGENE ANHYDRE EN GAZ HALOGENE AU MOYEN D'UNE MEMBRANE A TRANSPORT CATIONIQUE

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Application  
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Abstract (en)  
[origin: WO9634998A1] The present invention relates to an electrochemical cell, system and process for converting essentially anhydrous hydrogen halide to essentially dry halogen gas. The process of the present invention is useful for converting anhydrous hydrogen halide, in particular, hydrogen chloride, hydrogen fluoride, hydrogen bromide and hydrogen iodide, to a halogen gas, such as chlorine, fluorine, bromine, or iodine. In particular, in the present invention, water is provided to the cation-transporting membrane at the cathode in various ways. The present invention allows for recovery of a released fluid at the cathode side of the membrane and recycling of the recovered fluid back to the cathode side of the membrane. In this way, the recovered, released fluid may be recycled to continuously supply water to the membrane, thereby allowing the limiting current density of the cell to be increased and/or controlled.

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