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# United States Patent [19]

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Aaron et al.

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- [54] **BUBBLE CAPTURE ELECTRODE CONFIGURATION**
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### [57] ABSTRACT

A bubble capture electrode configuration for an MHD system includes a body portion which forms a main channel and holds an electrically conductive fluid adapted to have a first flow direction. The system includes at least two electrodes wherein one is a cathode and the other is an anode. The electrodes are adjacent the body portion and are adapted to transmit an electric current therebetween and through the fluid. An electrolysis reaction is produced adjacent at least one electrode, forming gas bubbles. The system also includes magnetic poles for forming a magnetic field, wherein the magnetic field passes through the fluid substantially transverse to the electric current. Accordingly, a force is created for moving the fluid through the main channel. The system further includes a structure for preventing the gas bubbles from entering the main body portion and for preventing interference of the gas bubbles with the electric current flow, for increasing the efficiency of the system and decreasing interference with the electric current transmission through the conductive fluid.

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- [51] Int. Cl.<sup>6</sup> ..... H02K 44/00
- [52] U.S. Cl. .... 204/600; 310/11; 417/50
- [58] Field of Search ..... 417/50; 310/11; 204/600

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20 Claims, 2 Drawing Sheets

