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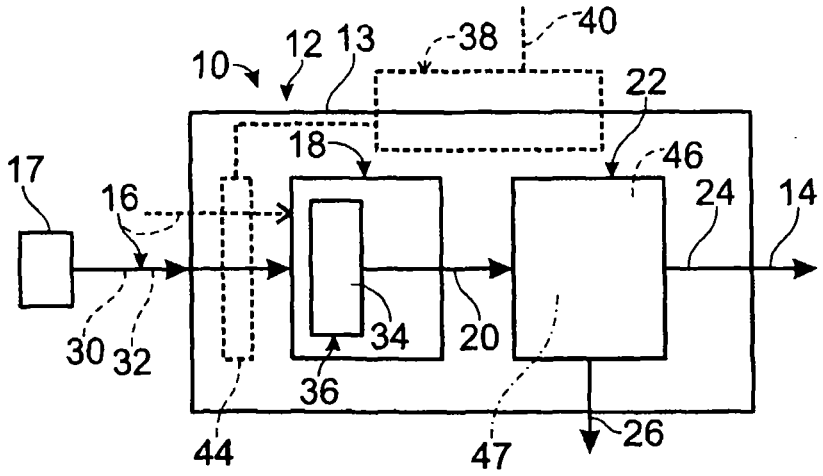
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(54) Title: METHANOL STEAM REFORMING CATALYSTS, STEAM REFORMERS, AND FUEL CELL SYSTEMS INCORPORATING THE SAME



(57) Abstract: A fuel processing system (10) incorporating a methanol steam reformer (13) comprising a catalyst bed (36) containing methanol steam reforming catalysts (34). The catalyst includes zinc oxide as an active component and may further include at least one of chromium oxide and calcium aluminate. The catalyst may not be pyrophoric and may not be reduced during use. Further the catalyst may include a sulfur-absorbent material and may not be active at temperatures below 275°C. The reforming catalyst bed (36) is air-permeable or air-accessible. Produced hydrogen gas is separated using hydrogen-permeable and/or hydrogen-selective membranes (46) to form hydrogen-rich stream (24) to be used in fuel cell systems and byproduct stream (26).

WO 2004/002616 A3

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