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(54) **FUEL CELL, FUEL CELL MODULE, POWER GENERATION SYSTEM, HIGH TEMPERATURE STEAM ELECTROLYSIS CELL, AND PRODUCTION METHODS OF THOSE**

(57) It is an object to provide a single fuel cell and a high-temperature steam electrolysis cell that can prevent gas leakage. A single fuel cell (101) according to the present disclosure includes a power generation section (105), a power non-generation section (110) which does not include the power generation section (105), and an oxygen-ion-insulating gas seal film (117) arranged so as to cover the surface of the power non-generation section, and the gas seal film is configured by a structure formed by firing a material containing MTiO<sub>3</sub> (M: alkaline earth metal element) and metal oxide. The structure may in-

clude a first structure and a second structure which are different in composition, the first structure may include components derived from MTiO<sub>3</sub> in larger amounts than the second structure, the second structure may include a metal element contained in the metal oxide in a larger amount than the first structure, and the area ratio of the second structure in the structure may be not less than 1% and not more than 50%.

FIG. 1

