

Reactor for generating moisture

Abstract

A reactor (2) for generating moisture in which the starting material gases are caused to undergo turbulence so as to increase the efficiency of the moisture-generating reaction.

The reactor (2) for generating moisture comprises a first inlet-side reactor structural component (4) which is adapted to supply the starting material gases from a starting material gas feed port into the inlet side of an interior space; a second outlet-side reactor structural component (2) which is adapted to transfer generated gas to a moisture gas take-out port (30a) from a moisture gas feed passage (28); a reflector (12) clamped air-tightly between the first and second structural components (4,20) and having a plurality of blowing holes (16) at predetermined locations for communicating with the inlet-side interior space (8); a reactor chamber (18) formed with a narrow gap d provided between the reflector (12) and the second structural component (20); a nozzle hole (24) formed in the second structural component (20) for communicating with the moisture gas feed passage (28); and a coating catalyst layer (21) formed on a wall surface (20a) of the reaction chamber opposing the reflector (12); wherein when hydrogen and oxygen gas fed from the starting material gas feed port flow into the reaction chamber (18) through the blowing holes (16) in the reflector (12), they react and generate moisture gas by a non-combustive pathway by the catalytic effect of the coating catalyst layer (21).

Fig. 1