

ABSTRACT

A fuel supply system (1A) according to one embodiment includes: a tank (2) that stores liquefied hydrogen; and a fuel supply line (3) through which the liquefied hydrogen is led out of the tank (2). A pump (5) that increases a pressure of the liquefied hydrogen such that the liquefied hydrogen transitions into supercritical hydrogen is located on the fuel supply line (3). The fuel supply system (1A) further includes a reflux flow line (8) that is branched off from the fuel supply line (3) at a position downstream of the pump (5) and that connects to the tank (2). A pressure reducing valve (81) and a gas-liquid separator (82) are located on the reflux flow line (8). By using the liquefied hydrogen that has a temperature lower than a saturation temperature corresponding to a pressure of a gaseous layer in the tank (2), an agitator (7) condenses hydrogen gas flowing out of the gas-liquid separator (82) into liquefied hydrogen. The liquefied hydrogen resulting from condensing the hydrogen gas by the agitator (7) is returned into the tank (2).