

Title (en)  
FUEL SUPPLY APPARATUS

Title (de)  
KRAFTSTOFFZUFUHRVORRICHTUNG

Title (fr)  
APPAREIL D'ALIMENTATION DE CARBURANT

Publication  
**EP 1904738 B1 20091111 (EN)**

Application  
**EP 06780773 A 20060628**

Priority  
• JP 2006313346 W 20060628  
• JP 2005211792 A 20050721

Abstract (en)  
[origin: WO2007010745A1] A fuel supply apparatus (1) that supplies fuel to an internal combustion engine (100) by injecting liquid fuel from a fuel injection valve (6) into a suction port (101) is configured by a microbubble generator (4) that generates microbubbles and an ultrasonic wave generator (5) that generates an ultrasonic wave depending on a gas in the microbubbles generated by the microbubble generator (4). In the fuel supply apparatus (1), the generated microbubbles are mixed into the liquid fuel that is supplied to the fuel injection valve (6), and the liquid fuel in which the microbubbles are mixed is irradiated with the ultrasonic wave depending on the driving state of the internal combustion engine (100). When the liquid fuel in which the microbubbles are mixed is irradiated with the ultrasonic wave, a temperature of the liquid fuel is raised instantaneously due to contraction of the microbubbles.

IPC 8 full level  
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