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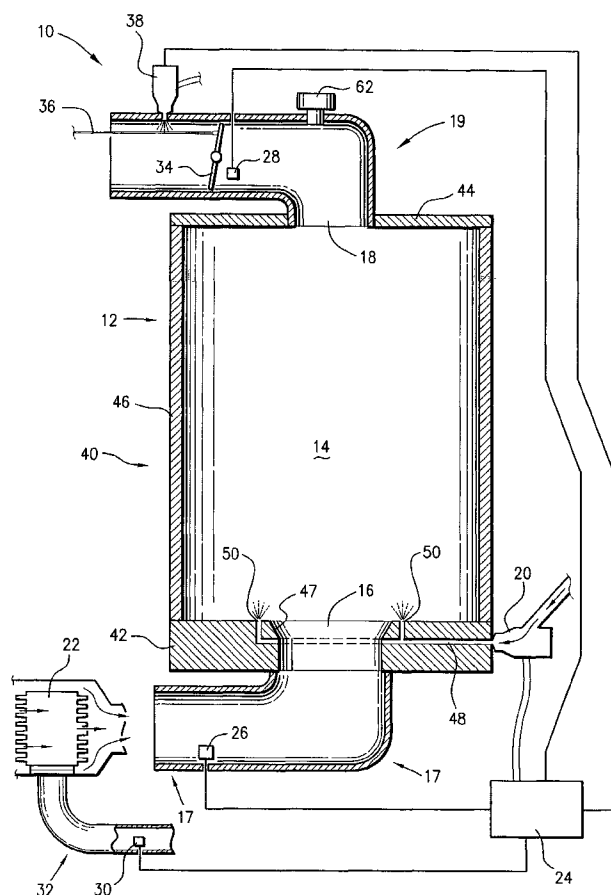
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(54) Title: FUEL SUPPLY SYSTEM FOR AN INTERNAL COMBUSTION ENGINE



(57) Abstract: A fuel supply system (10) for an internal combustion engine includes a housing (12) defining a chamber (14) and provided with an inlet opening (16) upstream of the chamber (14) and an outlet opening (18) downstream of the chamber (14). The fuel injector (20) sprays a fuel mist into the chamber (14). A heater (22) heats air flowing into the chamber (14) via inlet (16) to a temperature of between 110 °C-260 °C. Pressure within the chamber (14) is also negative relative to ambient pressure. The fuel sprayed into the chamber (14) via the fuel injector (20) is thermally cracked so that a mixture of thermally cracked fuel and heated air flows out from the outlet (18) for combustion in combustion chambers of the engine.

WO 03/056165 A1



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