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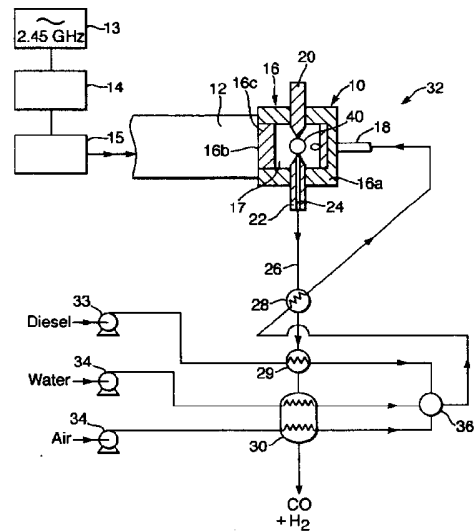
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(54) Abstract Title: **Hydrogen production**

(57) A process and apparatus are provided for producing hydrogen from a hydrocarbon fuel by combining the fuel with a gas comprising both oxygen and steam, and passing the resulting mixture through a plasma generated by a microwave plasma generator between opposed electrodes. At least one of the electrodes defines a duct for outflow of gaseous material from the vicinity of the plasma, and the gas mixture emerging from the outflow duct contains hydrogen. The fuel undergoes partial oxidation and steam reforming, the reactions being initiated by the plasma rather than by a catalyst.



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