Hydro Gasoline Engine

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ABSTRACT

For a car the thermal efficiency of gasoline engine is nearly 30%, even if gasoline engine is operated at maximum thermal efficiency. About 70% heat is rejected, without being turned into useful form of work.

This article is about the most efficient way of converting rejected heat into useful work. Definitely by the method stated in this article not only increase the efficiency but also decrease fuel consumption.

Keywords: *Hydro Engine, Thermal Efficiency, Heat Rejected, Efficient Way, Useful Work, Heat Rejected, Fuel Consumption, Ambient Air Temperature, Water and Fuel.*

1. INTRODUCTION

As stated in abstract, about 70% of heat is rejected, without being turned into useful form of work. In that 70% of heat. "Approximately half of the heat go away through cylinder walls and exhaust gases carry remaining half heat".

2. DISADVANTAGES OF REJECTED HEAT

2.1 decreases the engine efficiency,

2.2 At high temperature oxygen react with nitrogen forming (NOx). This mixture can be seen in exhaust gases, which decrease the efficiency of engine, and also (NOx) is harmful to health,

2.3 One other factor that negatively affects efficiency is ambient air temperature, as increase in temperature density of air decreases so efficiency decreases.

3. METHOD

To overcome above disadvantages, a new engine is designed as shown in fig 1

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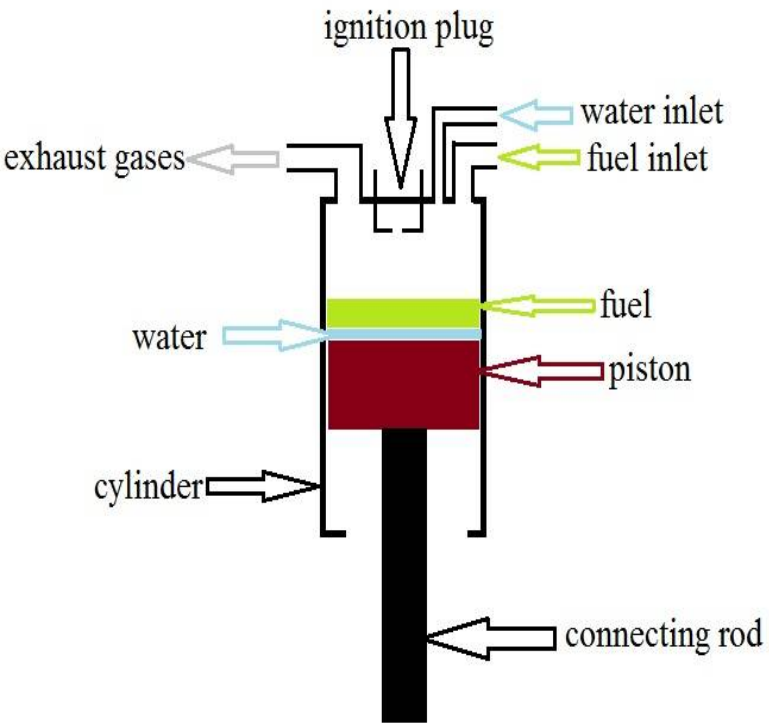

Fig.1 Hydro Gasoline Engine

If the heat released is used to vaporize the water. That is send through the inlet as shown in fig 1. It results in increase of compression ratio. As we know compression ratio is directly proportional to the efficiency, so efficiency increases. In this way the rejected heat is converted to useful work and temperature of cylinder also decreased.

4. WORKING PROCESS

Amount of heat released by combustion of 1g gasoline is 43000 J/g.

As stated in introduction about 70% heat is rejected without being converted to useful work, If we add 1g of fuel and 1g of water through inlet, in 70% of heat, approximately 6% of heat is used to convert water to steam that is 43000*0.06=2580J/g. Remaining 64% of heat is used in increases the pressure of steam. It results compression ratio increases.

Approximately equal quantity of gasoline and water are added through the inlet, to attain maximum efficiency.

This results in 20%-30% increase in efficiency of gasoline engine. Since the heat released is used to vaporize water and increase pressure. So temperature of engine decreases.

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5. DISCUSSION

If more amount of water is added, more heat is utilized to vaporize the water, but this result decrease in speed of engine. Hence for best result we add half gasoline and half water.

6. CONCLUSION

1) Decrease in engine temperature,
2) The efficiency of gasoline engine is increases by 20%-30%,
3) Ambient air temperature decreases,
4) Emission of pollutants like (NOx) are decreased,
5) Consumption of fuel is decreased.

REFERENCE

Encyclopedia, engine efficiency, available at http://en.wikipedia.org/wiki/Engine_efficiency