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A Research Paper on Green Engine

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Abstract: *Modern Development and populace development have prompted a flood in the worldwide interest for energy lately. Inexhaustible utilization of petroleum products has caused exhaustion of petroleum derivatives and increment in contamination. Increment in contamination is predominantly caused because of discharge of fumes gases from vehicles that run on nonrenewable energy sources. To defeat the energy emergencies different strategies have been executed for the utilization of inexhaustible and environmentally friendly power energy assets. The green engine is one of the most significant revelations of the century considering the consumption of petroleum products and ascends in the level of the populace. It has got some great highlights that were utilized without precedent for the creation of engines. The Engine doesn't contain a regular cylinder with superb highlights like successive variable pressure proportion, direct air admission, direct fuel infusion, Multi-fuel use and so on. The Volumetric Efficiency of this engine is high when contrasted with the customarily utilized IC Engines and furthermore, the fumes emanations are almost zero. This Paper incorporates a prologue to Green Engine, its specialized highlights, working and correlation with the ordinary IC Engines, additionally its Pros and Cons with future applications. A Green Engine is a Six Phased IC Engine. Due to six periods of working, the air-fuel blending process and consistent volume burning with controlled time can be accomplished. Consequently, the green engine is the main multi-fueled engine that can take a shot at any fluid or vaporous fuel.*

Keywords: Clean Energy, Green House, Volumetric Efficiency, IC Engines, Petroleum Products, Renewable Energy

I. INTRODUCTION

Presently days the number of vehicles is expanding therefore contamination likewise increases. All over the world, the energy emergency [1] is a principal problem. After not many hundred years of modern improvement, we are confronting these worldwide issues while simultaneously we keep up an elevated requirement of living or such issue the green engine will become valuable choice than a regular engine.

Power is the most dynamic and revolutionary factor in human society. The invention of the steam engine opened the era of mechanical power dramatically increased laborprodectivaty ,and triggered the first industrial revolution. The same is true in the field of aviation; the invention of each new generation of the engine has driven the introduction of a new generation of aircraft. And with the rapid development of civil aviation transportation industry and people's increasing awerness of environmental protection, the problem of aviation emission pollution has also received wide attention the long time of exploring filght human being began to pursue clean and green aviation. Nowdays energy saving an environmental protection has become one of the important goals of modern civil aviation engine development and how to better integrate the green development concept into aviation engine technology research has long been a global issue.

HIGHLIGHT: The green engine is worked at six stages with a higher extension proportion while the customary engine is worked at four phases. The six working procedures might be admission, pressure, blending, burning, force and fumes.

Working stages:-Intake air
Strong Swirling
Sequential Variable Compression Ratio

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Direct Fuel Injection
Super Air-Fuels Mixing
High Expansion Ratio

II. CONCLUSION

Currently, the global aviation industry is shifting from incremental reforms based on reducing carbon emissions by improving fuel efficiency to revolutionary changes in the direction of developing new low-carbon propulsion technologies and new fuels, with the main goal of change being to fundamentally address low-carbon emissions. Among them, sustainable aviation fuel (SAF), new hybrid propulsion technology, hydrogen turbine and hydrogen fuel cell electric technology, have become the most representative disruptive technologies. Therefore, while applying the world's advanced technologies, it is necessary to continuously increase innovation and promote technology iteration to meet the future development requirements in the field of low-carbon aviation, which in turn will enable economic development and social progress to new heights.

REFERENCES

[1] International Energy Agency, "CO_2 Emissions from fuel combustion 2017 - Highlights," International Energy Agency, 2017
[2] D. E. Klett, E. M. Afify, K. K. Srinivasan, and T. J. Jacobs, "Internal combustion engines," in Energy Conversion, Second Edition, 2017.
[3] P. Rutkowski, L. Stobierski, D. Zientara, L. Jaworska, P. Klimczyk, and M. Urbanik, "The influence of the graphene additive on mechanical properties and wear of hot-pressed Si3N4 matrix composites," Journal of the European Ceramic Society, 2015, doi: 10.1016/j.jeurceramsoc.2014.08.004.
[4] B. Du et al., "Aging of solidified/stabilized electrolytic manganese solid waste with accelerated carbonation and aging inhibition," Environmental Science and Pollution Research, 2016, doi: 10.1007/s11356-016-7635-8
[5] M. Faye, B. Lartigue, and V. Sambou, "A new procedure for the experimental measurement of the effective heat capacity of wall elements," Energy and Buildings, 2015, doi: 10.1016/j.enbuild.2015.05.054.
[6] I. A. Reşitoǀlu, K. Altinişik, and A. Keskin, "The pollutant emissions from diesel-engine vehicles and exhaust aftertreatment systems," Clean Technologies and Environmental Policy. 2015, doi: 10.1007/s10098-014-0793-9.
[7] D. Struck, G. Lawyer, A. M. Ternes, J. C. Schmit, and D. P. Bercoff, "COMET: Adaptive context-based modeling for ultrafast HIV-1 subtype identification," Nucleic Acids Research, 2014, doi: 10.1093/nar/gku739.
[8] A. P. Raman, M. A. Anoma, L. Zhu, E. Rephaeli, and S. Fan, "Passive radiative cooling below ambient air temperature under direct sunlight," Nature, 2014, doi: 10.1038/nature13883.
[9] S. Dharma et al., "Experimental study and prediction of the performance and exhaust emissions of mixed Jatropha curcas-Ceiba pentandra biodiesel blends in diesel engine using artificial neural networks," Journal of Cleaner Production, 2017, doi: 10.1016/j.jclepro.2017.06.065
[10]. Liu Z. (2020) The green road of aviation industry. Big Aircraft, 7: 50-55
[11].2. Yan C. (2013) Green power: open rotor aero engine. Aviation Science and Technology, 1:6-12
[12]3. Gu M. (2012) The future of engines based on helping green aviation--Interview with Pratt & Whitney vice president. China Civil Aviation, 11: 13-15
[13] Jeffrey M, Eric K, David Y. (2009) The future of green aviation industry. China Civil Aviation, 4: 26-27
[14]Cheng L. (2008) Green maintenance as a contri-bution to environmental protection. International Aviat-ion, 3: 38-40[15]Liang C. (2005) Green civil aviation engine key technology. Aviation Science and Technol-ogy, 6: 14-16
[16] Beemkumar N, Venkadeshwaran K
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