CERTIFICATION

This is to certify that the B.Sc. thesis entitled “LPG Refrigeration and Burner System with Low Operating Cost” submitted by this group, Md Aourongojeb Khan, student id: BME1901017092, Jahidul Islam, student id: BME1901017159, Biplob Kumar Sinha, student id: BME1901017160, Anik Kumar Sen student id BME1901017162, Ayub Ali student id BME1901017454.

The thesis represents an independent and original work on the part of the candidates.

The whole work of this thesis has been planned and carried out by this group under the supervision and guidance of Prof. Md. Mostofa Hossain, Sonargaon University (SU), Dhaka, Bangladesh.

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DECLARATION

It is here by declared that no part of this thesis bearers the copyright violation and no plagiarism opted during the course of material preparation. The entire works has been planned and carried out under the thesis supervisor of the honorable Professor, Head of the Department Md. Mostofa Hossain Department of Mechanical Engineering. Sonargaon University (SU), Dhaka, Bangladesh.

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Only for the fulfillment of the course of "LPG Refrigeration and Burner System with Low Operating Cost" and no part of this is used anywhere for the achievement of any academic Degree or Certificate.

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ABSTRACT

In current situation supply of continuous electricity is a major problem in several areas as well as city also. At such places, this project will be very helpful for refrigeration various item like food, medicine, etc. Refrigerator became the daily part of our life. Its usage is increasing day by day. On the other side, its harmful effect to environment also increasing. We need to reduce this harmful effect, but we can't avoid using refrigerator. Rather than we can use some other techniques to produce refrigeration effect and also reduce usage of electricity.

The Objectives of this project "LPG Refrigeration and Burner System with Low Operating Cost" are: Compare the important characteristics between LPG refrigeration system and traditional refrigeration system, to obtain the characteristic benefits of LPG refrigerant, to determine the COP of refrigerator using LPG as refrigerant, to benefit the Cooling effect at free of cost by eliminating the compressor.

Our proposed is very simple type of refrigeration system, the high-pressure LPG is passing through a capillary tube and expands. After expansion the phase of LPG is changed and converted from liquid to gas and then it passes through the evaporator where it absorbs the heat and produces the refrigerating effect. After evaporator it passes through the gas burner where it burns.

We were able to do a successful trial and got some positive output from the setup. We also try to run gas cylinder at lean position and got some amazing result but there are some limitations at this time.

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