

Project Details for SSIP Funding

1. **Institute Name:** BABARIA INSTITUTE OF TECHNOLOGY, VARNAMA.
2. **Department Name:** MECHANICAL ENGINEERING
3. **Title of Project:** APPLICATION OF THERMAL BATTERY TO REDUCE POWER CONSUMPTION OF REFRIGERATORS
4. **Guiding Faculty Name:** PATEL PRATIKKUMAR RAMESHBHAI
5. **Guiding Faculty Contact Number:** 9998661271
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Details of Participating Student(S)

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7. **SSIP fund granted:** Rs.45000

ABSTRACT

Most revolutionary and influential invention in the history of science was that of “electricity”. At the same time when this became an inseparable part of our lives, world now is facing an acute “energy crisis”. Refrigeration and air conditioning systems are directly and indirectly responsible of present energy crisis problem as their use in household, commercial and transportation sector is increasing rapidly. Household refrigerators are the most widely used appliances of present world and its consuming massive portion of the total world energy.

Many applications of thermal energy storage are used to receive, store and subsequently release heat. Thermal energy storage or phase changing material (PCM) is having property of storing a large amount of latent heat fusion. Heat is absorbed or released when the material changes from solid phase to liquid phase and vice versa. Thermal batteries (PCM) is being used in applications like storage of perishable items or used in transportation of such items. Research was also made to use PCM in providing heat in solar water heaters and used to maintain temperature of refrigerators during power cuts which saves energy.