

Steam Cooking System for 1000 People using Scheffler Dishes at Karnataka Veera Shaiva Vidhyabhirruddi Samasthe, Bangalore, Karnataka

Location: Bangalore

Type of Installation: Scheffler Dishes

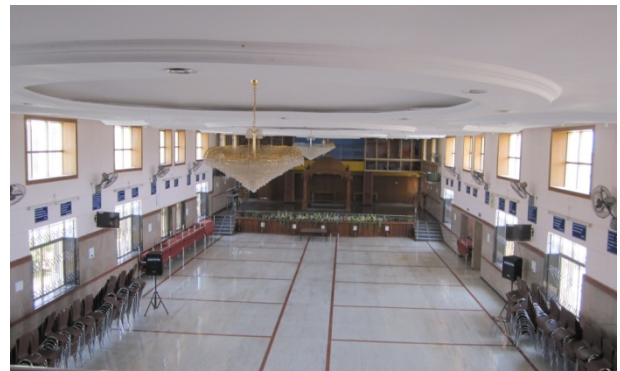
Configuration: 96m² (16 m² x 6 Nos.)

Supplier: Unisun Technologies, Bangalore

Application: Cooking

Year of Installation: 2011

Beneficiary Details: Siddaganga Sri. Shiva Kumara Swamy Thana Prakasha Mandapam was established by Karnataka Veera Shaiva Vidhyabhirruddi Samasthe for Marriage & functional activities. The Siddaganga Sri. Shaiva Kumara Swamy Thana Prakasha Mandapam is located at Mariappanapalya, Bangalore, Karnataka. The establishment has installed the system on the roof top of the Kalyanamandapam.



Siddaganga Thana Prakasha Mandapam

System Details: The total system has an area of 94 m² comprising of 6 concentrators with 16 m² capacity each. The system was commissioned during 2011 by M/s. Unisun Technologies Pvt. Ltd. Prior to the implementation of the CST system the establishment was using LPG cylinders for cooking and is integrated with its existing process. The project is set up at a cost of Rs. 18.12 Lakh with grant availed from MNRE of the order of Rs. 4.83 Lakh.



CST Array at Siddaganga Thana Prakasha Mantapa



Heat Receiver and running water piping

Timings & System Application Details: The system is operating as per the seasonal requirements. The quantum of food prepared is around 70 kg of Rice, 320 pieces of Idly and 200 Liters of Milk. It is functioning properly and is operated around 100 days/year. The Mandapam is open and runs in the marriage season only and hence the number of days of usage varies year to year.

Steam Generation: 390 kg/d **Operating Temperature & Pressure:** 100-120°C; 4 to 6 kg /cm²

Type of Fuel Saved: LPG **Quantity of Fuel Saved:** 100 Cylinders /Year

Functionality & Key Issues of Non-Operation: Operational

Status of Equipment: Some of the mirrors are damaged due to movement of monkeys in the locality.

O & M Issues & Beneficiary Perception: The system is operating properly and benefiting by saving around 100 LPG Cylinder per Year by adopting the concentrating solar cooking system. As the mandapam runs only 100 days in a year the efficiency of the system is very low, some of the mirrors are damaged due to high winds. The kitchen of the mandapam is situated far away from the CST arrays and the pressure drop is high in this system.

Financials in Detail: The project is set up at a cost of Rs. 18.12 Lakh with grant availed from MNRE of the order of Rs. 4.83 Lakh. The plant saves around Rs. 1.80 Lakh per year on cost of purchasing LPG. The plant has an operating IRR of 9.10 % without subsidy and payback period of 7 Years and 4 Months. With subsidy, the IRR is 15.94 % and payback period is 5 Years and 3 Months.

Cost of System: Rs. 18.12 Lakh

MNRE Subsidy: Rs. 4.83 Lakh

IRR & Payback with Subsidy:
15.94 % & 5 Years and 3 Months

IRR & Payback without Subsidy:
9.10 % & 7 Years and 4 Months

Overall System Performance: Average

Date of Visit: 18-04-2013

Beneficiary Contact:

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