

NANDHA COLLEGE OF TECHNOLOGY, ERODE – 638052

Erode – Perundurai Main Road, Vaikkaalmedu, Tamil Nadu

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

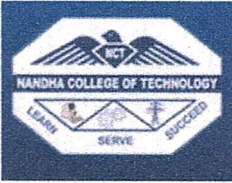
E-Mail ID: principal@nandhatech.org, Fax: 04294-224787, Mobile: 7373714703

7.1.2 -Alternate Sources of Energy & Energy Conservation Measures

Solar Street Light



[Signature]
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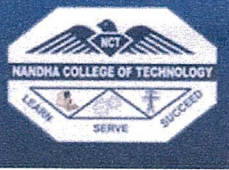
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Specifications – Solar Street Light

Total Capacity (kWp)		165 wp							
Specifications of Individual Panel									
Panel Make/Model		MICROTEK - MTK 165 / 12V							
P_{max}	165 wp	V_{max}	18.95 v	I_{max}	8.72 A	V_{oc}	22.5 V	I_{sc}	9.22A
Location of SPV Plant		Near NCT - Main Ghate							
Panel Orientation		Poly crystallin							
Availability of Tracking		NA							
No. of Panels per Inverter		1							
Total No. of Panels		1							
DC Bus Voltage		12 V							
General Specifications									
Number of DC Earthing		1 Ground Earthing							
Number of Inverter Earthing		NA							
Panel Mounting Direction & Angle		North to South with 11° inclination							
Frequency of Panel Cleaning		60 days							
Average Units Generated per Day		1 Unit / day							
Year of Installation		2023							
LED Bulbs		8 No's							
LED Bulb - Power Rating		10 Watts							
Solar Lighting Load		80 Watts							
Working Hours		6.00 p.m to 6.00 a.m (12 Hours)							
Total Watt - Hour		960 Watt - Hour							
Total Amper - Hour		80 Ah							
Battery		40 Ah							




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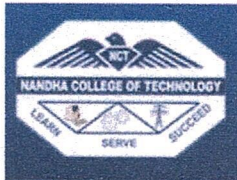
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Solar Water Heater



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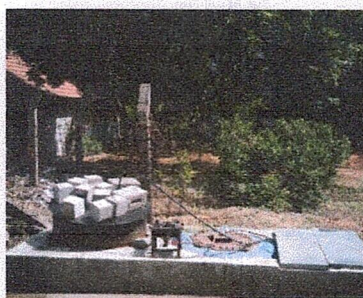
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Specification – Solar Water Heater

Total Capacity (LPD)	500 L	500 L
Specifications of Individual Panel		
Panel/Tube- Make and Model	V-Guard	
Location	Boys Hostel	Girl's Hostel
Panel Orientation (Direction)	N - S	N - S
Source of Water	Bore/well	
Whether RO water or Raw water?	Raw water	
Application	Bathing	
No. of Liters of hot water generated/day (Approx.)	500 L	500 L
No. of students in the hostel	Male	Female
	50	23
Is there any water flow meter available?	NO	
Year of Installation	2014	
Frequency of Tank Cleaning	3 Times/Year	


Bio Gas Plant

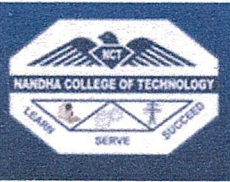


Specifications – Bio Gas Plant

Type of waste Processed	Food Waste
Quantity of waste Processed	5 kg/Day
Gas Produced	1 kg/Day
Capacity of the Digester	2000 Liters




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Specifications – Sensor Based Energy Conservation

<p align="center">LDR Sensor in Solar Lighting System</p>	<p align="center">Water Level Sensor in RO Plant</p>	<p align="center">Pressure Switch</p>

Energy Conservation Unit	Sensor Used
Solar Lighting System	Optical Sensor using LDR (100 ohms to 10 kohms)
RO Plant	Water Level Sensor
RO Plant	Pressure Switch

Specifications – LED Bulbs

Energy Conservation Unit	Usage
LED Bulb	9 Watts and 12 Watts
LED Tube Light	20 Watts



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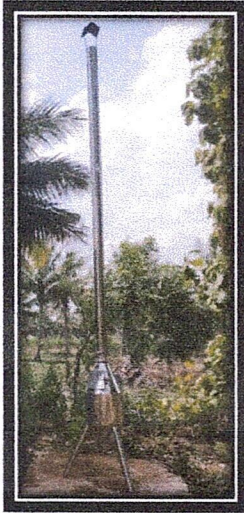
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Waste Management

Solid Waste Management – Incinerator



Specifications

Processing Waste	Capacity
Napkins	30 kg/day
Papers	
Plastics	


Liquid Waste and Recycling –STP

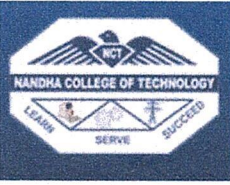


Specifications

Location	Near Boys Hostel
Collection Tank Capacity	1.6 Lakh Liters
Aeration – I Tank Capacity	2 Lakh Liters
Bar Screen Chamber Capacity	4000 L
Water Storage Tank	50000 L
Deep Settler - I & II	15 DRUM
Water Cleaning Sump	2
Treated Water Tank	50000 lit
No. of Sludge Bed	15
Duration & Quantity of Sludge removed	500 kg /day
Usage of sludge	Manure




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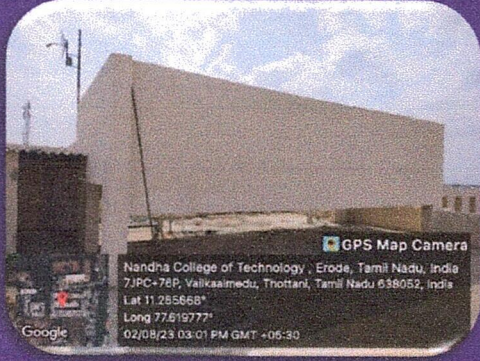
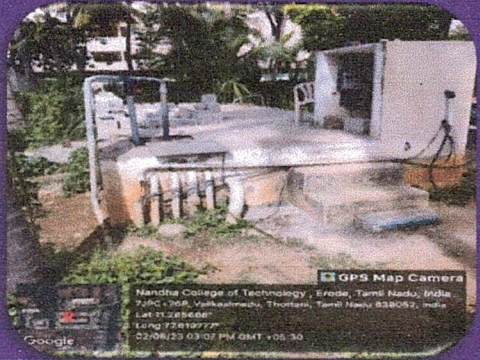

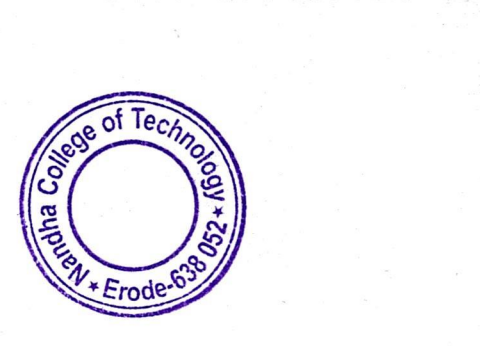
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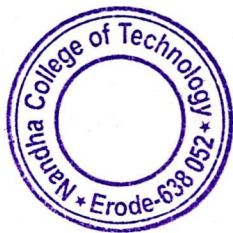
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Waste Conservation

Geo tagged Photo's	Specification
 <p>GPS Map Camera Nandha College of Technology, Erode, Tamil Nadu, India 7:10C+78P, Vaikkaalmedu, Thottani, Tamil Nadu 638052, India Lat 11.255668° Long 77.619777° 02/08/23 03:01 PM GMT +05:30</p>	Tank - 1 Length = 6.1 m Width = 3.05 m Depth = 1.5 m Capacity = 28,300 Liters
 <p>GPS Map Camera Nandha College of Technology, Erode, Tamil Nadu, India 7:10C+78P, Vaikkaalmedu, Thottani, Tamil Nadu 638052, India Lat 11.255668° Long 77.619777° 02/08/23 03:02 PM GMT +05:30</p>	Tank - 2 Length = 4.87 m Width = 3.05 m Depth = 3.05 m Capacity = 45,300 Liters
 <p>GPS Map Camera Nandha College of Technology, Erode, Tamil Nadu, India 7:10C+78P, Vaikkaalmedu, Thottani, Tamil Nadu 638052, India Lat 11.255668° Long 77.619777° 02/08/23 03:02 PM GMT +05:30</p>	Sump Length = 6.1 m Width = 3.05 m Depth = 1.5 m Capacity = 28,300 Liters
 <p>GPS Map Camera Nandha College of Technology, Erode, Tamil Nadu, India 7:10C+78P, Vaikkaalmedu, Thottani, Tamil Nadu 638052, India Lat 11.255668° Long 77.619777° 02/08/23 03:02 PM GMT +05:30</p>	Open Well Length = 10.67 m Width = 4.88 m Depth = 28.38 m Capacity = 14,77,000 Liters




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