

Solar Water Heating System for Thali Washing at Canteens

Before -: Hot water is required for washing the thalis at canteens. Earlier water was heated by using Electrical bulk cookers.

After -: By using Solar Collectors, water is heated and stored in hot water storage tank and is used as per requirement for washing the thalis .(4000LPD x 3Nos. & 750 LPD x 1No.)

Investment -: Rs.18.4 Lakh

Saving -: Rs. 7.87Lakh

Payback -: 28 Months



VFDs for ASP Blower of Paint Booth at J-1 paint shop

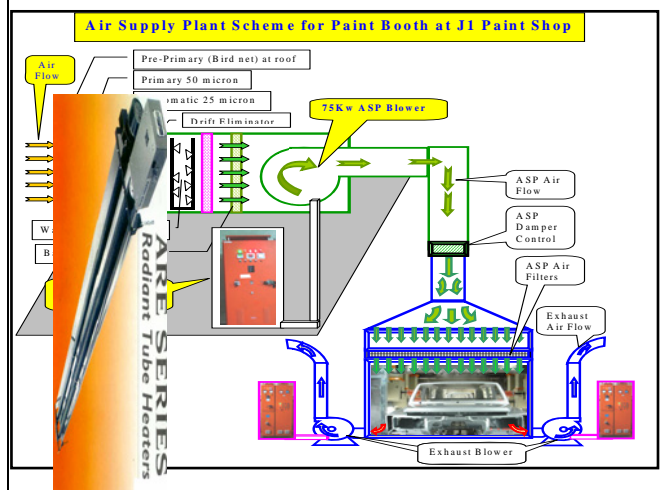
Before -: Earlier ASP blower motor were operating at rated speed & the ASP air flow maintained by manually controlling the damper of ASP air flow system.

After -: VFDs are used to optimise the ASP Air Flow of Paint Booth by operating the ASP Blower motor (75Kw) at lower speed & dampers are fully open condition.

Investment -: Rs.10.59 Lakh

Saving -: Rs. 9.4Lakh

Payback -: 14 Months



VFDs for Hot Air Circulation Blower of Paint Baking Oven at J-1 paint shop

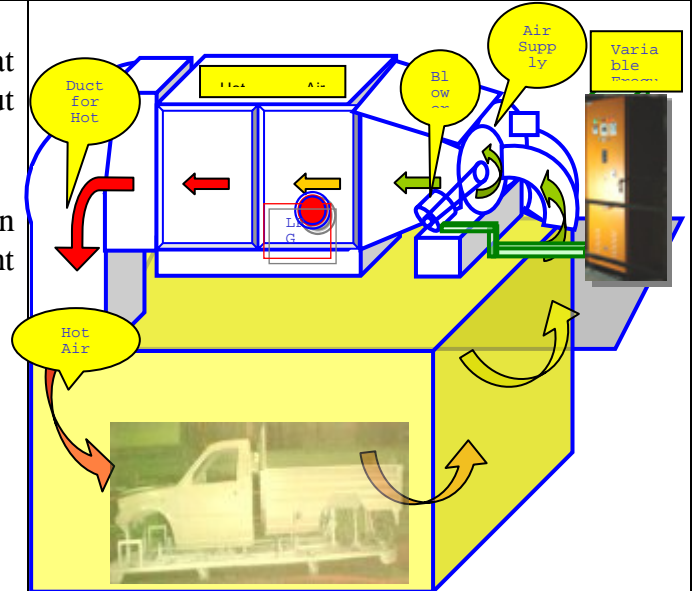
Before -: Earlier blower was operating at constant speed irrespective of burner heat output results in power loss.

After -: VFD is used for Hot Air Circulation Blower of Paint Baking Ovens at J-block Paint shop as per LPG burner heat output.

Investment -: Rs.4.62 Lakh

Saving -: Rs. 3.15Lakh

Payback -: 17 Months



Rad-Heat Gas Heating System for Small Part Hot water washing M/cs

Before -: Earlier Hot water washing operation was taking place by Electrical Heating.

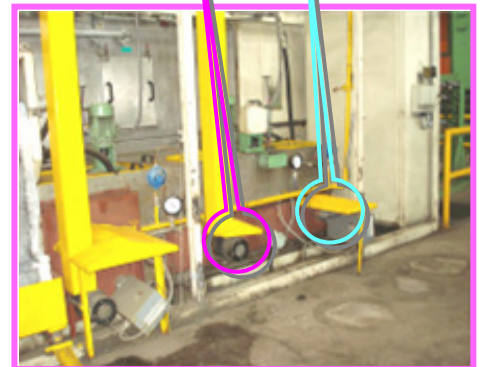
After -: Gas is burnt inside the radiant tubes, which emit the radiant heat to heat up the water in the tank with Automatic thermostatic controller & maintains tank water temperature automatically within $\pm 3^{\circ}\text{C}$.

Investment -: Rs.12 Lakh

Saving -: Rs. 10.62Lakh

Payback -: 14 Months

Small Part Hot Water Washing M/c with Rad-Heat Gas Heating system - Exhaust Blowers & Burner with controller



Natural Draft Cooling Tower at D-blk Compressor House

Before -: Earlier in conventional cooling tower, suction of air takes place with the help of a electrical operated Fan.

After -: Cooling Tower water cooled by air using Natural Draft – Fanless Cooling Tower inplace of conventional cooling tower. Suction of air takes place with venturi effect created in the tower by using specially designed nozzles.

Investment -: Rs.6.3 Lakh

Saving -: Rs. 3.5 Lakh

Payback -: 21 Months



New Energy Efficient Screw Compressor in place of old reciprocating compressor

Before -: Earlier old Reciprocating Compressor for generating compressed air.

After -: New Energy Efficient Screw Air Compressors has been installed in place of old Reciprocating Compressor for generating compressed air.

Investment -: Rs.150 Lakh

Saving -: Rs. 45.27 Lakh

Payback -: 40 Months



Installation of Cellulose filters for Blowers

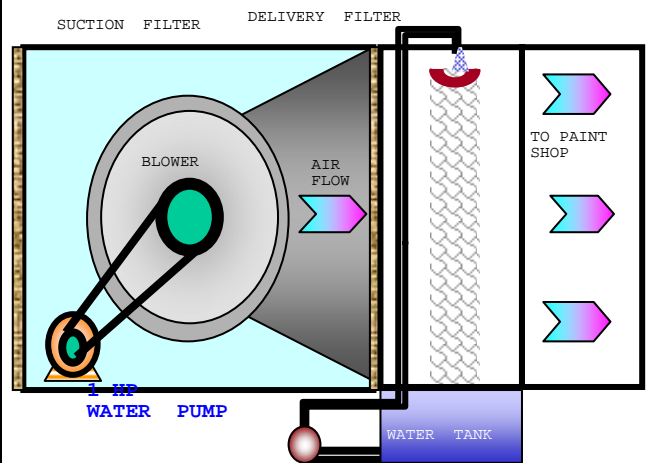
Before -: Earlier Fresh air supplied to J Paint booth was cooled and filtered by pressurized spray water jet having 15Kw pump motor.

After -: New Cellulose filter with water dripping used having water pump of 1.5 Kw.

Investment -: Rs.1.8 Lakh

Saving -: Rs. 2.2 Lakh

Payback -: 10 Months



Sea Pumps in place Multistage Pumps for Coolant Pump application

Before -: Earlier Multistage pumps 7.5Kw rated used for coolant pump.

After -: Multistage pumps replaced by sea pumps (Centrifugal type) by modifying the machine coolant tanks. Multi stage pump motor of 7.5Kw replaced by sea pump (Centrifugal type) motor of 2.2Kw for machine coolant pump application. (Down sizing of motors)

Investment -: Rs.1.75 Lakh

Saving -: Rs. 7.38 Lakh

Payback -: 3 Months



Vane Pumps in place of Axial Piston Pumps for Hydraulic Pump application

Before -: Earlier Vane pumps are used for hydraulic Pump. It is constant output displacement pump. Its output bypassed to tank when not required through relief valve in turn Energy Loss.

After -: Multistage Vane pumps replaced by Axial Piston pumps by down sizing of motors. Axial Piston pumps are variable output displacement pumps. Its output varies as when required, it increases or decreases in turn Energy saving.

Investment -: Rs.6.5 Lakh

Saving -: Rs. 6.72 Lakh

Payback -: 12 Months

