

Energy Saved is Energy Generated



ABOUT US

ENERGY CONSERVATION FOR ENVIRONMENT PROTECTION About Us

We provide concept to design engineering and supply with supervision of erection commissioning of all type of **Thermal Energy Conservative** systems which are useful for **Process** Industries and Automobile sectors.

Our Vision

nation through serve To thermal energy conservation that will help to reduce global warming & keep earth clean & green.



Our Mission

To develop and deliver cost – effective , safe, clean and reliable solutions that will maximize prosperity of our customers.

- **Our Expertise Area**
- > Thermal Equipments.
- Waste Heat Recovery Systems.
- Heat Exchangers & Radiators.
- Engine Jacket Heat Recovery.
- IBR & NON IBR Economizer.
- Energy Conservation Projects.



OUR CREDENTIALS

- A Complete Thermal Engineering Solutions provider Company with 25 years of experience in Energy field.
- An ISO 9001:2015 Certified Company.
- > Many Thermal ENCON projects in various industries & Sectors.
- Waste heat recovery systems on Exhausts of :-
 - Furnace Exhaust
 - Oven Exhaust
 - Engine Test Bed Exhaust

- Fired Boiler Exhaust
- RTO
- Incinerator
- Air Compressor HRS installed & commissioned successfully and are saving substantial amount of Energy / Fuel.
- > Handled Exhausts Temperatures from 100 Deg. C up-to 800 Deg. C
- Heat recovered is utilized to generate Steam , Hot water, Hot air, Thermic fluid heating.



WE ARE SPECIALIZED IN

- > Waste Heat Recovery Systems Steam Boiler.
- Waste Heat Recovery Systems for (Hot water/ Hot air/ Steam/ TFH) Generation Through (Oven, Furnace & DG Set) Exhaust Gases.
- Pressure Vessel/Reboiler/Condenser/ Evaporator/Economizer.
- > Boiler conversion from Solid fuel to liquid/ gas fuel & vice versa.
- > IBR Boiler activities & site IBR piping with approval from authority.
- Economizer, HWG/WPH/ APH/ Bag filter/Multi cyclone / Dust collector and

thermal equipments accessories.



WE ARE SPECIALIZED IN

- > Boiler Repairing, Revamping & up gradation.
- Compressor Heat Recovery Systems.
- Fuel Handling & fuel feeding systems.
- > Atomization & up gradation of existing systems.
- Operation & Maintenance for Boilers, Heaters & Industrial Machines & Equipments.
- Thermic fluid Heaters/HWG/HAG/ Steam Boiler (Oil/ Gas/ Solid Fuel)
- > Fabrication and Installation of all types of Piping and Structural work.
- Compressed air audit & Performance up gradation & Efficiency improvement.



KEY FEATURES OF PROJECT

- PROJECT DESIGNE .
- IN-HOUSE MANUFACTURING.
- SITE INSTALLATION.
- CALIBRATION TESTING & COMMISSIONING.
- WASTE HEAT RECOVERY UNIT [HEAT EXCHANHER].
- THREE WAY DIVERTOR VALVE [PNEUMATICALLY OPERATED].
- HEAT EXCHANGING COILS.
- AIR PRE-HEATER [AIR RADIATOR].

- PLATE HEAT EXCHANGER.
- PLC CONTROL PANEL WITH HMI [ABB / SEMIENS / MITSUBSHI].
- FLUID CIRCULATION PUMP
 [GRUNDFOS/SHAKTI/KSB]
- DIGITAL MAGNATIC FLOW METER.
- TEMPERATURE & PRESSURE GAUGES, SWITCHES, SENSORS.
- FLOW CONTROL VALVES
 [MODULATING / MECHANICAL].
- END TO END SOLUTION & SERVICE.



CASE STUDIES

Project : WHRS on Furnace Exhaust - Hot Water Generation for Casting washing M/C & Paint shop process. Client : Maxion Wheels Aluminium India Pvt. Ltd.

- Exhaust Temp. :- 200 Deg. C
- Fuel Consumption :- LPG
- Heat Recovery :- 3,00,000 kcal/hr.
- Electricity Saving :- 350 kWh.

Energy Conversion :-

- Hot Water @ 90 Deg. C
 - To Washing Machines .
- Pay Back Period : 15 Months.





Project : WHRS on Furnace Exhaust – Hot air to oven

Client : Rockman Industries Ltd.

- Exhaust Temp. :- 300 Deg. C
- Fuel Consumption :- LPG
- Heat Recovery :- 1,06,000 kcal/hr.
- Saving In Terms Of LPG :- 10 kg/hr.

Energy Conversion :-

- Hot Air @ 160 Deg. C To TC Oven .
- Pay Back Period : 15 Months.





Project : WHRS on Melting Furnace & Chip Melting Furnace Exhaust – Hot Water Generation.

- Client : Steel Strips Wheels Limited (Mehsana Gujrat)
- Exhaust Temp. :- 220 Deg. C
- Fuel Consumption :- Propane gas
- Heat Recovery :- 5,00,000 kcal/hr.
- **Saving In Terms of Propane :- 45 Kg/Hr.**

Energy Conversion :-

- Hot Water @ 90 Deg. C To Hot Water
 Generator .
- Pay Back Period : 9 Months.





Project : WHRS on Oven Exhaust – Hot Water Generation.

Client : Mahindra Swaraj Division, (Mohali)

- Exhaust Temp. :- 170 Deg. C
- Fuel Consumption :- PNG
- Heat Recovery :- 2,50,000 kcal/hr.
- Saving In Terms of PNG :- 27 SCM/hr.

Energy Conversion :-

- Hot Water @ 95 Deg. C To Hot Water Generator .
- Pay Back Period : 10 Months.





Project : WHRS on Furnace Exhaust - Hot Water Generation for Casting washing M/C Client : Jaya Hind Industries Pvt. Ltd. (PDC-1 PLANT)

- Exhaust Temp. :- 400 Deg. C
- Fuel Consumption :- Biodiesel
- Heat Recovery :- 1,50,000 Kcal/hr.
- Saving In Terms Of Electricity :- 175 KWh

Energy Conversion :-

- Hot Water @ 80 Deg. C to Washing M/C.
- Hot Air @ 60 Deg. C To Washing M/C.
- Pay Back Period : 8 Months.





Project : WHRS on Melting Furnace Exhaust - Hot Water Generation for Casting washing M/C & Casting Impregnation Process. Client : Jaya Hind Industries Pvt. Ltd. (PDC-2 PLANT)

- Exhaust Temp. :- 350 Deg. C
- Fuel Consumption :- Biodiesel
- Heat Recovery :- 3,32,000 Kcal/hr.
- Saving In Terms Of Electricity :- 367 kWh

Energy Conversion :-

- Hot Water @ 90 Deg. C to Washing M/C.
- Hot Air @ 60 Deg. C To Washing M/C.
- Pay Back Period : 9 Months.





Project : WHR on Burner Exhaust – Hot water for Paint Shop Process.

Client : Kalyani Maxion Wheels Ltd. Chakan

WHR Unit On Oven	Exhaust I/L Temp in Deg. C	Exhaust O/L Temp in Deg. C	Heat recovered	Hot water Generation @	Pay back period in months
ED-1	270	100	49383	75	8
ED-2	250	100	43573	75	8
TC-1	250	100	43573	75	8
TC-2	250	100	43573	75	8

- avg. Exhaust Temp. :- 255 Deg. C
- Total Heat Recovered :- 1,80,103

kcal/hr.

• Saving In Terms of PNG :- 20 SCM/hr.

Energy Conversion :-

- Hot Water @ 75 Deg. C To Hot Water Generator .
- Pay Back Period : 8 Months



WHR UNIT





Divertor Valve Assembly



Project : Air Preheater on HTM Fresh air & hot air. Client : Bhilosa Industries Pvt. Ltd. Silvasa

- Flue Gas I/L Temp. :- 238 Deg. C
- Flue Gas O/L Temp. :-161 Deg. C
- Fresh Air I/L Temp. :- 20 Deg. C
- Fresh Air O/L Temp. :- 115 Deg. C





Project : Air Preheater on HTM Heater exhaust. Client : Bhilosa Industries Pvt. Ltd. Silvasa

- Flue Gas I/L Temp. :- 375 Deg. C
- Flue Gas O/L Temp. :- 215 Deg. C
- Air Temp. :- 90 Deg. C
- Hot Air Temp. :- 285 Deg. C





Project : Air Preheater on HTM Heater exhaust. Client : Sanathan Industries Ltd. Silvasa

- Flue Gas I/L Temp. :- 220 Deg. C
- Flue Gas O/L Temp. :- 135 Deg. C
- Air Temp. :- 30 Deg. C
- Hot Air Temp. :- 115 Deg. C









Shell & Tube Heat Exchanger

Candle Drying Tank



Project : FORCE CIRCULATION REBOILER Client : Shree Durga Syntex Pvt. Ltd.

Design Code :- ASME SEC VIII,

DIV-I TEMA CLASS C

- Design. Temp. Tube side :- 260 Deg. C.
- Design Temp. Shell side :- 350 Deg. C.
- Design Pr. Tube side :- 4 kg/cm2.
- Design Pr. Shell side :- 5 kg/cm2.
- MOC :- SS 316 L
- Heat Recovery :- 12,70,000 kcal/hr.





Project : POLYCONDENSATION BYPHENYL EVAPORATOR Client : Shree Durga Syntex Pvt. Ltd.

Design Code :- ASME SEC VIII, DIV-I

TEMA CLASS C

- Design. Temp. Tube side :- 330 Deg. C.
- Design Temp. Shell side :- 330 Deg. C.
- Design Pr. Tube side :- 4 kg/cm2.
- Design Pr. Shell side :- 4 kg/cm2.
- Volume :- 2.65 kl.
- Media Shell Side :- VP-1 STEAM.
- Media Tube Side :-T 66







Project : Thermic Fluid Filtration System Client : Shree Durga Syntex Pvt. Ltd.

- Working Temp. 350 Deg. C
- Flow 10 CMH.
- Pressure 6 kg/cm2.
- Element MOC SS 304.







Project : Total Condenser Client : Sumeet Industries Pvt. Ltd.

Design Code :- ASME SEC VIII , DIV-I

TEMA CLASS C

- Design. Temp. Tube side :- 230 Deg. C.
- Design Temp. Shell side :- 230 Deg. C.
- Design Pr. Tube side :- 5 kg/cm2.
- Design Pr. Shell side :- 3 kg/cm2.
- MOC:- SS 304 L





Project : Briquette Fired Steam Boiler. Client : Dhan Sanjivani Agro Feeds Pvt. Ltd.

Equipment :- Briquette Fired Steam

Generator.

- Capacity :- 1 Ton/hr.
- Steam Pr. :- 10.5 kg/cm2.
- Fuel Used :- Wood/Briquettes.
- Utilization :- Steam to cattle

feed plant





Biomass Briquette Fired Furnace Centralized TFH for Multiple Applications

- Capacity :- 20,00,000 Kcal/hr.
- Thermic fluid I/L Temp. :- 260 Deg. C
- Thermic fluid O/L Temp. :- 280 Deg. C

Energy Conversion :-

- Hot Air @120 Deg. C To Oven.
- Hot Air @230 Deg. C To Oven .
- Hot water to Process @90 Deg. C
- Pay Back Period : 15 Months.





Project : Agitator Tank/Toner Mixing System Client : Jindal Polyfilms Ltd. Nasik.

- Equipment :- Red & Blue Toner System.
- Capacity :- 1000 m3. Colour additional system.





Project : L P DRYER (FINNED TUBE TYPE) Client : Shree Durga Syntex Pvt. Ltd.

- Equipment :- L P DRYER
- Fins :- SS 304.
- Pneumatic Test Pr. :- 5 kg/cm2.
- Tubes :- Gr.SA 179 ,

19.05OD x 2.20 T x 730 mm Long





WHR System on Furnace Exhaust -HWG

- Working Temp. :- 220 Deg. C
- No. of Furnace :- 4 Nos.
- No. of WHR Systems :- 4 Nos.
- Fuel Consumption :- (LPG)
- Heat Recovery :- 550000 kcal/hr.
- Saving In Terms of LPG :- 47 kg/hr.

Energy Conversion :-

- Hot Water @ 90 Deg. C To HWG
- Pay Back Period :- 6 Months





Compressor Heat Recovery System -HWG

- Saving In Terms Of Electricity :- 60 kWh.
- Energy Conversion :- Hot Water @ 70 Deg. C
- Pay Back Period :- 15 Months







INCINERATOR EXHAUST WHR SYSTEM – GENERATION OF HOT RAFINATE & WATER

- F.G .Working Temp. :- 185 Deg. C
- Heat Recovery :- 6,55,000 kcal / hr.
- Saving In Terms of Steam :- 600 Kg.
- Saving In Terms of NG :- 13 SCM/Hr.
- Energy Conversion :- To Pre-Heat Water And raffinate To 95 Deg. C
- Pay Back Period :- 10 Months.





KILN EXHAUST WHR SYSTEM- GENERATION OF HOT AIR

- F.G .Working Temp. :- 400 Deg. C
- Heat Recovery :- 1,18,000 kcal / hr.
- Saving In Terms of LPG :- 11 kg/hr.
- Energy Conversion :- Hot Air through to Oven @ 250 Deg. C
- Pay Back Period :- 17 Months.





ENGINE TEST BED EXHAUST WHR SYSTEM– GENERATION OF HOT WATER

- F.G .Working Temp. :- 400 Deg. C
- Heat Recovery @ 100 % load :- 1,68,000 kcal / hr.
- Heat Recovery @ 50 % load :- 84,000 kcal / hr.
- Saving In Terms of LPG :- 8 kg/hr.
- No of Test Beds :- 8 Nos.

- Energy Conversion :- To Heat Washing
 M/C Tank temp @ 55 Deg. C
- Pay Back Period :- 14 Months.





CLIENTS





CONTACT US

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THANK YOU