

# **C O N T E N T S**

- **THE BROAD SPECTRUM**
  
- **PRODUCTS AND SERVICES**
  
- **ONE-STOP-SHOP**
  
- **CUTTING EDGE TECHNOLOGY**
  
- **TECHNOLOGY EXPORT**
  
- **MANUFACTURING**
  
- **PROFILE OF KEY PERSONS**
  
- **PRODUCT GLIMPSES**
  
- **REFERENCE LIST**

**Thermodyne Technologies Pvt.Ltd.**

## **- THE BROAD SPECTRUM**

**..... To meet the Objectives**

**Thermodyne Technologies Pvt Ltd is formed with the Objective**

- To Engineer and Supply Systems and Products for Industries in the field of Energy and Thermal Energy Conservation for meeting the growing demands on fuel efficiency and reliability through better technology.
- To provide comprehensive turnkey services to Industries.

**..... The Field of Operation**

Thermodyne Technologies Pvt. Ltd. Engineers and Supplies Systems and Products in the field of Thermal Energy, Thermal Energy Conservation and Industrial Technology.

More specifically and within the immediate range, are Industrial Boilers, Thermal Energy Saving Equipment and selective auxiliaries.

**..... The Technocrat Team**

Thermodyne Technologies derives its strength from several Engineer Technocrats forming a technically strong team to meet the many faceted requirements of customers from various Industries. The Engineers have specialised experience in all the relevant disciplines of engineering, design, manufacturing technology, project management. This is a multi-disciplinary team, with expertise to render comprehensive services to the customers.

The Key Executives have previous experience of over 15 years primarily gained in a premier national organisation, namely, Bharat Heavy Electricals, Tiruchi, including training exposure at internationally renowned organisation Combustion Engineering, U.S.A. The Key Executives with skills honed through continual innovative development, have in-depth expertise in terms of both know-how and know-why in the disciplines of Engineering and Manufacturing Technologies.

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## **Thermodyne Technologies Pvt.Ltd.**

### **..... The Technology Base**

- The engineering skills in designing a very broad range of steam generating systems and other heat transfer systems like Economisers, Superheaters, etc. and Pressure Vessels and Heat exchangers.
- The familiarity of the requirements of international and national codes like ASME, BS, DIN, TEMA, IBR, etc.
- The capability developed to trouble shoot, analyse and resolve field problems.
- The specific skills in high technology fabrication processes such as high pressure welding, metal forming, heat treatment and machining.
- The in-depth knowledge in manufacturing services in all facets of planning, processing, procurement, quality control, etc.
- The understanding of the requirements of international inspection agencies Lloyds, Bureau Veritas.

### **..... Panel of Specialists**

Thermodyne Technologies has a Panel of Specialists with vast experience and Knowledge in specific specialised areas.

### **..... Associates**

- **Thermodyne Industrial Products**, dealing with Packaged Boilers and Standard Products for various related applications.

## **PRODUCTS AND SERVICES**

..... **The Product Range**

- **INDUSTRIAL BOILERS**

Upto 115 kg/cm<sup>2</sup> (g) pressure, 200 TPH capacity

Coal/Oil/Gas Fired Boilers

Husk/Biomass Fired Boilers

Heat Recovery Boilers

Water Tube, Smoke Tube and

Combined Water tube-Smoke tube

- **SMALL CO-GEN SYSTEMS**

Upto 25 TPH Steam and 3000 KW Power.

- **HEAT RECOVERY EQUIPMENT**

Air Preheaters

Economisers

- **STEAM GENERATOR PRESSURE PARTS**

Superheaters

Economisers

Boiler Bank and water walls

Steam Piping

- **STEAM COIL AIR HEATERS**

- **PULVERISED FUEL FIRING SYSTEM**

- **FEED WATER SYSTEM**

- **TUBULAR HEAT EXCHANGERS**

- **CUSTOMISED FABRICATIONS**

..... **Services**

- Turnkey Services - Concept to Commissioning.

- Revamp / Upgrade - Old Boilers.

- Trouble Shooting – Existing Boilers

..... **Technology Export for Industrial Boilers**

## **ONE-STOP-SHOP**

**....ANY FUEL, ANY STEAM PARAMETERS**  
**THERMODYNE TECHNOLOGIES** can offer Boilers of most appropriate  
Configuration and Combustion system  
Judiciously tailored to suit the fuel and steam parameters

<b>FUEL</b>	<b>CONFIGURATION</b>	<b>PARAMETERS</b>
<b>FOSSIL</b> Coal, Oil , Gas, Low heat gases	Bi-Drum - Water Tube Single Drum - Water Tube Packaged - Smoke Tube Compo Type	1 to 200 TPH 7 kg/sq.cm (g) to 125 kg/sq.cm (g) Dry Saturated or Superheated
<b>RENEWABLE</b> Bagasse, Rice Husk, Mustard/Soya husk, Palm Fibre and shell, Wood waste, Palm Empty Fruit Bunch, Other Biomass Fuels, Biogas.	<b>COMBUSTION SYSTEM</b> Travelling Grate Reciprocating Grate Dumping Grate Fixed Grate Fluidised Bed Combustor Oil/Gas Burners Distillery Spent wash Burners	
<b>SPECIALITY</b> Refuse Derived Fuel (RDF) Spent Wash (Distillery) Poultry Litter		

Thermodyne Boilers are characterized by

- Membrane Water Wall (Water Tube & Compo Boilers)
- Three Pass Full Wet Back (Smoke Tube Boiler)
- High Combustion and Boiler Efficiency.
- Well Proportioned Combustion Regime
- Optimized Heat Transfer Surfaces
- Most effective Boiler Bank with Cross Baffles for low ash Biomass fuels
- Over ground ductings
- High Steam Purity
- Well Engineered Furnace
- O&M Focussed Layouts
- Low Maintenance and High Reliability

**....Heat recovery boilers  
Matching configuration for varied  
flue gas exhaust sources**

**Kiln Exhaust  
Incinerator Exhaust  
Gasifier Exhaust  
Gas Turbine Exhaust  
Diesel Engine Exhaust**

**Clean Gas or  
Dust Laden Gas**

## **CUTTING EDGE TECHNOLOGY**

**Thermodyne** has **Complete** range of Modern State-of-art technology for different types & configuration of industrial Boilers, to offer ONE-STOP solutions to meet end user's requirement.

**Thermodyne** is uniquely positioned Indian Company to have provided Boiler Technology to leading Overseas Boiler Manufacturers

- **PRINCIPALS** to PETRA BOILERS Malaysia (1992-2007, 2012-2013)  
PETRA RESOURCES Malaysia (2013-2015)  
PETRA FABRICATORS Malaysia (2015-2018)  
For Palm waste (Biomass) Water Tube Boiler.
- **PRINCIPALS** to Advance Boilers, Malaysia (2003-2006).  
For Palm waste (Biomass) Water Tube Boiler.
- **LICENSOR** to English boilers and Tube, Virginia, US (2003-2008).  
For Oil/Gas Fire Tube Boiler.

**Thermodyne** Technologies, with leadership in Boiler Technology, have secured / executed several First-of-its-kind jobs, establishing their position as "**Pioneer – Then, Leaders Now**".

- **Thermodyne Technologies** is the **FIRST** Indian Boiler Company to Export Palm Oil Mill Boiler to Indonesia, 25 TPH capacity to Sabut Mas Abadi (1999-2000)
- **Thermodyne Technologies** is **FIRST** to introduce Dumping Grate combustion system for Bagasse at 87 kg/cm<sup>2</sup>(g) pressure Boiler (110 TPH / 87 atg / 510 Deg.C at Simbhaoli Sugars, Uttar Pradesh) (2007)
- **Thermodyne Technologies** is the **FIRST** and **ONLY** Indian Boiler Company to couple Waste Heat Boiler to externally fired Envirocyclor Biomass combustor (Installation in Malaysia) (2009)
- **FIRST** Oil & Gas Fired Smoke Tube Boiler to be executed by **Thermodyne Technologies** was for EXPORT MARKET, to P.T.Eterindo, **Indonesia** through Sembawang Projects, Singapore (1997)
- **FIRST** Oil & Gas Fired Water Tube Boiler to be executed by **Thermodyne Technologies** is for EXPORT MARKET to Magadi Soda, **Kenya** through Larsen & Toubro Ltd., India (2005)
- Pulverised Fuel Firing System for Sponge Iron India, to augment Waste Heat Boiler based 5 MW Captive Power Plant. This is the first and **ONLY** of its kind in India.
- 5 TPH, 35 kg/cm<sup>2</sup> with Integral Superheater Smoke Tube Boiler for Department of Atomic Energy. This Boiler is unique with HIGHEST possible pressure for a smoke tube boiler of this size and with integral super heater.

## **Thermodyne Technologies Pvt.Ltd.**

- 140 TPH, 87 kg/cm<sup>2</sup>(g), 520 Deg.C Bagasse-cum-Coal Fired Boiler for Shree Renuka Sugars, Karnataka.
- Capacity upgrade of existing boilers, 40 TPH to 48 TPH for Rana Sugars, 32 TPH to 40 TPH for Oswal Sugars, in Punjab, 20 TPH to 27 TPH for Sahakari Khand Udyog, Gujarat.

### **Capacity upgrade/revamp**

- Capacity upgrade 20% to 25%
  - Additional coal firing retrofit
  - Fuel Conversions bagasse to coal, coal to mustard husk
  - Mustard husk fired boiler with longest mean time between cleaning
- 
- 30 TPH, Multi-Fuel Fired Boiler design and engineering and supply of Grate for Advance Boilers, Malaysia to fire Empty Fruit Bunch, Rice Husk and Log Wood. This is unique application demanding use of 2 metre long log wood and continuous ash discharge, combined with capability of firing other biomass fuels.
  - Smoke Tube Boilers with Air Pre-heater and FD / ID System to handle high moisture fuels. This gives higher combustion efficiency and with controlled excess air, results in significant reduction in fuel consumption.
  - Spent Wash (Distillery) Fired Boiler, Sunil Hitech, Maharashtra with distinctive design and construction features to provide long uninterrupted operation.
  - Refuse Derived Fuel (Municipal Solid Waste), Srinivasa Gayitri, Karnataka with distinctive design features.
  - All Membrane Water Tube Waste Heat Boilers, utilising Refinery Incinerator Gas, for Indian Oil Corporation through Callidus Technologies.
  - 100 % Cashew de-oiled shell fired boiler for Rajkumar Impex
  - First 18 TPH at 65 Kg/cm<sup>2</sup> (g), 485°C husk fired FBC boiler for Gulshan Sugar and Chemical (2002)

**Thermodyne Technologies Pvt.Ltd.**

## **TECHNOLOGY EXPORT**

Thermodyne has the UNIQUE DISTINCTION of having been the **PRINCIPALS** of leading Boiler Manufacturing Organisations in **Malaysia** and in the **United States of America** in the area of Boiler Technology to provide basic Engineering, Detailed Design and Technology Support for Industrial Boilers.

**PRINCIPALS** to Petra Boilers Sdn Bhd, **Malaysia** (formerly Wembley IBAE) (1992-2007, and 2012-2013), Petra Resources Sdn Bhd (2013-2015), Petra Fabricators Sdn Bhd (2015-2018). And

Advance Boilers Sdn Bhd, **Malaysia** (2003-2006) for Palm Waste Water Tube Boilers.

**LICENSOR** to English Boiler & Tubes, Virginia, **United States of America** for Oil / Gas Fire Tube Boilers (2003-2008).

This amply demonstrates the immense confidence reposed by the international clientele in the capabilities of Thermodyne in the field of Boiler Technology.

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**TECHNOLOGY EXPORT**



**Fired Tube Boiler - USA  
(Manufactured Under License  
from Thermodyne Technologies)**



**Palm Waste Fired boiler – Malaysia  
(Manufactured under Technology  
Transfer from Thermodyne  
Technologies)**

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## **MANUFACTURING**

Location	:	SIDCO Industrial Estate, Ranipet And Musiri, Walaja Tamilnadu
Land Area	:	Plot 12 Acres (Two Locations) Covered area 30,000 Square Feet.
Code of Practices	:	IBR, ISO R 831, ASME Section I, IV, VIII, BS 2790, BS 1113, BS 806, BS 5500, ANSI B31.1, AWS
Materials	:	Carbon Steel, Low Alloy Steel, Stainless Steel
Facilities	:	<b><i>Inhouse</i></b>  Plate Rolling : 20 mm Gas Cutting : 100 mm Tube Bending : 76 dia x 4 mm Drilling : 76 mm Welding : MMA, TIG, SAW, CO <sub>2</sub> Tube expansion: Various ranges Heat Treatment: 1.5 metre x 2 metres Machining : Light turning, Chamfering Handling : Gantry Crane : 20 MT Mobile Crane : 40 MT Rotators : 80 MT  <b><i>Outsourcing Tie-up</i></b>  Plate Rolling : High Thickness Drilling : High Diameter Heat Treatment : Large Size Machining : Heavy Size
Power Connection	:	900 HP (Total)

**Thermodyne Technologies Pvt.Ltd.**



**Factory – Musiri ( Off Chennai -  
Bengaluru Expressway ) /  
Tamilnadu / India  
Main Plant 12 Acre Plot**



**Main Plant Front View**



**Main Plant Rear View**



**Main Plant Yard View**

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**Biomass Flow Test Station**



**Drum Shop**



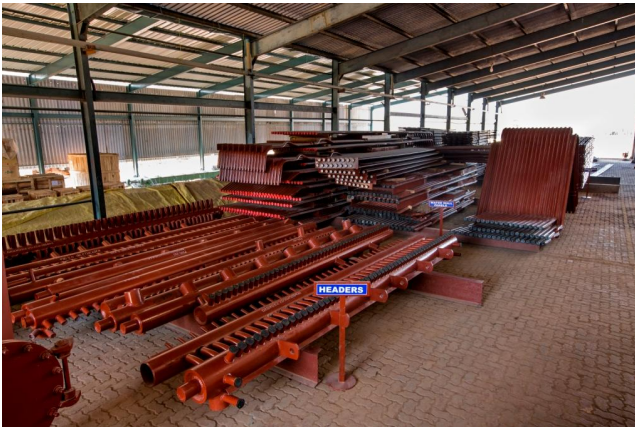
**Predespatch Bay**

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**Thermodyne Technologies Pvt.Ltd.**



**Factory – Tubular Shop**



**Tubular - Predespach**



**Factory – Tubular Shop**

**July 2024**

## **QUALITY**

Quality Policy	:	To operate on the principle of “Do Right Things Right “permeating through all relevant disciplines of Engineering , Manufacture and Installation  To provide on-time and appropriate service to customer.  To meet maximally the End User expectation on Product Performance and Reliability.
Quality Assurance System	:	Inspection Standards & Procedures, Design Document & Revision Control, Procurement Control, Manufacturing Process Control, Gauges and Instruments Calibration, History Card Maintenance, Failure analysis.
Certification	:	Indian Boiler regulation (IBR)
Quality Control	:	<b>Inspection</b> Receipt, In-Process Stage, Sub-Assy. Stage, Final Assembly and Pre-dispatch  <b>Testing</b>  <b>In House</b> Dye-Penetrant, Magnetic Particle, Radiography, Ultrasonic, Hydrostatic.  <b>Outsourcing</b> Mechanical, Chemical, Spectral  <b>Third Party Inspection</b> Jobs Specific under third party Inspection by Third party agencies like ABS, Bureau Veritas, Germanischer Lloyds, IIQA, Lloyd’s Register Asia, SGS

## **PROFILE OF KEY PERSONS**

### **S. DAMODARAN DIRECTOR**

#### **B.E. (Mechanical)**

Total experience over 50 years in engineering and development of Industrial Boilers, Fuel Systems and Pulverised Fuel Technology.

Involved in Contracts Management, Installation, Commissioning and Field Engineering assignments.

Received training at Combustion Engineering, USA and made business visits to USA, UK, Europe, Malaysia, Singapore, Indonesia, Thailand, Fiji, Egypt, Kenya, Costa Rica, Honduras, Turkey, Lebanon, Colombia, Peru, Nicaragua, China, Philippines, Mexico.

Twenty Five years of experience in establishment and management of Industrial Boiler Manufacturing Industry.

**Previous Tenure – BHEL, Tiruchi, India.**

### **R. SRIDHARAN DIRECTOR**

#### **B.E. (Mechanical)**

Total experience 47 years.

Specialised in Boiler Manufacturing process technology including heat treatment, forging & forming technologies.

Received training at Combustion Engineering, USA. Has made business visits to UK, Europe and Middle East.

Twenty Five years of experience in establishment & management of Industrial Boiler Manufacturing Industry.

**Previous Tenure – BHEL, Tiruchi, India.**

### **R.RANGARAJAN DIRECTOR**

#### **B.E. (Mechanical)**

Total experience 46 years

Manufacture of High Pressure Boiler Components, namely, Drums, Headers, Piping & Pressure Vessels.

Received training in CZECHOSLOVAKIA at International Institute of Welding, Bratislava. Has made business visits to UK, Europe, USA, Malaysia and Indonesia.

Twenty Five years of experience in establishment and management of Industrial Boiler manufacturing Industry.

**Previous Tenure – BHEL, Tiruchi, India.**

**Thermodyne Technologies Pvt.Ltd.**

**D.LALITHA SARASWATHI**  
**(Chief Executive Officer)**

**B.Sc, ICWA**

Total experience of over 20 years in Finance and Accounts.  
Has been with the Company since inception.

Has made business visits to USA, Malaysia, Indonesia,  
Turkey, Costa Rica, Peru.

**SHANKAR DAMODARAN**  
**(Vice President)**

**B.E. (Mechanical),**  
**University of Madras, India**

**MBA/MS Dual Degree,**  
**University of Tennessee, USA**

Over 20 years of experience in Procurement, Manufacture,  
Supply Chain Management and Engineering.

**Work Tenures (about 2 years or more)**

Vistra Energy, Texas, USA	-About 2 years
Atlast Copco, Texas , USA	-2 years
Worldwide Equipment, Tennessee, USA	-4 years
Picor, Tennessee, USA	- 2 years
Ametek, Tennessee, USA	- 4 years
Mapics, Georgia, USA	- 4 years
Bharat Heavy Electricals Ltd, India	- 4 years

Made Business Visits to UK, Netherlands, Belgium, Costa  
Rica, Honduras, Colombia, Peru, Nicaragua, Mexico,  
Argentina, Uruguay.

**July 2024**

**PRODUCT GLIMPSES**

**Thermodyne Technologies Pvt.Ltd.**

## **FIRE TUBE / COMBO BOILERS**



**Oil-cum-Gas  
Fired Packaged Boiler**



**Agro Waste Fired  
Compo Boiler**



**Solid Fuel Fired Three Pass  
Fully Wet Back Packaged  
Boiler**

**PRESSURE PARTS**

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**Thermodyne Technologies Pvt.Ltd.**



**Membrane Flat Fin Welded  
Water Wall Panel for Water  
Tube Boiler  
Under Pre-despatch Stage**



**Water Tube Boiler Drum  
Under Pre-despatch Stage**



**Water Tube Boiler  
Economisers  
Under Pre-despatch Stage**



**Super Heater Coils  
Pre-despatch Stage**

**COMBUSTION EQUIPMENT**

**July 2024**

**Thermodyne Technologies Pvt.Ltd.**



**Travelling Grate (Twin)  
Shop Trial Run**



**Reciprocating Grate  
Shop Trial Run**



**Dump Grate  
3 Streams – 6 Sections  
3 Opened – 3 Closed  
Predespatch**



**Fluidised Bed  
Combustor  
Predespatch**

**COMBUSTION EQUIPMENT**

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**Thermodyne Technologies Pvt.Ltd.**



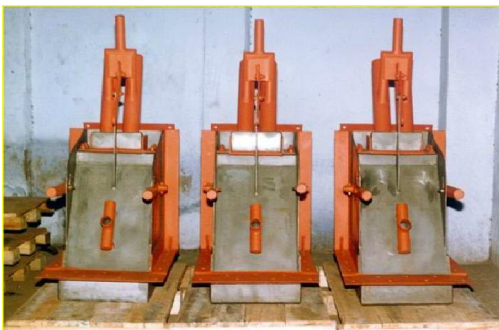
**Drum Fuel Feeder**



**Two Roller Fuel Feeder**



**Drag Chain Feeder**



**Pneumatic Spreader**

**WATER TUBE BOILERS**

**July 2024**

**Thermodyne Technologies Pvt.Ltd.**



**140TPH/ 87atg/ 525°C  
Bagase /Coal Fired  
Travelling grate Boiler**



**Independent Power Plant 10 Mw  
Biomass/ Husk and Coal Fired  
Travelling Grate Boiler**



**45TPH /67atg/ 490°C  
Biomass Fired  
Travelling Grate Boiler**



**Textile plant  
40TPH /45atg /450°C  
Husk and Coal Fired Boiler**

**WATER TUBE BOILERS**

**July 2024**

**Thermodyne Technologies Pvt.Ltd.**



**Boiler Silhouette  
45tph / 66atg / 460°C  
Cotton stalk Fired Boiler**



**Boiler front view  
110TPH / 87atg/ 510° C  
Bagasse Fired Dumping grate Boiler**



**Waste heat boiler  
10TPH / 66 atg / 490°C  
Sponge Iron Plant**

**July 2024**

## REFERENCE LIST

<b>1.0 WATER TUBE BOILERS (FIRED) - INDIA</b>				
<b>S.No.</b>	<b>Specification</b>	<b>Customer/End User</b>	<b>Segment</b>	<b>Nature/ Year of Commissioning</b>
01	40 TPH 45 kg/sq.cm Bagasse	The Mahalakshmi Sugar Mills Uttar Pradesh	<b>Sugar</b> Industry Cogen	Turnkey  1996
02	40 TPH 45 kg/sq.cm Bagasse	Rana Sugars Punjab	<b>Sugar</b> Industry Cogen	Supply / Supervision  1997
03	15 TPH 32 kg/sq.cm Bagasse	Nirani Sugars Karnataka	<b>Sugar</b> Industry Cogen	Turnkey  1997
04	2 Nos. 40 TPH 45 kg/sq.cm Bagasse	ICL Sugars Karnataka	<b>Sugar</b> Industry Cogen	Turnkey  1999
05	40 TPH 45 kg/sq.cm Bagasse	Nahar Sugar & Allied Industries Punjab	<b>Sugar</b> Industry Cogen	Supply / Supervision  2002
06	12 TPH 21 kg/sq.cm Palm Fibre	Palmtech India Andhra Pradesh	<b>Palm Oil</b> Industry Cogen	Turnkey  1999
07	2 Nos. 35 TPH 45 kg/sq.cm Bagasse	Tikaula Sugars Uttar Pradesh Through Binny Engg. Chennai	<b>Sugar</b> Industry Cogen	All Pressure Parts Tubular & Auxiliaries. Engineering, Supply & Erection 1999
08	35 TPH 45 kg/sq.cm Bagasse	Kay Bouvet Engg. Maharashtra Kay Pulp & Paper	<b>Paper</b> Industry Cogen	Turnkey  2001
09	25 TPH 45 kg/sq.cm Husk Fluidised Bed Boiler	Narindera Paper Products Punjab	<b>Paper</b> Industry Cogen	Supply / Supervision  2001
10	40 TPH 45 kg/sq.cm Husk Fluidised Bed Boiler	Oswal Cotton Mills Punjab	<b>Textile</b> Industry Cogen	Turnkey  2001
11	35 TPH 66 kg/sq.cm(a) Biomass	Suchand Powergen Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey  2002
12	4 TPH 32 kg/sq.cm Bagasse	Akkubai Through Kay Bouvet Engg. Maharashtra	<b>Sugar</b> Industry Cogen	Turnkey  2001

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
13	20 TPH 65 kg/sq.cm Husk / Coal Fluidised Bed Boiler	Gulshan Sugars & Chemicals Uttar Pradesh	<b>Chemical</b> Industry Cogen	Supply / Supervision  2002
14	55 TPH 45 kg/sq.cm Bagasse	Bilagi Sugar Mills Karnataka	<b>Sugar</b> Industry Cogen	Turnkey  2005
15	7 TPH 22 kg/sq.cm Bagasse	Simbhaoli Sugar Mills Uttar Pradesh	<b>Sugar</b> Industry Cogen	Supply / Supervision  2003
16	25 TPH 45 kg/sq.cm Husk / Coal Fluidised Bed Boiler	Kailash Papers Uttar Pradesh	<b>Paper</b> Industry Cogen	Supply / Supervision  2003
17	55 TPH 45 kg/sq.cm Bagasse	Badami Sugar Mills Karnataka	<b>Sugar</b> Industry Cogen	Turnkey  2005
18	12 TPH 30 atg Agrowaste / Biogas	J.P.Distilleries Pvt.Ltd. Karnataka	<b>Distilleries</b> Industry Cogen	Turnkey  2003
19	30 TPH 66 atg Coal Fluidised Bed Boiler	Universal Starch-chem Allied Ltd. Maharashtra	<b>Food</b> Industry Cogen	Turnkey  2004
20	16 TPH 45 atg Coal Fluidised Bed Boiler	Gokulanand Petrofibres Gujarat	<b>Textile</b> Industry Cogen	Turnkey  2004
21	12 TPH 14 atg K.Lignite Fluidised Bed Boiler	Santosh Starch Products Gujarat	<b>Textile</b> Industry Process	Turnkey  2004
22	20 TPH 65 atg Coal Fluidised Bed Boiler	Gulshan Polyols Ltd. Gujarat	<b>Chemicals</b> Industry Cogen	Turnkey  2004
23	16 TPH 45 atg Coal Fluidised Bed Boiler	Gulshan Chemicals Ltd. Rajasthan	<b>Chemicals</b> Industry Cogen	Turnkey  2003
24	8 TPH 34 atg Agrowaste	S.L.N.Distilleries P.Ltd. Karnataka	<b>Distilleries</b> Industry Cogen	Turnkey  2004
25	20 TPH 45 atg Bagasse	Shree Sumati Sugar P.Ltd. Uttar Pradesh	<b>Sugar</b> Industry Cogen	Supply / Supervision  2004

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
26	35 TPH 65 atg Agrowaste	Chitra Bio Energy Ltd Tamilnadu	Independent <b>Power</b> Plant	Turnkey 2004
27	20 TPH 65 atg Agrowaste	Velagapudi Power Generation Ltd. Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey 2004
28	50 TPH 66 atg Rice Husk FBC	Kailash Paper Products Ltd Uttar Pradesh	<b>Paper</b> Plant  Cogen	Turnkey 2007
29	28 TPH 65 atg Agrowaste	Venkataraya Fibres P.Ltd. Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey 2005
30	45 TPH 67 atg Agrowaste	Areva T&D India Ltd, Chennai (Prathyusha Power P.Ltd. Tamilnadu)	Independent <b>Power</b> Plant	Turnkey 2006
31	75 TPH 67 atg Bagasse	Tikaula Sugar Mills Ltd. Uttar Pradesh	<b>Sugar</b> Plant Cogen	Turnkey 2006
32	12 TPH 32 atg Bagasse	Sahakari Khand Udyog Mandal Ltd. Gujarat	<b>Sugar</b> Plant Cogen	Turnkey 2006
33	80 TPH 87 atg  Bagasse	Chilwaria Sugar Mills Uttar Pradesh	<b>Sugar</b> Plant Cogen	Turnkey 2007
34	45 TPH 67 atg Agrowaste	Areva T&D India Ltd, (Rukmani Power P.Ltd. Chattisgarh)	Independent <b>Power</b> Plant	Turnkey 2006
35	110 TPH 87 atg Bagasse	The Simbhaoli Sugar Mills Uttar Pradesh	<b>Sugar</b> Plant Cogen	Turnkey 2007
36	100 TPH 45 atg Bagasse/Coal	Shree Renuka Sugars Ltd Karnataka (Athani)	<b>Sugar</b> Plant Cogen	Turnkey 2007
37	100 TPH 45 atg Bagasse/Coal	Shree Renuka Sugars Ltd Karnataka (Manoli)	<b>Sugar</b> Plant Cogen	Supply / Supervision 2007
38	45 TPH 67 atg Biomass	TCP Limited Tamilnadu	Independent <b>Power</b> Plant	Turnkey 2007
39	80 TPH 87 atg Bagasse	Chilwaria Sugar Mills Uttar Pradesh	<b>Sugar</b> Plant Cogen	Turnkey 2009

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
40	24 TPH 65 atg Fluidised Bed Boiler	Gulshan Sugars & Chemicals Ltd. Uttar Pradesh	<b>Chemical</b> Industry Cogen	Turnkey 2006
41	55 TPH 67 atg Biomass	Vayunandana Power Ltd Maharashtra	Independent <b>Power</b> Plant	Turnkey 2011
42	25 TPH 65 atg Fluidised Bed Boiler	Areva T&D India Ltd, (Hothur Steels, Karnataka)	<b>Sponge Iron</b> Plant Power	Turnkey 2009
43	140 TPH 87 atg Bagasse/Coal	Shree Renuka Sugars Ltd Karnataka (Havalga)	<b>Sugar</b> Plant Cogen	Turnkey 2008
44	47 TPH 65 atg Biomass	GPR Power Solutions (P) Ltd. (Sri Gурpurabha Power Ltd) Maharashtra	Independent <b>Power</b> Plant	Turnkey 2010
45	30 TPH 66 atg FBC	Jai Balaji Industries Ltd. West Bengal	<b>Sponge Iron</b> Plant Power	Turnkey 2009
46	25 TPH 45 atg Mustard Husk	Sharda Solvent Ltd. Madhya Pradesh	<b>Chemical</b> Plant Cogen	Turnkey 2009
47	15 TPH 46 atg Palm Waste	Mac Oil Palm Ltd Andhra Pradesh	<b>Palm Oil</b> Industry Cogen	Turnkey 2009
48	40 TPH 45 atg Chicken Litter	PSR Green Power Ltd. Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey 2011
49	46 TPH 67 atg Coal / FBC	Mata Energy Ltd Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey Under Execution
50	40 TPH 45 atg Poultry Litter/Wood Chips	Shravana Power Projects Pvt.Ltd. Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey 2010
51	45 TPH 66 atg Wood Chips	Synergy Shakthi Renewable Energy Ltd Tamilnadu	Independent <b>Power</b> Plant	Turnkey 2010
52	60 TPH 67 atg Julie Flora	Transtech Green Power Ltd. Rajasthan	Independent <b>Power</b> Plant	Turnkey 2011
53	24 TPH 45 atg Spent Wash/Distillery	Sunil Hi Tech Engineers Ltd. Maharashtra	Distillery Plant Cogen	Turnkey 2011
54	100 TPH 67 atg Bagasse/Coal	Shree Renuka Sugars Ltd Maharashtra (Ajinkyatara)	<b>Sugar</b> Industry Cogen	Turnkey 2010

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
55	44 TPH 46 atg Refuse Derived Fuel	Srinivasa Gayithri Resource Recovery Ltd. Karnataka	Independent <b>Power</b> Plant	Turnkey  Under Execution
56	34 TPH 45 atg Cashew Shell	Rajkumar Impex (P) Ltd Tamilnadu	<b>Power</b> Plant	Turnkey  2012
57	20 TPH 45 atg Rice Husk FBC	Great Galleon Ltd Madhya Pradesh	<b>Distillery</b> Plant Cogen	Turnkey  2011
58	50 TPH 66 atg Husk FBC	Shasta Bio-Fuels Pvt Ltd Andhra Pradesh	<b>Agro</b> Industry Cogen	Turnkey  2011
59	12 TPH 45 atg Coal/Husk FBC	Sennar Paper and Boards Ltd Tamilnadu	<b>Paper</b> Industry  Cogen	Turnkey  2012
60	2 x 70 TPH 67 atg Bagasse/Coal/Rice Husk	Yadu Sugar Ltd. Uttar Pradesh	<b>Sugar</b> Industry Cogen	Turnkey  2011
61	16 TPH 15 atg Rice Husk BFBC	Suman Agritech Pvt Ltd Bihar	<b>Agro</b> Industry	Turnkey  2011
62	25 TPH 67 atg Coal/Rice Husk AFBC	SNS Starch Ltd. Andhra Pradesh	<b>Agro</b> Industry Power	Turnkey  2012
63	50 TPH 68 atg Coal BFBC	SPY Agro Industries Ltd Andhra Pradesh	<b>Agro</b> Industry Cogen	Turnkey  2013
64	45 TPH 67 atg Agrowaste	Abellon CleanEnergy Ltd Gujarat	Independent <b>Power</b> Plant	Turnkey  2014
65	40 TPH 45 atg Agrowaste	Redan Infrastructure Pvt Ltd. Andhra Pradesh	Independent <b>Power</b> Plant	Turnkey  2015
66	18 TPH 45 atg Coal FBC	Ohm Srinivasa Paper Boards Private Limited Tamilnadu	<b>Paper</b> Industry	Turnkey  Under Execution

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
67	28 TPH 66 atg Agrowaste	Matrix Agro Pvt. Ltd. Karnataka	Independent <b>Power</b> Plant	Turnkey 2015
68	30 TPH 45 atg Agrowaste	Ruchi Soya Industries Ltd Andhra Pradesh	<b>Palm Oil</b> Plant	Turnkey 2014
69	22 TPH 47 atg Agrowaste	Cetex Petrochemicals Ltd Tamilnadu	<b>Petrochemicals</b> Industry	Turnkey 2015
70	35 TPH 67 atg Coal FBC	Chhattisgarh Distilleries Ltd Chhattisgarh	<b>Distilleries</b> Industry	Turnkey 2016
71	28.5 TPH 21 atg Coal FBC	Sanstar Limited Maharashtra	<b>Food</b> Industry	Turnkey 2017
72	42 TPH 67 atg Coal BFBC	Great Galleon Ltd Madhya Pradesh	<b>Distillery</b> Plant Cogen	Turnkey 2017
73	60 TPH 45 atg Palm Waste	Nava Bharat Ltd Andhra Pradesh	<b>Palm Oil</b> Plant Cogen	Turnkey 2018
74	14 TPH 10.5 atg Agrowaste BFBC	SPS Agronico India LLP Karnataka	<b>Rice</b> Plant	Turnkey 2019
75	32 TPH 45 atg Agrowaste Travelling Grate	3F Oil Palm Agrotech Pvt.Ltd. Andhra Pradesh	<b>Palm Oil</b> Plant	Turnkey 2017
76	22 TPH 65 atg Imported Coal & Saw Dust FBC	Shree Karthik Papers Ltd Tamilnadu	<b>Paper</b> Plant	Turnkey Under Execution
77	25 TPH 40 atg Furnace Oil & Natural Gas D' type	Thirumalai Chemicals Ltd Tamilnadu	<b>Chemicals</b> Plant	Turnkey 2019
78	2 x 27 TPH Indonesian Coal & Kutch Lignite AFBC	Satyesh Brinechem Pvt.Ltd Gujarat	<b>Chemicals</b> Plant	Turnkey Boiler-1 - 2019 Boiler-2 - 2020
79	40 TPH 42 atg RDF Travelling Grate	Goodwatts WTE Jamnagar Pvt.Ltd Gujarat	<b>WTE</b> Plant	Turnkey 2021

S.No.	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
80	36 TPH 45 atg Biomass Travelling Grate	Goyal Proteins Ltd Maharashtra	Food Industry	Turnkey  2022
81	80 TPH 40 ATG RDF Travelling Grate	Goodwatts WTE Ahmedabad Pvt.Ltd. Gujarat	WTE Plant	Turnkey  Under Execution
82	2 x 40 TPH 40 ATG RDF Travelling Grate	Goodwatts WTE Vadodara Pvt Ltd Gujarat	WTE Plant	Turnkey  Under Execution
83	2 x 40 TPH 40 ATG RDF Travelling Grate	Goodwatts WTE Rajkot Pvt Ltd Gujarat	WTE Plant	Turnkey  Under Execution
83	25 TPH 67 ATG Biomass BFBC	Global Canesugar Services Pvt.Ltd. Bihar	Sugar Industry	Turnkey  2022
84	28 TPH 67 ATG Biomass FBC	Eastern India Cements Private Limited Bokaro Jharkhand	Cement Industry	Engineering Supply Supervision  Under Execution
85	35 TPH 44 ATG EFB & Palm Waste Reciprocating Grate <b>Balance of Plant</b>	Patanjali Foods Limited Peddapuram Andhra Pradesh	Food Industry	Turnkey  Under Execution
86	40 TPH 49 ATG Mustard Husk Travelling Grate	Goyal Vegoils Limited Kota Rajasthan	Food Industry	Turnkey  Under Execution
87	12 TPH 45 ATG Indian Coal/Rice Husk FBC	Brew Force Limited Bhubaneswar Odisha	Distillery Industry	Turnkey  Under Execution

## 2.0 WATER TUBE BOILERS (HEAT RECOVERY) - INDIA

S.No.	Specification	Customer/End User	Segment	Nature / Year of Commissioning
1	42.7 SQ.M. 25 kg/sq.cm. Sulphur Dioxide Waste Heat Recovery Boiler	TCP Ltd. Tamilnadu	<b>Chemical</b> Industry  Cogen	Supply / Supervision   2001
2	10 TPH 45 kg/sq.cm	Sree Rayalseema Green Energy Limited Andhra Pradesh	<b>Sponge Iron</b> Plant Power	Turnkey  2005
3	2 x 10 TPH 2 x 5 TPH 67 kg/sq.cm	Deepak Steel & Power Ltd. Orissa	<b>Sponge Iron</b> Plant Power	Turnkey  2006
4	2 x 10 TPH 67 kg/sq.cm	Nav Durga Fuel Pvt.Ltd. Chattisgarh	<b>Sponge Iron</b> Plant Power	Turnkey  2006
5	4 x 10 TPH 67 kg/sq.cm	Areva T&D India Ltd, (Kamachi Sponge & Power Corporation Tamilnadu)	<b>Sponge Iron</b> Plant Power	Turnkey  2007
6	3 x 10 TPH 67 kg/sq.cm	Areva T&D India Ltd, (Hothur Steels, Karnataka)	<b>Sponge Iron</b> Plant Power	Turnkey  2009
7	3 x 10 TPH 67 kg/sq.cm	Hothur Ispat Pvt Ltd, Karnataka	<b>Sponge Iron</b> Plant Power	Turnkey  2019
8	Incinerator Waste Heat Boiler with Import Steam Superheater 5.5 Million Kcal/hr Heat Duty, 46 kg/sq.cm.	Callidus U.S. through Callidus India for IOCL, Haldia West Bengal	<b>Petrochemical</b> Plant Cogen	Supply / Supervision   2010
9	2 x 10 TPH 66 kg/sq.cm	B.S.Ispat Ltd. Maharashtra	<b>Sponge Iron</b> Plant Power	Turnkey  2014

### 3.0 EXPORTS (BOILERS / COMPONENTS / REVAMP)

#### BOILERS

S.No.	Description	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
1	3 Pass Fully Wet Back Dual Fuel Boiler	10 TPH 13 ATG Dry & Saturated Oil & Gas	Sembawang Projects Engg. Co. Singapore (Site Indonesia)	Rubber Industry	Supply / Supervision  1997
2	Bi-drum Water Tube Boiler	15 TPH 24 kg/sq.cm Bagasse	Songlam Sugar Mills Vietnam (Through Shrijee Engineering)	Sugar Industry	Supply / Supervision  2000
3	Bi-drum Water Tube Boiler	25 TPH Palm Fibre Boiler	P.T.Sabut Mas Abadi Indonesia	Palm Oil Industry	Turnkey  2000
4	Bi-drum Water Tube Boiler	45 TPH 15.5 atg Fuel Oil	Larsen & Toubro Ltd Kenya	Pure Ash Project	Supply / Supervision  2005
5	3 Pass Fully Wet Back Boiler	3 TPH 10.5 atg Wood	Persus Palms Consultant(M) Sdn Bhd, Malaysia (Site Myanmar)	Palm Oil Industry	Supply / Supervision  2004
6	Packaged Shell & Tube Boiler	3 TPH 10.5 atg Natural Gas	AST Beverage Ltd. Bangladesh	Food Industry	Supply / Supervision  2006
7	Waste Heat Recovery Boiler	2 x 30 TPH 50 atg	Meridien Utilities Sdn Bhd Malaysia	Palm Waste Gasifier Plant	Supply / Supervision  2009
8	Bi-drum Water Tube Boiler	35 TPH 33.4 atg Bagasse	Sugar Corporation of Uganda Ltd. Uganda	Sugar Industry	Supply / Supervision  2009
9	Bi-drum Water Tube Fluidised Bed Boiler	45 TPH 32 atg Coal	PT Dharmapala Usaha Sukses Indonesia (PT Olam International Group)	Sugar Industry	Supply / Supervision  2009
10	Compo Boiler	20 TPH 9 atg Wood Chips Palm De-Oiled Cake	Euroasian Ventures FZE Dubai	Paper Plant	Supply / Supervision  2010
11	Incinerator for Waste Heat Boiler (Fire Tube with elevated Drum)	2.0 Million Kcal/hr Heat Duty 73.5 kg/sq.cm Waste Heat	Callidus, US through Callidus India for STAATSOLIE REFINERY Suriname	Petrochemicals Industry	Supply  2014
12	Bi-drum Water Tube Reciprocating Grate Boiler	35 TPH 31 atg Palm Fibre	GA Expertise Inc USA (Caicesa, Honduras)	Palm Industry	Supply / Supervision  2014

<b>S.No.</b>	<b>Description</b>	<b>Specification</b>	<b>Customer/End User</b>	<b>Segment</b>	<b>Nature/ Year of Commissioning</b>
13	Bi-drum Water Tube Travelling Grate Boiler	60 TPH 41 atg Palm Fibre	Compania Industrial Coto Costa Rica	<b>Palm</b> Industry	Supply / Supervision 2015
14	Bi-drum Water Tube Dump Grate Boiler	80 TPH 21 atg Bagasse	PT Trisula Abadi Indonesia (Trangkil Sugar Factory)	<b>Sugar</b> Industry	Supply / Supervision 2016
15	Bi-drum Water Tube Travelling Grate Boiler	40 TPH 41 atg Palm Fibre	Latin America Agrialim SA Costa Rica	<b>Palm</b> Industry	Supply / Supervision 2017
16	Bi-drum Water Tube Reciprocating Grate Boiler	20 TPH 42 atg Palm Shell & EFB	Agroindustrial De Oleaginosas SA Nicaragua	<b>Palm</b> Industry	Supply / Supervision 2017
17	Bi-drum Water Tube Travelling Grate Boilers	2 x 35 TPH 39 atg Biomass	Biogasenergo LLC Ukraine	<b>Power</b> Plant	Supply / Supervision Under Execution
18	Shell and Tube Boiler	4 TPH 10.5 atg Wood Logs	Lakeside Dairy Ltd Uganda	<b>Food</b> Industry	Supply / Supervision 2016
19	Bi-drum Water Tube Reciprocating Grate Boiler	2 Nos. 28 TPH 30 atg Palm Waste	GA Expertise Inc USA (For Hame Group Guatemala - Olmeca)	<b>Palm</b> Industry	Supply / Supervision 2019
			GA Expertise Inc USA (For Hame Group Guatemala - Pahosa)	<b>Palm</b> Industry	Supply / Supervision 2018
20	Bi-drum Water Tube Dumping Grate Boiler	20 TPH 46 atg	Ultratec Engg.Co. Delhi (For HDJ Bayawan Agri Venture, Philippines)	<b>Sugar</b> Industry	Turnkey 2019
21	Bi-drum Water Tube Reciprocating Grate Boiler	45 TPH 40 atg Palm Waste	GA Expertise Inc USA (For Repsa, Guatemala)	<b>Palm</b> Industry	Supply / Supervision 2019
22	Bi-drum Water Tube Vibrating Grate Boiler	22 TPH 31 atg Palm Waste	Tecnintegral S.A.S. Colombia (For Aceites de Palma S.A. de C.V. Mexico)	<b>Palm</b> Industry	Supply / Supervision 2020
23	Bi-drum Water Tube Dumping Grate Boiler	20 TPH 46 atg	Lemniscate Ultratek Industries Pvt.Ltd. Delhi (For HDJ Bayawan Agri Venture, Philippines)	<b>Sugar</b> Industry	Turnkey Under Execution
24	Bi-drum Water Tube Reciprocating Grate Boiler	16 TPH 25 atg Palm Waste	Tecnintegral S.A.S. Colombia (For Industrias Del Tulumayo, Peru)	<b>Palm</b> Industry	Supply / Supervision 2021

<b>S.No.</b>	<b>Description</b>	<b>Specification</b>	<b>Customer/End User</b>	<b>Segment</b>	<b>Nature/ Year of Commissioning</b>
25	Bi-drum Water Tube Reciprocating Grate Boiler	30 TPH 34 atg Palm Waste	Industrial Aceitera De La Raas, S.A. Nicaragua	<b>Palm</b> Industry	Supply / Supervision 2022
26	Bi-drum Water Tube Travelling Grate Boiler	30 TPH 31 atg Palm Waste	GA Expertise Inc USA (Inducaribe S.A. Nicaragua)	<b>Palm</b> Industry	Supply / Supervision 2022
27	Bi-drum Water Tube Travelling Grate Boiler	30 TPH 29 atg Palm Waste	GA Expertise Inc USA (ASAPALSA, Honduras)	<b>Palm</b> Industry	Supply / Supervision 2023

### 3.0 EXPORTS COMPONENTS

S.No.	Description	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
1	Combustion Equipment, Pneumatic Spreaders, Fuel Feeders	For 35 TPH 32 ATG Boiler	Advance Boilers Malaysia	<b>Palm Oil</b> Industry	Supply / Supervision 1994
2	Soot Blowers	For 35 TPH and 22.5 TPH Boilers	Advance Boilers Malaysia	<b>Palm Oil</b> Industry	Supply / Supervision 1994
3	Boiler Spares	For 10 TPH 13 kg/sq.cm. Oil & Gas Fired Boiler	P.T.Eterindo Nusa Graha Indonesia	<b>Rubber</b> Industry	Supply / Supervision 2008
4	Boiler Components for Reavamping	20 TPH 25 atg Bagasse	Integrated Casetech Consultants Pvt. Ltd. Tanzania	<b>Sugar</b> Industry	Supply / Supervision 2014
5	Dumping Grate	For 20 TPH Palm Fibre Boiler	Advance Boilers Malaysia	<b>Palm Oil</b> Industry	Supply / Supervision 1998
6	Boiler Pressure Part Tubular -Stainless Steel/ Alloy Steel	For High Pressure Boiler Revamp	Boiler Care Malaysia	<b>Power</b> Plant	Supply / Supervision 2003
7	Boiler Pressure Part Tubulars, Casing	For High Pressure Boiler Revamp	Boiler Care Malaysia	<b>Power</b> Plant	Supply / Supervision 2000
8	Reciprocating Grate Mechanical Stoker	For 30 TPH Log Wood Rice Husk	Advance Boilers Malaysia	<b>Wood</b> Industry	Supply / Supervision 2002
9	Boiler Spares		Sugar Corporation of Uganda Uganda	<b>Sugar</b> Industry	Supply / Supervision 2004
10	Economiser	3 Nos. for 12.5 TPH Gas Fired Boiler	Boilers & Burners Malaysia	<b>Process</b> Industry	Supply / Supervision 2008
11	Drum with Internals	For 25 TPH 31 atg Boiler	Ethanol and Energy Group Corporation Colombia	<b>Palm Oil</b> Industry	Supply / Supervision 2016
12	Steam Drum Internals	For 100 TPH Boiler	Ethanol and Energy Group Corporation Colombia (For Cana Brava, Peru)	<b>Sugar</b> Industry	Supply / Supervision 2016
13	Dumping Grate	For 18 TPH Boiler	Shrijee Process Engg Works Ltd. India (For Nile Agro, Uganda)	<b>Sugar</b> Industry	Supply / Supervision 2016
14	Biogas Burner	For 35 TPH Boiler	GA Expertise Inc USA (For Caecesa, Honduras)	<b>Palm</b> Industry	Turnkey 2018
15	Biogas Burner	For 22 TPH Boiler	GA Expertise Inc USA (For Agropalma Honduras)	<b>Palm</b> Industry	Turnkey 2018
16	Long Retractable Soot Blowers	For WHRB	Energia Renovable S.A.DE C.V Honduras	<b>Palm</b> Industry	Turnkey
17	Boiler Tubes		Manaseer Industrial Complex, Amman, Jordan		Supply

### 3.0 EXPORTS

#### REVAMP

S.No.	Description	Specification	Customer/End User	Segment	Nature/ Year of Commissioning
1	Modification of Combustion System of existing Boiler - Pneumatic Spreader with Dumping Grate	56 TPH 22 atg Bagasse	Metahara Sugar Factory Ethiopia	<b>Sugar</b> Industry	Supply / Supervision  2013
2	Refurbishment of Boiler	30 TPH Boiler	GA Expertise Inc USA (For La Atlantia, Guatemala)	<b>Palm</b> Industry	Supply / Supervision  2017
3	Modification Components for Boiler Upgradation	45 TPH to 50 TPH Boiler	PT Dharmapala Usaha Sukses Indonesia	<b>Sugar</b> Industry	Supply / Supervision  2017
4	Enhancement of Superheater Outlet Temp.	For 40 TPH Boiler	GA Expertise Inc USA (For Hame Group Guatemala)	<b>Palm</b> Industry	Supply / Supervision  2017
5	Retrofitting of existing Boiler	For 30 TPH D' type Boiler	Optimistic Organic Sdn Bhd Malaysia		Supply / Supervision  2020

## 4.0 TECHNOLOGY EXPORT

S.No.	Description	Specification	Customer/End User	Segment	Nature/ Year of Execution
1	Thermal Performance and Detailed Engineering	21 TPH 22.5 ATG Palm Fibre Bi-drum Water Tube Boiler	Innovest (Wembley) Malaysia	Palm Oil Industry	Engineering 1994
2	Thermal Performance and Detailed Engineering	35 TPH 32 ATG Palm Fibre Bi-drum Water Tube Boiler	Advance Boilers Malaysia	Palm Oil Industry	Engineering 1993
3	Thermal Performance Design	31.5 TPH 22.5 ATG Palm Fibre Bi-drum Water Tube Boiler	Wembley Works Malaysia	Palm Oil Industry	Engineering 1993
4	Thermal Performance and Detailed Engineering	50,000 PPH 350 PSIG Palm Fibre Bi-drum Water Tube Boiler	Advance Boilers Malaysia	Palm Oil Industry	Engineering 1994
5	Thermal Performance and Detailed Engineering	22 TPH 320 PSIG Palm Fibre Bi-drum Water Tube Boiler	Wembley Works Malaysia	Palm Oil Industry	Engineering 1994
6	Superheated Detailed Design	20 TPH 22.5 ATG Palm Fibre Bi-drum Water Tube Boiler	Wembley I.B.A.E. Malaysia	Palm Oil Industry	Engineering 1994
7	Thermal Performance Design	25 TPH 320 PSIG Palm Fibre Bi-drum Water Tube Boiler	Wembley I.B.A.E. Malaysia	Wood Processing	Engineering 1994
8	Thermal Performance and Detailed Design	40 TPH 32 ATG Palm Fibre Bi-drum Water Tube Boiler	Advance Boilers Malaysia	Palm Oil Industry	Engineering 1996
9	Heavy Engineering Shop-facilities & Layout-Project Review	Shop fabrication capacity of 15000 tonnes/annum	P.T.Perkasa Heavyndo Engg. Indonesia	Engineering Industry	Technology Services 1995
10	Bi-drum Water Tube Boiler	60 TPH Palm Fibre Fired Boiler	Advance Boilers Malaysia	Palm Oil Industry	Engineering 2004
11	Thermal Performance and Detailed Design	Oil / Gas Fired Boilers 150 PSI/250 PSI on continuing basis, as per License Agreement	English Boiler & Tube Inc, USA	Process Heat	Engineering 2004-2005
12	Basic Engineering	22 TPH / 31 bar(g) / 320 Deg.C Palm Waste Fired Reciprocating Grate Boiler	GA Expertise Inc USA (Palmenol)		Engineering 2023

### 5.0 SMOKE TUBE BOILERS / COMPO

S.No.	Description	Specification	No.off	Segment
1	3-pass fully wet back	1 TPH Coal / Wood waste 10.5 kg/sq.cm	14 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing
2	3-pass fully wet back	1 TPH 10.5 kg/sq.cm Coal / Wood waste	1 No. <b>Tamil Nadu</b>	<b>Rubber</b> Industry
3	3-pass fully wet back	1 TPH 10.5 kg/sq.cm Coal / Wood waste	1 No. <b>Tamil Nadu</b>	<b>Oil</b> Refinery
4	3-pass fully wet back	1.5 TPH 10.5 kg/sq.cm Coal / wood waste	17 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing
5	3-pass fully wet back	2 TPH 10.5 kg/sq.cm Coal / Wood waste	10 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing
6	3-pass fully wet back	2 TPH 10.5 kg/sq.cm Coal / Wood waste	1 No. <b>Tamil Nadu</b>	<b>Rubber</b> Industry
7	3-pass fully wet back	2 TPH 10.5 kg/sq.cm Coal / Wood waste	1 No. <b>Mumbai</b>	<b>Textile</b> Processing
8	3-pass fully wet back	2.5 TPH 10.5 kg/sq.cm Coal / Wood waste	6 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing
9	3-pass fully wet back	3.0 TPH 10.5 kg/sq.cm Coal / wood waste	1 No. <b>Karnataka</b>	<b>Textile</b> Processing
10	3-pass fully wet back	3.0 TPH 10.5 kg/sq.cm Coal / wood waste	15 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing
11	3-pass fully wet back	3.0 TPH 10.5 kg/sq.cm Coal / wood waste	1 No. <b>Tamil Nadu</b>	<b>Oil</b> Refinery
12	3-pass fully wet back	4.0 TPH 10.5 kg/sq.cm Coal / wood waste	9 Nos. <b>Tamil Nadu</b>	<b>Textile</b> Processing

S.No.	Description	Specification	No.off	Segment
13	3-pass fully wet back *	5.0 TPH 35 kg/sq.cm with Integral Superheater LDO	1 No. <b>Tamil Nadu</b>	Department of Atomic Energy Kalpakkam
14	3-pass fully wet back *	3.0 TPH 27 kg/sq.cm Agrowaste	1 No. <b>Maharashtra</b>	Dufon Laboratories
	* Specialty Design with High Pressure			
15	COMPO BOILERS	8 TPH 10.5 kg/sq.cm Coal / Agro waste	1 No. <b>Tamil Nadu</b>	<b>Effluent Treatment Plant</b>
16	COMPO BOILER	8 TPH 17.5 kg/sq.cm Husk	1 No. <b>Punjab</b>	<b>Sugar Industry</b>
17	COMPO BOILER	2 TPH 10.5 kg/sq.cm Coal / Agro waste	1 No. <b>Tamil Nadu</b>	<b>Agrowaste based Plant</b>
18	COMPO BOILER	5 TPH 10.5 kg/sq.cm Coal / Agro waste	1 No. <b>Tamil Nadu</b>	<b>Oil Refinery</b>
19	COMPO BOILER	5 TPH 10.5 kg/sq.cm Agro waste	1 No. Mizoram	<b>Palm Industry</b>
20	COMPO BOILER	6 TPH 10.5 kg/sq.cm Coal / Agro waste	2 Nos. <b>Tamil Nadu</b>	<b>Textile Processing</b>
<b>TOTAL</b>			<b>86 Nos.</b>	

From year 2004 onwards, due to Business re-organisation Smoke Tube Boilers and selected categories of Compo Boilers are supplied by Associate Firm **Thermodyne Industrial Products** with Engineering Support provided by Thermodyne Technologies.

Summary of Boilers supplied by  
**Thermodyne Industrial Products**

<b>S.No.</b>	<b>Description</b>	<b>Specification</b>	<b>No.off</b>	<b>Region</b>	<b>Segments</b>
1	3-pass fully wet back	0.5 TPH to 5 TPH Wood waste 10.5 kg/sq.cm to 17.5 kg/sq.cm	571 Nos.	Tamil Nadu Maharashtra Karnataka Punjab Telangana Kerala	Textile Processing Food Industry Paper Industry Oil Refinery Cement Plant
		6 TPH Wood Waste	5 Nos.		
		7 TPH Wood	1 No.	Tamilnadu	
		<hr/>			
2	Compo Boilers	5 TPH	5 Nos.	Tamil Nadu	Food Industry
		6 TPH 10.5 kg/sq.cm to 21.5 kg/sq.cm	13 Nos.	Andhra Pradesh	Rubber Industry Animal Feed Plant Dairy
		8 TPH 21.5 kg/sq.cm	3	Maharashtra	Food Industry
		10 TPH	1 No. 1 No. 1 No.	Maharashtra Tamilnadu Tamilnadu	Food Industry Effluent Treatment Printing Mill
		<b>Total</b>	<b>601 Nos.</b>		

## 6.0 BOILER COMPONENTS / REVAMP - INDIA COMPONENTS

S.No.	Specification	Customer/End User	Segment	Nature
1	<b>Heat Recovery System Equipments</b> for 2 Nos.18 TPH Bagasse Fired Boilers	The Mahalakshmi Sugar Mills Uttar Pradesh	<b>Sugar Industry</b>	Engineering Supply Supervision
2	<b>Dumping Grate</b> for 18 TPH Bagasse Fired Boiler	The Mahalakshmi Sugar Mills Uttar Pradesh	<b>Sugar Industry</b>	Engineering Supply Supervision
3	<b>Superheater &amp; Attemperator</b> for 51.5 TPH Bagasse Fired Boiler	EID Parry (I) Ltd. Tamilnadu	<b>Sugar Industry</b>	Engineering Supply
4	<b>Feed Water Heater &amp; Economiser</b> for 5 MW Captive Power Plant Kiln Waste Heat Recovery Boiler-11.5 TPH/45 ATG	Sponge Iron India Andhra Pradesh	<b>Metallurgical Industry</b>	Turnkey
5	<b>Water Wall Panels</b> for 32 TPH 32 kg/sq.cm Boiler	Venus Sugars Uttar Pradesh	<b>Sugar Industry</b>	Supply
6	<b>Boiler Non-pressure parts</b> for 2 Nos. 45 TPH 63 kg/sq.cm Bi-drum Water Tube Boilers	ISGEC New Delhi	<b>Sugar Industry</b>	Supply
7	<b>Deaerator with Tank</b> for 2 Nos. 45 TPH 63 kg/sq.cm Bi-drum Water Tube Boilers	ISGEC New Delhi	<b>Sugar Industry</b>	Supply
8	<b>Drum Internals</b> for 40 TPH 32 kg/sq.cm Bi-drum Water Tube Boiler	The Simbhaoli Sugar Mills Uttar Pradesh	<b>Sugar Industry</b>	Engineering Supply Supervision
9	<b>Economiser Assembly</b> for 20 TPH Bagasse Fired Boiler	Perambalur Sugar Mills Tamilnadu	<b>Sugar Industry</b>	Turnkey
10	<b>Economiser Assembly</b> for 20 TPH Bagasse Fired Boiler	Arignar Anna Sugar Mills Tamilnadu	<b>Sugar Industry</b>	Turnkey
11	<b>Boiler Structures</b> for Water Tube Boiler	Mitsui Babcock Energy (India) New Delhi	<b>Sugar Industry</b>	Manufacture Supply
12	<b>Boiler Supporting Structures</b> for Water Tube Boiler	ISGEC John Thompson New Delhi	<b>Power Plant</b>	Manufacture Supply

S.No.	Specification	Customer/End User	Segment	Nature
13	<b>Boiler Spares</b> for 2 Nos. 32 TPH Boilers	Oswal Sugars Punjab	<b>Sugar</b> Industry	Supply Supervision
14	<b>Boiler Pressure Part Spares</b> 2 Nos. 32 TPH Boilers	Chadha Sugars Uttar Pradesh	<b>Sugar</b> Industry	Supply
15	<b>Superheater for existing</b> 10 TPH Biogas Fired Boiler	Simbhaoli Sugar Mills Uttar Pradesh	<b>Sugar</b> Industry	Engineering Supply Supervision
16	<b>Pressure Parts for</b> 6 TPH CFBC Boiler	Greenfield Research Inc West Bengal	<b>Experimental</b> Project in Power Plant	Engineering Supply Supervision
17	<b>Attemperator</b>	Kailash Papers Uttar Pradesh	<b>Experimental</b> Project in Power Plant	Engineering Supply Supervision
18	<b>Boiler Components</b>	Sponge Iron India Ltd. Andhra Pradesh	<b>Sponge Iron</b> Industry	Engineering Supply Erection
19	<b>Boiler Components</b>	Global Canusugar Services Pvt.Ltd. Purnia Bihar	<b>Sugar</b> Industry	Engineering Supply Erection
19	<b>Fuel Feeding System for Rice Husk</b>	Gulshan Chemicals Pvt.Ltd. Bhiwadi Rajasthan	<b>Chemicals</b> Industry	Engineering Supply Supervision
20	<b>Air Preheater &amp; Economiser for 30 TPH Boiler</b>	Patanjali Foods Ltd. Peddapuram Andhra Pradesh	<b>Food</b> Industry	Engineering Supply Erection
21	<b>Boiler Components</b>	Thiru Arooran Sugars Ltd Thanjavur Tamilnadu	<b>Sugar</b> Industry	Engineering Supply
22	<b>Boiler Components</b>	Indian Oil Corporation Ltd Haldia Refinery Stores West Bengal	<b>Refinery</b> Industry	Engineering Supply

## 6.0 BOILER COMPONENTS / REVAMP - INDIA REVAMP

S.No.	Specification	Customer/End User	Segment	Nature
1	Performance Improvement Package for 35 TPH Boiler (Air Heater, Combustion System)	Nahar Sugar & Allied Industries Punjab	Sugar Industry	Engineering Supply Supervision
2	18 TPH Boiler Upgradation Capacity augmentation	The Mahalakshmi Sugar Mills Uttar Pradesh	Sugar Industry	Engineering Supply Supervision
3	Boiler Capacity Upgradation 2 Nos. 32 TPH 32 kg/sq.cm (g) Bagasse Fired Boilers	Rana Sugars Punjab	Sugar Industry	Engineering, Supply Supervision
4	Boiler Upgradation Capacity augmentation from 40 TPH to 48 TPH	Rana Sugars Punjab	Sugar Industry	Engineering Supply Supervision
5	Boiler Upgradation Capacity augmentation from 15 TPH to 18 TPH	Nirani Sugars Karnataka	Sugar Industry	Engineering Supply Supervision
6	Boiler Upgradation 2 Nos. 32 TPH Boilers upgrade to 40 TPH	Oswal Sugars Punjab	Sugar Industry	Engineering Supply Supervision
7	Boiler Revamp 50 TPH / 32 kg/sq.cm Bagasse Fired Boiler Revamp to Rated Capacity	Simbhaoli Sugar Mills Uttar Pradesh	Sugar Industry	Engineering Supply Supervision
8	Upgradation of 20 TPH to 27 TPH Bagasse Fired Boiler	Sahakari Khand Udyog Mandal Ltd. Gujarat	Sugar Industry	Engineering Supply Supervision
9	Conversion of 40 TPH Bagasse to Multifuel	Nahar Sugar & Allied Industries Ltd. Punjab	Sugar / Steel Project	Engineering Supply Supervision
10	Boiler Upgradation Capacity augmentation from 40 TPH to 46 TPH	Coromandel Sugars Ltd. Karnataka	Sugar Industry	Turnkey
11	Coal Firing Retrofit 140 TPH Bagasse Fired Boiler	Shree Renuka Sugars Karnataka (Havalga)	Sugar Industry Cogen	Turnkey
12	Coal Firing Retrofit 110 TPH Bagasse Fired Boiler	Simbhaoli Sugar Mills Uttar Pradesh	Sugar Industry Cogen	Engineering Supply Supervision
13	Coal Firing Retrofit 100 TPH Bagasse Fired Boiler	Shree Renuka Sugars Karnataka (Munoli)	Sugar Industry Cogen	Engineering Supply Supervision

S.No.	Specification	Customer/End User	Segment	Nature
14	<b>Coal Firing Retrofit</b> 100 TPH Bagasse Fired Boiler	Shree Renuka Sugars Karnataka (Athani)	<b>Sugar</b> Industry Cogen	Engineering Supply Supervision
15	<b>Coal Firing Retrofit</b> 120 TPH Bagasse Fired Boiler	A.B.Sugars Punjab	<b>Sugar</b> Industry Cogen	Engineering Supply Supervision
16	<b>Upgradation &amp; Modification</b> of 1 No.Bagasse Fired Horse Shoe Furnace Boiler into Biomass Fired Travelling Grate Boiler	Sree Rayalseema Sugar & Energy Pvt. Ltd. Andhra Pradesh	<b>Sugar</b> Industry	Engineering Supply Supervision
17	<b>Modification of 77 TPH</b> Travelling Grate Boiler into FBC Boiler	Uniworld Sugars Pvt. Ltd. Gujarat	<b>Sugar</b> Industry Cogen	Engineering Supply Supervision
18	<b>Modification of 80 TPH</b> into Multifuel Firing	Simbhaoli Power Pvt.Ltd Uttar Pradesh	<b>Sugar</b> Industry	Engineering Supply Supervision
19	<b>Upgrade Modification of</b> 50 TPH FBC Boiler to 55 TPH and with Pet coke firing	Genus Paper & Boards Ltd. Uttar Pradesh	<b>Sugar</b> Industry	Engineering Supply Supervision
20	<b>Modification items for 27 TPH</b> Coal Fired TG Boiler into 100% Mustard Husk Fired TG	Shriram Rayons Rajasthan	<b>Chemicals</b> Industry	Engineering Supply Supervision
21	<b>Fuel Conversion &amp; Combustion</b> System Change of existing FBC Boiler No.4 to 100% Mustard Husk, coal or combination of both fired Travelling Grate Boiler and capacity upgradation 30 TPH to 40 TPH	Shriram Rayons Rajasthan	<b>Chemicals</b> Industry	Engineering Supply Supervision
22	<b>Combustion System Conversion</b> and Performance improvement of their existing Boiler	Goyal Vegoils Ltd Rajasthan	<b>Food</b> Industry	Engineering Supply Supervision
23	<b>Upgradation of 15 TPH</b> Boiler to 20 TPH	Ruchi Soya Industries Ltd Andhra Pradesh	<b>Food</b> Industry	Engineering Supply Supervision

## 7.0 OTHER PRODUCTS

S.No.	Description	Specification	Customer/End User	Segment	Nature
01	Pulverised Fuel Firing System-Sponge Iron Kiln Waste Heat Boiler Unit-1	4 Million Kcal/hr Capacity	Sponge Iron India Andhra Pradesh	<b>Metallurgical</b> Industry	Engineering Supply Supervision
02	Pulverised Fuel Firing System-Sponge Iron Kiln Waste Heat Boiler Unit-1	4 Million Kcal/hr Capacity	Sponge Iron India Andhra Pradesh	<b>Metallurgical</b> Industry	Engineering Supply Supervision
03	Piping Engineering	Boiler Project	Deutsche Babcock Tamilnadu	<b>Engineering</b>	Engineering
04	Balancing (Feed Water System) Equipment for Heat Recovery Steam Generator	For 1 x 5 MW Gas Turbine Heat Recovery Steam Generator	Akai Impex Union Territory	<b>Petro-chemical</b> Industry	Engineering Supply Supervision
05	Sterilizers	For Palm Oil Mill	Palmtech India Andhra Pradesh	<b>Palm Oil</b> Industry	Engineering Supply Erection
06	Gallery Structures	For Handling Plant	Fenner India Tamilnadu	<b>Fertilizer</b> Plant	Manufacture Supply
07	Deaerator with Tank	25 Cu.M/hr	DSQ Beverages Tamilnadu	<b>Food</b> Industry	Engineering Supply
08	Steam Generation & Distribution System	Steam Generation Plant with 2 x 500 kg/hr Boilers along with complete piping and auxiliaries	KERAFED Kerala	<b>Food Oil</b> Industry	Engineering Supply Supervision
09	Tangential Overfire Air System - 2 Nos.	For 40 TPH Boiler	ICL Sugars Ltd. Karnataka	<b>Sugar</b> Industry	Engineering Supply

## 8.0 FABRICATION AND PROCESS EQUIPMENT

<i>Products</i>	<i>Description</i>	<i>Customer</i>
<b>Power Boiler Components</b>	HP/LP Steam Piping Electrostatic Precipitator - Shock Bar Assy Casing Sheets Funnel Frame Parts Assy Insulation Housing Vertical Beams Air Preheater - APH Assy Tube Sheet Fan Components - Impellers Outer volute casing Stator Parts Silencers Dampers	BHEL Piping Centre * BHEL, Ranipet NTPC
<b>Heat Exchangers</b>	SO2 Cooler Gas Cooler Salt Bath Cooler Vam Storage Temperature Control Unit Air Cooled Condenser	MRF TCL Snowcem EID Parry
<b>Pressure Vessels</b>	Expansion Vessel Hot Can / Calendria Steam Accumulator	MRF TCL
<b>Autoclaves</b>		Ramco