



TBWES



## Waste to Energy Solutions

Leveraging technology for a cleaner and greener future



# Our MISSION

Conserving **Resources**  
to **Preserve the Future.**

## Thermax Babcock & Wilcox Energy Solutions (TBWES)

TBWES, a wholly-owned subsidiary of Thermax Limited provides equipment and complete solutions for generating steam for process and power needs through the combustion of various solid, liquid and gaseous fuels, as well as through heat recovery from turbine/engine exhaust and (waste) heat recovery from industrial processes. TBWES also offers heaters for various applications in the chemical, petrochemical and refinery segments. Its services arm offers renovation and modernization solutions for old boilers and heaters. TBWES has rich experience in indigenising technologies and handling different types of complicated wastes like Spent Coffee Grounds, Spentwash, Palm Waste, Empty Fruit Bunch, Refuse Derived Fuel etc.



## The growing need

The fuel source for steam & power has been continuously changing. This change is driven by availability, fuel costs & environmental considerations. Decarbonization and sustainability are becoming key drivers for energy transition. We believe in providing greener and cleaner solutions to deliver our promise of **Conserving Resources to Preserve the Future.**

Our approach has always been to provide indigenized advanced solutions for combusting non-recyclable solid waste, agricultural waste, Refused Derived Fuel (RDF) and other biofuels to produce energy.



### TBWES at a glance

#### Expertise

in manufacturing  
subcritical and  
supercritical boilers

**275+**

Grate Fired  
Boilers  
installed

**2,500+**

successful boiler  
installations in  
55+ Countries



## Our Waste To Energy (WTE) Solutions

### WTE boilers for Industrial Waste

1. Non-Recyclable Solid Waste (NRSW) boilers
2. FlexiSource™ boilers
3. Scheduled industrial waste
4. Agro-waste fired boilers

### WTE Heat Recovery Boilers

1. Downstream of Waste Gasifier
2. Downstream of Rotary Kiln
3. Downstream of Stokers/Incinerators

### WTE Boilers for MSW/RDF

1. Refuse Derived Fuel (RDF) fired boilers



Manufactured as per Technology developed by TBWES



## Reciprocating Grate Fired WTE Boiler - NRSW, Scheduled Waste

- Special inclined Reciprocating (pusher) Grate technology with better efficiency.
- Single drum & bi-drum designs available
- The furnace is sized for complete combustion, carryovers and also to ensure proper residence time of 2 sec at >850 C for complete combustion of fuel and to decompose the Dioxin/Furans
- Suitable pressure part arrangement & metallurgy for corrosion protection
- Special refractory lining provision for better boiler life as per fuel
- Suitable for firing irregular shape fuel
- Integrated flue gas cleaning system with dry scrubbing and bag filter



### FlexiSource™ Solution to your energy challenges

- Automated & digitally enabled combustion technology for ensuring better controllability & efficient combustion of multi-waste fuel.
- Low Carbon loss in ash
- Tall furnaces with second generation secondary air jets for ensuring complete combustion of volatiles
- Vertical & Horizontal models offered
- Special feeding systems to enable multiple fuel mix firing
- Wide range of fuel calorific value with irregular shape
- Periodic online cleaning systems with provision of continuous cleaning systems depending on the fuel.
- Integrated flue gas cleaning system with dscrubbers, circulating systems complemented with bag filter or ESPs depending on the fly ash & gas compositions



## Heat Recovery WTE Boilers

- Multi pass heat recovery boiler downstream of Kilns or Gasifiers or Stokers with empty passes to ensure destruction of harmful pollutants.
- We offer interface engineering with multi-pass vertical as well as horizontal boiler arrangements

Conserving Resources,  
Preserving the Future.



Air Pollution  
Control



Boiler and  
Heater



Build-Own  
-Operate



Chemicals



Cooling



Projects and  
Energy  
Solutions



Process  
Heating



Renewable  
Energy



Water and Waste  
Solutions




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