AKAYA
ENGINEERING LLP

(A Joint venture with Dehu Group)

DEHU®

AKAYA ENGINEEIRNG WASTE TO ENERGY SOLUTIONS

Visit Our Website
www.akayaengineering.com

WHAT IS RDF (REFUSE-DERIVED FUEL)?

Refuse-Derived Fuel (RDF) is a fuel produced from various types of waste, which include non-recyclable plastics, paper, cardboard, textiles, and other combustible materials. It is used to generate energy through combustion in industrial boilers, cement kilns, and power plants. RDF is an alternative to traditional fossil fuels and contributes to waste management and energy recovery.

Why RDF is Important

Environmental Benefits:

Waste Reduction: Helps divert waste from landfills.

Carbon Footprint: Lower carbon emissions compared to conventional fossil fuels.

Resource Efficiency: Utilizes waste materials that would otherwise be disposed of

Economic Advantages:

Cost Savings: Cheaper than traditional fossil fuels.

Waste Management: Provides a solution for managing municipal and industrial waste.

Regulatory and Policy Support:

Many governments support RDF use through incentives and regulations to promote renewable energy and sustainable waste management.

AKAYA ENGINEERING PROVIDES ONE STOP SOLUTION FOR WASTE TO ENERGY PLANTS....

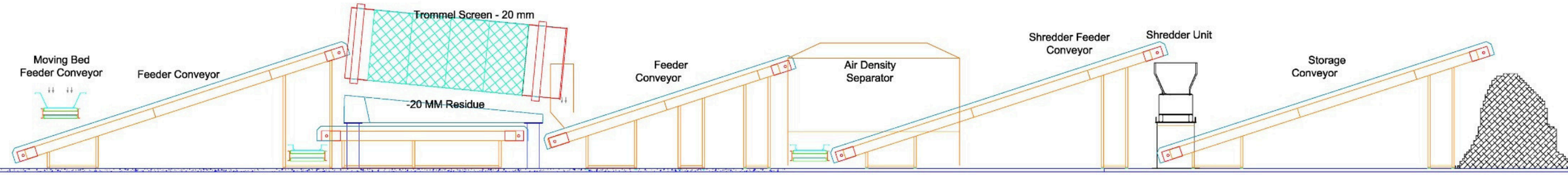
WASTE TO ENERGY PLANTS

PRE-PROCESSING / SEGREGATION OF FUEL

POWER PLANT

AIR POLLUTION CONTROL EQUIOMENT

PRE-PROCESSING / SEGREGATION OF FUEL



Pre-processing of Refuse-Derived Fuel (RDF) involves several steps to convert municipal solid waste (MSW) and other waste streams into a suitable fuel for combustion in boilers or other thermal systems. Effective pre-processing ensures that RDF has consistent quality, appropriate calorific value, and is free from contaminants that could harm combustion systems or produce harmful emissions

Akaya Engineering can Provide complete Pre-Processing / Preparation equipment like:

1. Trommel / Duster Drum (For RDF)
2. Air Density Separator (For RDF)
3. Shredder (For RDF)
4. Balers (For Biomass Waste)

BROWN FIELD PROJECT (RETROFITTING SOLUTIONS)

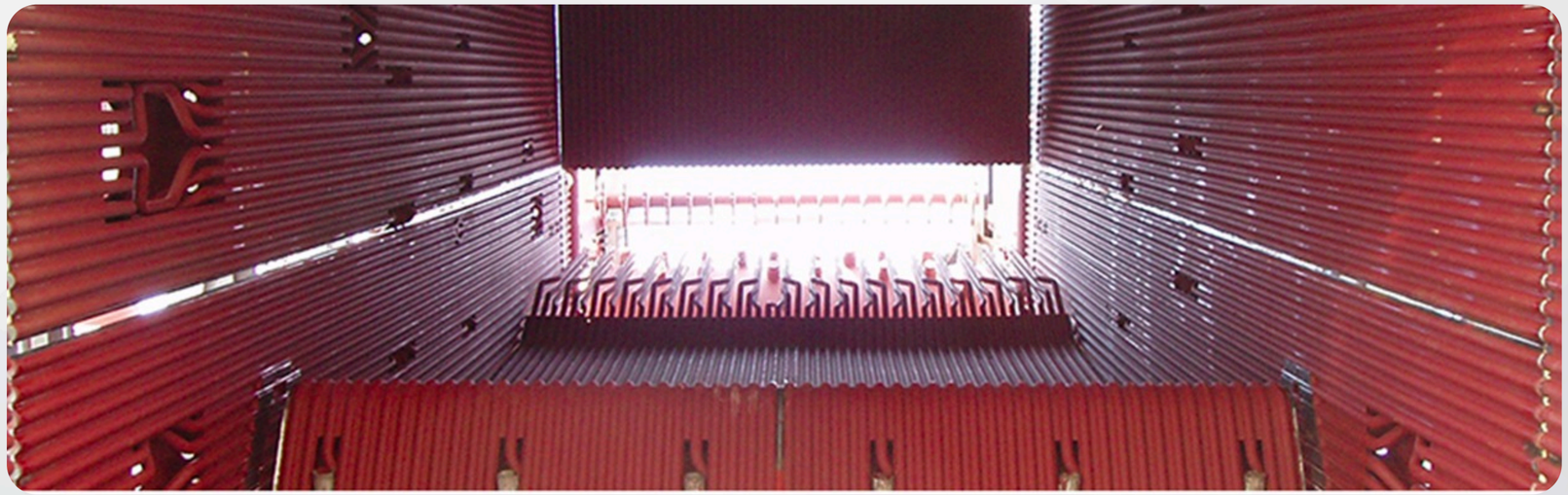
Amid the prevailing downturn in the paper industry, retrofitting stands out as a strategic remedy offering swift returns requiring only modest capital investment. Akaya Engineering offers two retrofitting solutions tailored to meet the specific steam consumption requirements of each customer :

- **Solution for Existing Paper Plant Machinery with unchanged Steam Consumption**

Akaya Engineering can retrofit client’s existing boiler and can make it compatible for firing RDF by Adding /Refurbishing all the necessary equipment's required for Efficient Combustion and implementing all the pollution control norms with **Payback Being less than 3 months**

- **Solution for New Paper Plant Machinery with Increased Steam Consumption**

Akaya Engineering can provide old boiler with retrofitting it to make compatible for RDF firing and matching the steam consumption required by the client with **Payback Being less than 6 months**



AIR POLLUTION CONTROL EQUIPMENT

Controlling pollution in Waste firing is crucial to ensure compliance with environmental regulations and to minimize the environmental impact of RDF combustion. Effective pollution control strategies involve a combination of pre-combustion, combustion, and post-combustion measures to manage emissions of pollutants such as particulate matter (PM), sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), dioxins, furans, heavy metals, and other toxic compounds.
A specializes in Providing comprehensive Solution considering different Regulations :

1) Particulate Matter Control

- Electrostatic Precipitators (ESP)
- Baghouse Filters
- Cyclone Separators

2) Sulfur Oxides (SOx) Control

- Flue Gas Desulfurization (FGD)

3) Nitrogen Oxides (NOx) Control

- Selective Non Catalytic Reduction (SNCR)

4) Activated Carbon and Lime Dosing System

ELECTRO STATIC PRECIPITATORS

BAG FILTER

SCRUBBER

WHY AKAYA ENGINEERING FOR RDF ?

Our Journey and Expertise

Successful Projects: With more than 2500 Tons of RDF Burning in our Supplied Boilers Daily. We have completed numerous successful Retrofitting projects across various industries, helping our clients transition to RDF with minimal disruption and maximum benefits.

Our Commitment to Sustainability: We are dedicated to promoting sustainable practices through our innovative solutions. By enhancing the efficiency of RDF combustion and reducing environmental impact, we support industries in their journey towards greener operations.

Advanced Technologies and Systems

We utilize state-of-the-art technologies which have led to many Innovations Like:

- Best in class retrofitting kits with short paybacks and high durability.
- Special 3-pass design for best-in-class combustion with minimum cleaning cycle.
- India’s First Dual Combustion Technology on AFBC + RG Combustion system firing RDF
- Increasing the Steam Temperature to 490°C with Industry Standard being 410°C
- Increasing the life of Superheater by considering special manufacturing techniques and thus Decreasing Down time with Increased Production.
- Increasing the uptime of the boiler (MINIMUM 330 DAYS PER YEAR).
- Compact Design Solutions with Minimum Extra Space Requirements.

OUR PRESTIGIOUS

PAPER MILL CLIENTS

GARG DUPLEX & PAPER MILL PVT. LTD.

NEW BONANZA INDIA LTD

NIKITA PAPER LTD

JANKI NEWSPRINT LTD

Products & Services

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- Pressure Parts
- Non Pressure Parts
- Air Pollution Control Equipment
- Steam at Cost
- **Retrofitting & Renovation**
- Operation & Maintenance
- Modernization & Efficiency Improvement
- Fuel Conversion & Capacity Enhancement

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Thank You

For Your Attention

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