

# From Waste to Power: Optimizing RDF Boiler Efficiency with Advanced Automation



Paper mills based in Northern India are committed to environmental sustainability. Due to the rising cost of power, they were looking for a new solution & RDF boiler seems to be the best in the present scenario. RDF boiler system for power generation along with complete electrical automation & efficient **Grate control** is required to ensure the complete burning of RDF.

Optimizing RDF boiler operations is essential for improving energy production, safety, and environmental impact.

## Our Engineering Solution



MCC Panel



DCS Panel



Grate Control System



Field Instrument

## Joint operation of existing boiler & New RDF Boiler

Our technical solutions ensure that your current boiler is seamlessly integrated with a new RDF Boiler at minimal cost for electrical and automation with efficient **Grate Control**.

## How our Automtions Solutions Improved RDF Operations



### Optimized Power Generation

Additional Power Availability of 2.5-4 MW



### Emission Control

Reduced greenhouse gas emissions by 30% Annually



### Predicative Maintenance

Minimized boiler downtime by 500 to 600 hours annually by using an optimized automation solution



### Improved Boiler efficiency

Improve boiler efficiency by 4 to 5 % because of better steam control



### Reduction in cost of Power generation

Using optimized grate control there is a substantial reduction of power generation under present conditions the cost of generating power from multi-fuel has been reduced by approximately 50%.

# Optimizing Grate Control System with Advanced DCS Control

## Grate Control Operations

The step grate combustion chamber for boilers is a system that allows the combustion of a wide variety of solid waste, from biomass to RDF. Powered with our Advanced DCS control Logic, the furnace with step grate enables the combustion to be modulated and adapted to fuels with changing characteristics. In addition, a step grate combustion chamber's robustness and automatic cleaning system allow the plant to work more than 8,000 hours per year.

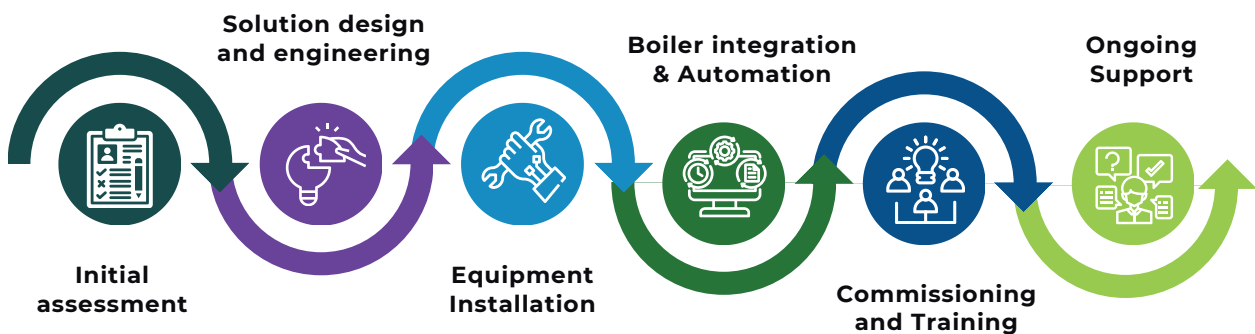
## DCS

Our DCS is designed to efficiently meet the control system needs of various industrial applications. It includes model-based advanced predictive control technology for loop-control optimization. It utilizes Honeywell's patented Fault Tolerant Ethernet (FTE) capability ensures greater reliability.

### The key features of this solution includes:

- 1. Built-in function blocks and pre-built templates.
- 2. Rich function libraries to easily create control strategies.
- 3. Support for Custom Algorithm Blocks (CABs) and application development to suit industry and application-specific requirements.
- 4. User-friendly tools such as Control Builder, Enhanced Bulk Builder, Quick Builder, Smart Reporting and HMI Web Solution Pack.
- 5. Simple Human Machine Interface (HMI) including Abnormal Situation Management (ASM®) Consortium-compliant displays .
- 6. Alarm management tools such as alarm shelving, alarming tracker, and dynamic alarm suppression.

## RDF Boiler Implementation Process



## Our Flagship Projects on RDF Boiler

S/N	PLANT	VIZEN SCOPE
01	Silvertoan Paper	HT Panels, Bus Duct, PCC, MCC, VFD and DCS Panels
02	KK Duplex	HT Panels, Bus Duct, PCC, MCC, VFD and DCS Panels
03	Nikita Paper	MCC, VFD and DCS Panels
04	Bahl Paper	MCC and VFD Panels
05	Silverton Paper	DCS Panels ( Under commissioning)
06	Maruti Paper	MCC, VFD DCS Panels ( Under commissioning)
07	Garg Duplex	HT Panels, VFD and DCS Panels ( Under commissioning)
08	Meenu Paper	HT Panels, VFD and DCS Panels ( Under commissioning)