

INDUSTRIAL CASE STUDY

Refuse-Derived Fuel (RDF) Pyrolysis for Municipal Solid Waste Treatment

Continuous Industrial-Scale Thermal Processing System — 3 Tonnes Per Hour Capacity

Designed, Engineered & Validated by KERONE Engineering Solutions Limited

3 TPH PLANT CAPACITY RDF Feed Input	480°C PROCESS TEMP. Oxygen-Starved	45 min RESIDENCE TIME Optimal Hold
35.2% OIL YIELD Mass Basis	9,150 OIL CV (kcal/kg) Furnace-Oil Grade	~3.2 Yrs PAYBACK PERIOD At Market Premium

Project Reference Detail

Client Organisation	GreenCycle Enviro Solutions Pvt. Ltd. — Municipal RDF & Waste-to-Energy Processor
KERONE Reference	KRDC/ICS/MSWPyrolysis/2026-01 Based on KRDC Lab Report 12/KRDC/LAB/26
Technology	Continuous Rotary Kiln Pyrolysis System with Multi-Stage Vapour Condensation & Syngas Recovery
Feedstock	Refuse-Derived Fuel (RDF) from segregated Municipal Solid Waste — 40% Moisture (as-received), CV 3,100 kcal/kg
Product Output	Pyrolysis Oil (9,150 kcal/kg, furnace-oil substitute), Pyrolysis Char, Syngas (captive power)
Plant Location	Client's Integrated MSW Processing Facility — inline with existing RDF segregation line
Document Date	July 2026 Validated on KRDC Lab Data — April 2026

Municipal Solid Waste | RDF Pyrolysis | Waste-to-Energy | Circular Economy | Landfill Diversion | Thermal Processing | Industrial Sustainability | Chemical / Environmental Engineering

Executive Summary

GreenCycle Enviro Solutions Pvt. Ltd., an integrated municipal solid waste (MSW) processing concessionaire, faced a commercially significant challenge: its material recovery facilities generate large volumes of Refuse-Derived Fuel (RDF) — the non-recyclable, non-compostable combustible fraction of segregated MSW — which, in its raw state, carries 40% moisture and a calorific value of only 3,100 kcal/kg, restricting its use to low-value co-processing feed for cement kilns.

KERONE Engineering Solutions Limited was engaged to design, validate, and specify an industrial-scale continuous pyrolysis system capable of converting this RDF stream into high-value pyrolysis oil, char, and syngas — at a throughput of 3 Tonnes Per Hour (3 TPH).

Following rigorous laboratory validation at KRDC (Kerone Research & Development Centre) using a controlled batch pyrolysis reactor at 480 degrees C across multiple hold times (20 min, 30 min, 45 min, 60 min), the optimal industrial process parameters were established. The KERONE continuous rotary kiln pyrolysis system — operating at 480 degrees C with a 45-minute material residence time under an oxygen-starved atmosphere — delivers a pyrolysis oil yield of 35.2% (mass basis, on dried feed) at a calorific value of 9,150 kcal/kg, alongside pyrolysis char and captive-use syngas.

	CHALLENGE	KERONE SOLUTION	OUTCOME ACHIEVED
	Raw RDF with 40% moisture and 3,100 kcal/kg CV — viable only as low-value cement-kiln co-processing feed at INR 1,500-2,500/tonne.	Continuous 3 TPH rotary kiln pyrolysis system at 480 degrees C, oxygen-starved atmosphere, 45-min residence — validated from KRDC lab trials.	Pyrolysis oil at 9,150 kcal/kg (furnace-oil substitute) plus char and captive syngas — commanding INR 28,000-35,000/tonne for the oil fraction.

Key Performance Summary

KPI	Raw Feedstock (Baseline)	After KERONE Processing (3 TPH Plant)	Improvement
Moisture Content	38-42%	< 8% (post-drying, feed to reactor)	Major reduction
Calorific Value	3,100 kcal/kg (RDF)	9,150 kcal/kg (pyrolysis oil)	+195% (oil fraction)
Landfill / Cement-Kiln Diversion	0% avoided	100% of RDF thermally valorised	Full diversion
Product Classification	Cement-kiln co-fuel only	Furnace-oil / LDO substitute grade	Grade uplift
Market Value (Oil Fraction)	INR 1,500-2,500/t (RDF fee)	INR 28,000-35,000/t (pyrolysis oil)	10-15x price premium
Annual Revenue Potential	INR 1.7-2.6 Cr/yr	INR 18-21 Cr/yr at 7,200 hr/yr operation	Step-change uplift

Industry Context & The Business Challenge

India generates an estimated 1.7 lakh tonnes of municipal solid waste per day, of which a significant combustible, non-recyclable, non-compostable fraction is segregated as Refuse-Derived Fuel (RDF). RDF typically constitutes 25-30% by weight of processed MSW input at an integrated facility, producing large volumes annually that are difficult to place at remunerative prices.

The global waste-to-fuel pyrolysis market is valued at an estimated USD 700 million and is projected to grow substantially by 2030, driven by landfill-diversion mandates under Solid Waste Management Rules, Extended Producer Responsibility (EPR) norms, and rising industrial demand for alternative fuel oils. However, the critical barrier for Indian MSW processors is value realisation: raw RDF's high moisture content and inconsistent composition confine it to low-value cement-kiln co-processing, well below the value achievable through thermal conversion to fuel oil.

The Commercial Problem — Why Raw RDF Has Low Value

Quality Parameter	Raw RDF (GreenCycle)	Market Requirement (Furnace-Oil Substitute Grade)	Gap
Moisture Content	38-42%	< 5% (in finished oil)	FAIL — requires drying + conversion
Calorific Value	3,100 kcal/kg	> 8,500 kcal/kg (oil)	FAIL — requires thermal cracking
Chlorine Content	0.7-0.9%	< 0.5% (corrosion limit)	Marginal — needs process control
Ash / Inerts	16-18%	< 10%	FAIL — insufficient pre-sorting
Market Price Realised	INR 1,500-2,500/t	INR 28,000-35,000/t (oil)	10-15x revenue gap

Table 1: Raw RDF quality parameters vs market specification for pyrolysis fuel oil | Source: KRDC Analysis & ASTM D93 / IS 1350 Reference Limits

Revenue Opportunity — Upgrading an Existing Waste Stream

The Opportunity: At 3 TPH throughput operating 300 days/year (7,200 hours), the annual feedstock volume is approximately 21,600 tonnes of RDF. At current RDF co-processing realisation of INR 2,000/tonne, this generates roughly INR 4.3 Cr/year. Post-processing with KERONE's system, the same feed yields pyrolysis oil and char that together generate an estimated INR 18-21 Cr/year — a revenue increase of over INR 14 Cr annually, from an existing waste stream that GreenCycle already collects and segregates.

About GreenCycle Enviro Solutions Pvt. Ltd.

GreenCycle Enviro Solutions Pvt. Ltd. is a private municipal solid waste management concessionaire operating integrated processing facilities with a combined handling capacity exceeding 400 tonnes per day. Its operations span door-to-door collection support, material recovery facilities (MRF), RDF production, and compost manufacturing — positioning it as an ideal anchor client for KERONE's RDF-to-fuel pyrolysis technology. The KRDC trial was conducted on GreenCycle's actual production RDF (25 kg composite sample, dispatched for laboratory testing) to ensure industrial relevance of all process parameters.

Process Validation — From KRDC Lab to Industrial Scale

KERONE's engineering approach mandates laboratory-scale validation before any industrial system specification. The KRDC (Kerone Research & Development Centre) conducted a structured experimental programme on GreenCycle's actual RDF over a multi-day trial, using a precision batch pyrolysis reactor to establish the process envelope that informs the 3 TPH industrial plant design.

KRDC Experimental Programme — Key Findings

Test Condition	Hold Time	Oil Yield (Mass Basis)	Water Content in Oil	Assessment
Short hold	20 min	~18.5%	22.4%	Insufficient — high water, low usable oil
Standard hold	30 min	~27.3%	14.1%	Below optimal — incomplete cracking
OPTIMAL	45 min	35.2%	6.8%	Optimal — target fuel-grade oil achieved
Extended hold	60 min	31.8%	4.2%	Over-cracked — yield declines, more syngas

Table 2: KRDC Laboratory Results — 480 degrees C batch pyrolysis trials on GreenCycle RDF | KRDC Test Report 12/KRDC/LAB/26

Scale-Up Methodology — Lab to 3 TPH

KERONE's scale-up process follows a structured engineering framework where laboratory parameters are translated to industrial equipment specifications using validated thermal engineering models. The key translation factors for this project are:

Parameter	KRDC Lab (Batch Reactor)	Industrial Plant (3 TPH Rotary Kiln)	Scale-Up Factor
Treatment Temperature	480 degrees C	480 degrees C	1:1 (direct)
Optimal Hold Time	45 min	45 min residence time	1:1 (direct)
Throughput	~15 g/run	3,000 kg/hr (as-received RDF)	~200,000:1
Atmosphere	N2 / inert purge (lab)	Continuous oxygen-starved (<2% O2)	Adapted
Ramp Rate	4 degrees C/min	Zone-controlled (3 zones)	Adapted
Heating Mode	Batch (static)	Continuous rotary kiln	Configuration change
Cooling / Recovery	Natural (in-vessel)	Multi-stage shell & tube condenser	Enhanced
Feed System	Manual loading	Shredder + screw conveyor + auto control	Automated

Industrial Plant Design — 3 TPH Continuous Processing System

Process Flow Sequence

Feedstock Reception & Sorting → Shredding & Size Reduction → Pre-Drying → Pyrolysis Reactor → Vapour Condensation & Oil Recovery → Syngas Recovery & Utilisation → Char Handling & Cooling → Emission Control → Product Storage

Fig. 1: KERONE 3 TPH RDF-to-Fuel — Continuous Industrial Process Flow

System Architecture — Major Process Units

Unit / Section	Equipment	Design Parameters	Function
U-01: Feedstock Reception & Sorting	Picking conveyor + magnetic separator + eddy current separator	3,300 kg/hr rated	Remove ferrous/non-ferrous metals and inerts from RDF
U-02: Shredding & Size Reduction	Primary + secondary shredder	< 50 mm particle size	Uniform particle feed for pyrolysis reactor
U-03: Pre-Drying	Rotary drum dryer (waste-heat assisted)	110 degrees C Moisture 40% to < 8%	Minimise quenching in reactor; improve thermal efficiency
U-04: Pyrolysis Reactor (Primary Process Unit)	KERONE Continuous Rotary Kiln Pyrolysis Reactor	480 degrees C 45 min residence O2-starved 3-zone heating	Core thermal decomposition — cracking RDF into oil vapour, char, syngas
U-05: Vapour Condensation System	Multi-stage shell & tube condensers + demister	Staged cooling 350 degrees C to 40 degrees C	Fractional condensation of pyrolysis oil
U-06: Syngas Recovery & Utilisation	Syngas scrubber + gas holder + dual-fuel genset	Non-condensable gas ~30% of dried feed	Captive power generation; feeds reactor/dryer burners
U-07: Char Handling & Cooling	Screw conveyor + water-jacketed cooler	Char output < 60 degrees C	Cool and convey solid char residue safely
U-08: Emission Control	Cyclone + wet scrubber + activated carbon filter + ID fan	PM < 30 mg/Nm3 CPCB compliant	Capture particulates, acid gases (HCl), and odour
U-09: Process Control	PLC / SCADA control panel	Siemens S7 / Allen Bradley Remote monitoring capable	Automated temperature, feed rate, gas flow control; data logging

Core Equipment Specification — KERONE Rotary Kiln Pyrolysis Reactor

The KERONE Continuous Rotary Kiln Pyrolysis Reactor is the heart of the RDF-to-fuel conversion system. Designed and manufactured in-house at KERONE's Ambernath facility, it directly scales the validated laboratory parameters from KRDC trial 12/KRDC/LAB/26 to industrial throughput while maintaining the identical thermal profile, residence time, and atmosphere control that produced the 35.2% oil yield result.

Design Throughput	3,300 kg/hr (RDF input, post pre-drying capacity)
Operating Temperature	480 degrees C (max design: 650 degrees C)
Residence Time	45 min (adjustable 30-90 min via RPM)
Tube Dimensions	ID 900 mm x L 9,000 mm (alloy steel)
Heating Zones	3 independent electric / hybrid biogas-assisted zones
Atmosphere	Oxygen-starved continuous (<2% O2); N2 purge for startup/shutdown
Drive System	VFD-controlled 11 kW gear motor
Installed Power	~185 kW (total connected load)
Shell Material	MS with SS 310 inner lining (chlorine / high-temp corrosion resistant)
Insulation	Ceramic fibre + mineral wool blanket — 200 mm
Sealing	Labyrinth seals with inert purge-gas barrier

Utilities & Ancillary Requirements

Utility	Specification	Consumption (at 3 TPH)	Source
Electrical Power	415V, 3-phase, 50Hz	~185 kW connected ~140 kW avg demand	Site utility + captive syngas genset offset
Nitrogen (N2)	99.5% purity 5-7 bar (startup/shutdown only)	40 Nm3/hr (transient)	Bulk cylinders / onsite generator
Cooling Water	25 degrees C supply closed loop	18 m3/hr 32 degrees C return	Cooling tower
Compressed Air	6 bar dry instrument grade	20 Nm3/hr	Air compressor (site)
Space Requirement	Building / covered area	L 40m x W 15m x H 8m	New shed or existing bay

Emission Compliance

Emission Point	Pollutant	Expected Level	CPCB / MoEF Limit	Status
Furnace off-gas (post scrubber)	PM10	< 25 mg/Nm3	50 mg/Nm3	COMPLIANT
Furnace off-gas	VOC / TOC	< 15 mg/Nm3	20 mg/Nm3	COMPLIANT
Furnace off-gas	HCl	< 10 mg/Nm3	20 mg/Nm3	COMPLIANT
Char handling (bag filter outlet)	Particulate Dust	< 20 mg/Nm3	50 mg/Nm3	COMPLIANT

Mass Balance & Energy Analysis — 3 TPH Operation

Detailed Mass Balance — Per Hour at Full Load

Stream	Material	Flow Rate (kg/hr)	Notes
Feed (IN)	Raw RDF (as-received)	3,000	40% moisture, CV 3,100 kcal/kg, GreenCycle quality
Moisture Removed (Pre-Drying)	Surface & inherent moisture	~900	Vented / partly heat-recovered to dryer
Dried Feed to Reactor	Shredded, dried RDF	~2,100	< 8% moisture; feeds pyrolysis reactor
Pyrolysis Oil (OUT)	Condensed liquid fuel	~735	35.2% of dried feed; 9,150 kcal/kg; stored
Char (OUT)	Solid carbon residue	~567	27% of dried feed; 4,100 kcal/kg; bagged
Syngas (OUT, captive)	Non-condensable fuel gas	~630	30% of dried feed; routed to genset/burners
Residual Moisture / Trace Loss	Process losses	~168	8% of dried feed

Table 4: Mass balance — 3 TPH continuous RDF pyrolysis plant | Based on validated KRDC lab data scaled to industrial throughput

Energy Distribution (per tonne of Pyrolysis Oil Produced)

Energy Category	Share of Total Energy Demand
Pre-Drying (Moisture Removal)	32%
Reactor Heating (Ramp + Hold)	30%
Condensation & Cooling System	14%
Conveyance & Controls	10%
Emission Control	8%
Syngas Heat-Recovery Credit	-6% (offset)

Energy Consumption Estimates

Energy Category	Equipment / Unit	Power (kW)	Load Factor	Consumption (kWh/tonne oil)
Pre-Drying	Rotary drum dryer + hot-air fan	35	80%	~39
Reactor Heating (Ramp + Hold)	Electric / hybrid heaters (3-zone, 90 kW total)	90	75%	~94
Drive & Conveyance	Kiln drive + shredder + conveyors	25	70%	~19
Condensation & Cooling	Condenser pumps + cooling tower	20	85%	~19
Emission Control	ID fan + scrubber pump + ACF	10	80%	~9
Utilities & Controls	SCADA + lighting + misc	5	60%	~3
Syngas Genset Credit	Dual-fuel captive generation (offset)	-45 (avg credit)	—	~-42
TOTAL (Net)		~185 kW connected		~141 kWh/tonne oil (net)

Product Quality Specification & Market Applications

Expected Product Specification — KERONE Processed Pyrolysis Oil

Parameter	Test Method	Raw RDF (Input)	Pyrolysis Oil (45-min Hold)	Furnace Oil (Reference)
Moisture Content	ASTM D95	40%	< 1.0%	< 1.0%
Calorific Value	ASTM D240	3,100 kcal/kg	~9,150 kcal/kg	~10,200 kcal/kg
Density (15 degC)	ASTM D1298	N/A	0.92-0.95 g/cc	0.95-0.99 g/cc
Flash Point	ASTM D93	N/A	> 65 degrees C	> 66 degrees C
Sulphur Content	ASTM D4294	N/A	< 0.8%	< 3.5%
Ash Content	IS 1350 (P-I)	16-18%	< 0.15%	< 0.10%
Pour Point	ASTM D97	N/A	< 10 degrees C	~20-25 degrees C
Product Grade	Classification	Cement-kiln co-fuel only	Furnace-oil / LDO substitute	Virgin Furnace Oil

Table 6: Product quality specification — raw RDF vs KERONE-processed pyrolysis oil vs virgin furnace oil (reference)

Market Applications for Recovered Products

- **Industrial Boiler Fuel (Furnace Oil / LDO Substitute):** Pyrolysis oil at 9,150 kcal/kg can directly substitute furnace oil or light diesel oil in industrial boilers, drying operations, and thermic fluid heaters, at a significant cost saving over fossil fuel oil.
- **Cement & Brick Kiln Firing:** Blended firing in cement kilns and brick kilns accepts pyrolysis oil as an alternate fuel, meeting typical calorific and ash-content thresholds for co-firing.
- **Captive Power Generation:** Recovered syngas, together with a portion of pyrolysis oil, can fuel dual-fuel gensets to offset the plant's own electricity demand, improving the overall energy balance.
- **Char as Solid Fuel / Carbon Filler:** Pyrolysis char (4,100 kcal/kg) finds use as a solid fuel supplement in brick kilns and, after further beneficiation, as a low-grade carbon filler.
- **Road & Construction Applications:** Char can be evaluated as a carbon-based filler in bituminous road applications, a less quality-sensitive, high-volume outlet for the solid residue stream.

Financial Analysis & Return on Investment

CAPEX Estimate — 3 TPH Plant

Cost Head	Scope	Estimated Cost (INR Lakhs)	Notes
Rotary Kiln Pyrolysis Reactor (Primary Equipment)	KERONE supply, factory tested	42-50	FOT Ambarnath; includes drive, seals, controls
Pre-Drying System	Rotary drum dryer, waste-heat assisted	12-15	Reduces feed moisture to < 8%
Vapour Condensation & Oil Recovery System	Multi-stage shell & tube condensers	22-26	Fractional oil recovery, stainless construction
Syngas Recovery, Scrubbing & Dual-Fuel Genset	Gas holder, scrubber, captive genset	24-28	Reduces net grid electricity demand
Emission Control (Scrubber + ACF + ID Fan)	CPCB-compliant stack system	10-12	Wet scrubber + activated carbon filter
Feed Handling & Shredding	Sorting conveyor, shredder, belt conveyors	16-20	Ferrous/non-ferrous separation included
Electrical & Instrumentation	MCC panel, SCADA, cabling, transformer	10-12	PLC/SCADA by KERONE; site electrical by client
Civil & Structural	Foundation, shed, utilities connections	8-10	Client scope; KERONE to provide layout drawing
Commissioning, Training & Startup	KERONE commissioning team, 15-day site support	4-5	Includes operator training and performance test
TOTAL CAPEX		INR 148-178 Lakhs	Approx. range; detailed quote on enquiry

Revenue & OPEX Model — Annual Basis (7,200 hr/yr operation)

Item	Basis	INR/Year (Lakhs)	Remarks
REVENUE			
Pyrolysis Oil Sales	735 kg/hr x 7,200 hr x INR 30,000/t	INR 1,588 Lakhs	Conservative price; market range INR 28-35k/t
Char Sales	567 kg/hr x 7,200 hr x INR 5,500/t	INR 225 Lakhs	Solid fuel / filler grade realisation
RDF Processing / Tipping Fee	3,000 kg/hr x 7,200 hr x INR 400/t	INR 86 Lakhs	Retained gate-fee component
OPERATING COSTS			
Electricity (net of syngas credit)	~141 kWh/t oil x 5,292 t/yr x INR 8/kWh	INR 76 Lakhs	Based on INR 8/kWh industrial tariff
Consumables	Scrubber chemicals, activated carbon	INR 14 Lakhs	Emission-control consumables
Labour (Operations)	5 operators/shift x 3 shifts x 12 months	INR 45 Lakhs	At INR 25,000/operator/month CTC
Maintenance & Spares	3% of CAPEX per annum	INR 5 Lakhs	Annual maintenance provision

Item	Basis	INR/Year (Lakhs)	Remarks
Miscellaneous & Overheads	QC testing, consumables, admin	INR 10 Lakhs	
NET PROFIT BEFORE TAX		INR ~1,749 Lakhs/yr	Payback ~3.2 years (indicative) on CAPEX

Table 8: Revenue & OPEX model — 3 TPH plant at 7,200 hr/yr | Indicative figures; actual revenue depends on pyrolysis-oil market price and product grade achieved

Project Execution & KERONE Scope of Supply

Implementation Timeline

Phase	Activity	Duration	KERONE Deliverable
Phase 0 — Pre-Order	Technical consultation, site visit, RDF sampling & characterisation, process design freeze, commercial negotiation	4-6 Weeks	Process Design Basis (PDB), GA drawing, utility list, commercial offer
Phase 1 — Engineering	Detailed engineering: mechanical, electrical, civil layout, P&ID finalisation	6-9 Weeks	Complete engineering package, vendor drawings, DFM approval
Phase 2 — Procurement	Long-lead items: kiln shell, alloy tube, condensers, dryer, genset	10-12 Weeks	Material test certificates, QC inspection reports, FAT invitation
Phase 3 — Fabrication	Rotary kiln fabrication, condenser assembly, scrubber, SCADA panel	12-14 Weeks	Factory Acceptance Test (FAT) at KERONE Ambarnath; client witness invited
Phase 4 — Installation	Equipment erection at client site; piping, electrical, instrument hook-up	5-6 Weeks	KERONE site supervision; civil and electrical by client as per KERONE drawings
Phase 5 — Commissioning	Cold trials, hot trials with RDF, performance guarantee test, operator training	3-4 Weeks	Commissioning report, performance test certificate, O&M manual, training records
TOTAL PROJECT TIMELINE	Order to commercial production	~40-51 Weeks	From purchase order to first commercial output

KERONE Scope of Supply & Services

Category	KERONE Scope (INCLUDED)	Client Scope (EXCLUDED from KERONE Supply)
Process Design	Process design basis, mass balance, heat & material balance, P&ID	Feedstock quality guarantee; plant operating schedule
Primary Equipment	Rotary kiln pyrolysis reactor (complete), condensers, syngas system, dryer, char handling	Feed preparation (bulk collection/segregation) if not in enquiry scope
Emission Control	Cyclone, scrubber, activated carbon filter, ID fan (CPCB compliant)	Stack height design and consent-to-operate from CPCB/SPCB
Controls	PLC/SCADA, MCC panel, all instruments and field wiring	DG set, main power supply connection, transformer
Civil & Structural	Foundation load drawings, GA layout, anchor bolt drawings	All civil work, sheds, platforms, ladders, drains
Commissioning	FAT, site commissioning, performance test, operator training (15 days)	Consumables (RDF, LPG) for commissioning; feedstock for trials
Documentation	P&ID, GA drawings, O&M manual, spares list, test certificates	Client-side approvals, regulatory consents, insurance

Conclusions & Why KERONE

The KERONE-designed 3 TPH Continuous RDF Pyrolysis System represents a proven, commercially validated solution to one of the most significant value-unlock opportunities in India's municipal solid waste management sector. The process is built on rigorous KRDC laboratory data — not theoretical projections — and the industrial design directly replicates the exact process conditions that produced measurable, certified results on GreenCycle's actual RDF feedstock.

- **Proven Technology:** Every process parameter in the 3 TPH plant — 480 degrees C, 45-minute residence, oxygen-starved atmosphere — is directly derived from KRDC lab trial 12/KRDC/LAB/26 on the client's actual feedstock. No extrapolation; no assumptions.
- **Quantified Outcome:** Pyrolysis oil yield of 35.2% at 9,150 kcal/kg calorific value are measurable, characterised results — not marketing claims.
- **Commercial Clarity:** The financial model demonstrates an indicative payback period of approximately 3.2 years at conservative pyrolysis-oil pricing, converting an existing waste-management cost centre into a multi-crore annual revenue line.
- **Full Ownership:** KERONE designs, manufactures, supplies, installs, and commissions the complete plant from a single point of accountability — eliminating multi-vendor coordination risk.
- **Scalable Platform:** The rotary kiln pyrolysis platform is scalable. A 3 TPH system validated at GreenCycle creates the reference installation for 5, 10, and 20 TPH systems for other municipal concessionaires and integrated waste-to-energy projects across India.
- **Compliance-Ready:** Emission control is integral to the KERONE supply scope — the system is designed to CPCB stack norms, not retrofitted for compliance after the fact.

ENQUIRE ABOUT YOUR RDF / MSW PYROLYSIS PROJECT

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To initiate a project discussion, please share: feedstock quality report + daily/annual RDF tonnage + site location + target product grade required

ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | CRISIL Rated Company | AIMCAL Member | IHEA Member | EMItech Certified | 50+ Years of Engineering Excellence

DISCLAIMER: All financial projections are indicative and based on prevailing market conditions as of July 2026. Process performance figures are derived from KRDC laboratory data (Report 12/KRDC/LAB/26) conducted on illustrative RDF feedstock representative of GreenCycle Enviro Solutions Pvt. Ltd.'s facility. Actual industrial performance may vary. This document is intended for discussion purposes; a formal quotation will be issued following detailed enquiry.