

Recovered Solvent & VOC-Compliant Air from Solvent-Based Paint & Coatings Manufacturing

Continuous Industrial-Scale Regenerative Thermal Oxidation (RTO) System — 20,000 Nm³/hr Capacity

Designed, Engineered & Validated by KERONE Engineering Solutions Limited

20,000 Nm³/hr PLANT CAPACITY Process Air Handled	850 degC OXIDATION TEMP. Ceramic Bed Chamber	1.0 sec RESIDENCE TIME Chamber Hold
99.5 % VOC DESTRUCTION Efficiency (DRE)	95 % THERMAL EFFICIENCY Ceramic Heat Recovery	~2.1 Yrs PAYBACK PERIOD Compliance + Recovery Value

PROJECT REFERENCE DETAIL

Field	Detail
Client Organisation	ChromaCoat Industries Ltd. — Leading Indian decorative & industrial paints manufacturer
KERONE Reference	KRDC/ICS/PaintVOC/2025-02 Based on KRDC Lab Report 63/KRDC/LAB/22
Technology	Regenerative Thermal Oxidizer (RTO) — 3-Bed Ceramic Heat Recovery with Integrated Solvent Condensate Recovery
Feedstock	VOC-laden process air from paint mixing, thinning, tinting & filling operations — 3.8 g/Nm ³ VOC (as-received)
Product Output	Treated stack air < 20 mg/Nm ³ VOC (CPCB-compliant), plus recovered mixed-solvent condensate
Plant Location	Client facility (paint manufacturing plant) — Inline with existing mixing & filling lines
Document Date	June 2026 Validated on KRDC Lab Data — September 2025

Paints & Coatings Manufacturing | VOC Abatement | Solvent Recovery | Regenerative Thermal Oxidation | Industrial Sustainability | Chemical / Process Industries

Executive Summary

ChromaCoat Industries Ltd., one of India's established decorative and industrial paints manufacturers, faced a growing regulatory and commercial challenge: its solvent-based paint mixing, thinning, tinting, and filling operations generate large volumes of VOC-laden process air which, if released untreated, breach CPCB stack emission norms and expose the plant to closure notices, community complaints, and lost export certifications that require documented VOC compliance.

KERONE Engineering Solutions Limited was engaged to design, validate, and specify an industrial-scale continuous Regenerative Thermal Oxidizer (RTO) system capable of destroying VOC-laden air to well within CPCB limits, while recovering reusable solvent condensate — at a throughput of 20,000 Nm³/hr.

Following rigorous laboratory validation at KRDC (Kerone Research & Development Centre) using a pilot-scale regenerative oxidation rig at 850 degrees C across multiple residence times (0.5 sec, 1.0 sec, 1.5 sec), the optimal industrial process parameters were established. The KERONE continuous 3-bed regenerative thermal oxidizer — operating at 850 degrees C with a 1.0-second chamber residence time and ceramic-media heat recovery — delivers VOC destruction efficiency of 99.5%, reducing stack VOC concentration from 3.8 g/Nm³ to below 20 mg/Nm³, while recovering approximately 180 litres/day of reusable mixed-solvent condensate.

CHALLENGE	KERONE SOLUTION	OUTCOME ACHIEVED
VOC-laden process air at 3.8 g/Nm ³ and no abatement system — CPCB non-compliance risk with closure notices and no solvent recovery value.	Continuous 20,000 Nm ³ /hr 3-bed regenerative thermal oxidizer at 850 degrees C, 1.0-sec residence — validated from KRDC pilot trials.	Treated air at <20 mg/Nm ³ VOC, 99.5% DRE, CPCB-compliant stack, plus ~180 L/day recovered solvent condensate.

Key Performance Summary

KPI	Raw Process Air (Baseline)	After KERONE Processing (20,000 Nm ³ /hr Plant)	Improvement
VOC Concentration	3.8 g/Nm ³	< 20 mg/Nm ³	99.5% reduction
Destruction Efficiency (DRE)	No abatement (0%)	99.5%	CPCB compliant
Thermal Efficiency	N/A	95% (ceramic heat recovery)	Auto-thermal operation
Solvent Recovery	0 L/day	~180 L/day recovered condensate	New revenue stream
Odour Complaints (monthly avg.)	8-12	< 1	Community relations uplift
Annual Compliance Risk Exposure	High — CPCB notices, closure risk	Eliminated	Regulatory risk uplift

Industry Context & The Business Challenge

India's decorative and industrial paints & coatings sector produces an estimated 4.5 million tonnes of paints and coatings annually, of which a significant share remains solvent-based, particularly in industrial, wood, and protective coatings segments. Solvent-based manufacturing — mixing, thinning, tinting, and filling — releases VOC-laden process air containing xylene, toluene, butyl acetate, and mineral spirits, typically in the range of 2-6 g/Nm³ at plant exhaust points.

CPCB's VOC emission norms for the paints & coatings industry, tightened progressively since 2019, require stack VOC concentrations below 20 mg/Nm³ for large manufacturing units, alongside VOC content caps on finished decorative paint formulations. Export-oriented manufacturers face additional pressure from REACH and international buyer audits that require documented abatement systems, not just compliant formulations. However, the critical barrier for many Indian paint manufacturers is that legacy plants were built before these norms existed, and retrofitting a compliant, cost-effective abatement system without disrupting production is a significant engineering challenge.

The Commercial Problem — Why Untreated VOC Emissions Carry Cost and Risk

Compliance Parameter	Raw Process Air (ChromaCoat)	CPCB Requirement	Gap
VOC Concentration	3.8 g/Nm ³	< 20 mg/Nm ³ (stack)	FAIL — 190x over limit
Destruction/Removal Efficiency	0% (untreated)	> 98% DRE (typical consent condition)	FAIL — no abatement installed
Odour / Community Complaints	8-12/month	Nil / negligible	FAIL — recurring notices
Consent-to-Operate Renewal	At risk	Abatement system mandatory	FAIL — renewal jeopardised

Table 1: Raw process air parameters vs CPCB stack emission requirement | Source: KRDC Analysis & CPCB VOC Emission Norms for Paints & Coatings Industry

Revenue & Risk Opportunity — Turning a Compliance Cost into a Recovery Asset

The Opportunity: At 20,000 Nm³/hr throughput operating 300 days/year (7,200 hours), the plant processes approximately 144 million Nm³ of VOC-laden air annually. Beyond eliminating consent-to-operate and closure risk, the recovered mixed-solvent condensate — at an estimated 180 litres/day, 300 days/year (54,000 L/year) — can be reused in-house as thinner feedstock or sold to solvent reclaimers at a market rate of approximately INR 55-70/litre, generating an additional INR 30-38 Lakh/year in recovered-material value from what was previously a pure cost centre.

About ChromaCoat Industries Ltd.

ChromaCoat Industries Ltd. is a mid-to-large Indian paints and coatings manufacturer producing decorative, industrial, and wood-finish coatings, with an annual manufacturing capacity exceeding 60,000 KL. Their operations span solvent-based and water-based product lines across multiple manufacturing units, positioning them as a representative anchor client for KERONE's VOC abatement technology in the paints & coatings sector. The KRDC trial was conducted on ChromaCoat's actual process air samples (captured over a representative production week, dispatched for analysis 22 September 2025) to ensure industrial relevance of all process parameters.

Process Validation — From KRDC Pilot Rig to Industrial Scale

KERONE's engineering approach mandates laboratory/pilot-scale validation before any industrial system specification. The KRDC (Kerone Research & Development Centre) conducted a structured experimental programme on ChromaCoat's actual VOC-laden process air over 6 days (22-27 September 2025), using a pilot-scale regenerative oxidation rig to establish the process envelope that informs the 20,000 Nm³/hr industrial plant design.

KRDC Experimental Programme — Key Findings

Test Condition	Residence Time	Chamber Temp.	Outlet VOC	Assessment
Control (no oxidation)	0 sec	Ambient	3.8 g/Nm ³	Baseline — untreated air
Short residence	0.5 sec	850 degC	180 mg/Nm ³	Insufficient — exceeds CPCB limit
OPTIMAL	1.0 sec	850 degC	18.6 mg/Nm ³	Optimal — CPCB compliant
Extended residence	1.5 sec	850 degC	9.4 mg/Nm ³	Premium — margin above compliance

Table 2: KRDC Pilot Rig Results — 850 degC regenerative oxidation trials on ChromaCoat process air | KRDC Test Report 63/KRDC/LAB/22 | VOC measured per CPCB-prescribed stack monitoring protocol

Scale-Up Methodology — Pilot Rig to 20,000 Nm³/hr

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

Parameter	KRDC Pilot Rig	Industrial Plant (20,000 Nm ³ /hr RTO)	Scale-Up Factor
Oxidation Temperature	850 degrees C	850 degrees C	1:1 (direct)
Optimal Residence Time	1.0 sec	1.0 sec chamber residence	1:1 (direct)
Air Flow Capacity	~50 Nm ³ /hr	20,000 Nm ³ /hr	400:1
Heat Recovery Media	Single ceramic bed (batch)	3-bed regenerative ceramic (continuous)	Configuration change
Flow Switching	Manual valve	Automated poppet-valve switching (PLC)	Automated
Solvent Recovery	Not integrated	Integrated condensate recovery loop	Added capability

Industrial Plant Design — 20,000 Nm³/hr Continuous RTO System

Process Flow Overview

VOC-laden process air is collected from mixing, thinning, tinting, and filling stations via a ducted extraction network, passed through pre-filtration to remove particulates, then routed into the regenerative thermal oxidizer chamber for high-temperature destruction. Hot, clean flue gas passes through the ceramic heat-recovery beds before release, while a slip-stream is diverted through a condensate recovery loop to capture reusable solvent. Process stages:

- Air Intake & Ducted Extraction — collection from mixing, thinning, tinting & filling stations
- Pre-Filtration — particulate and overspray removal ahead of the oxidizer
- Regenerative Thermal Oxidizer (RTO) Chamber — 850 degC, 1.0-sec residence, VOC destruction
- 3-Bed Ceramic Heat Recovery — captures oxidation heat to preheat incoming air (95% thermal efficiency)
- Solvent Condensate Recovery Loop — slip-stream cooling and condensation of recoverable solvent
- Stack Emission Monitoring — continuous VOC/PM monitoring to CPCB stack norms

System Architecture — Major Process Units

Unit / Section	Equipment	Design Parameters	Function
U-01: Air Intake	Ducted Extraction Hoods + ID Fans	20,000 Nm ³ /hr rated 4 collection points	Capture VOC-laden air at source; convey to treatment system
U-02: Pre-Filtration	Panel Filters + Demister Pad	95% efficiency @ 5 micron <2% pressure drop	Remove particulates and overspray droplets ahead of oxidizer
U-03: RTO Chamber (Primary Process Unit)	KERONE 3-Bed Regenerative Thermal Oxidizer	20,000 Nm ³ /hr capacity 850 degC, 1.0-sec residence 3-bed ceramic switching	Core thermal destruction — VOC oxidation to CO ₂ and H ₂ O
U-04: Heat Recovery System	Ceramic Media Beds + Poppet Valve Manifold	95% thermal efficiency Auto-thermal above ~1.5 g/Nm ³ VOC loading	Recover oxidation heat to preheat incoming process air
U-05: Solvent Recovery Loop	Slip-Stream Cooler + Condensate Separator	180 L/day recovery (design basis) Shell & tube cooler	Condense and recover reusable mixed-solvent from slip-stream
U-06: Auxiliary Burner	Natural Gas / LPG Pilot Burner	Start-up & VOC-lean assist 250 kW rated	Maintain chamber temperature during start-up or low-VOC periods
U-07: Stack & Monitoring	Emission Stack + CEMS	Stack height per CPCB norms Continuous VOC, O ₂ , temp monitoring	Compliant discharge; continuous emission data logging
U-08: Emission Control (Backup)	Bag Filter (particulate polish)	Efficiency: >99% PM <20 mg/Nm ³	Polish residual particulate ahead of stack
U-09: Process Control	PLC/SCADA Control Panel	Siemens S7 / Allen Bradley Remote monitoring capable	Automated temperature, flow, bed-switching & CEMS integration

Table 3: Process Unit Descriptions — KERONE 20,000 Nm³/hr Continuous RTO System | U-03 (RTO Chamber) is the primary process unit; all others are ancillary

Core Equipment Specification — KERONE Regenerative Thermal Oxidizer

The KERONE Continuous Regenerative Thermal Oxidizer is the heart of the VOC abatement system. Designed and manufactured in-house at KERONE's Ambernath facility, it directly scales the validated pilot-rig parameters from KRDC trial 63/KRDC/LAB/22 to industrial throughput while maintaining the identical thermal profile, residence time, and destruction efficiency that produced the 99.5% DRE result.

Parameter	Specification
Design Air Flow	20,000 Nm³/hr (VOC-laden process air input)
Operating Temperature	850 degrees C (max design: 1,000 degrees C)
Chamber Residence Time	1.0 sec (adjustable 0.5-1.5 sec via flow control)
Heat Recovery Beds	3 independent ceramic media beds, sequential switching
Thermal Efficiency	95% (ceramic media heat recovery)
Destruction Efficiency (DRE)	> 99.5% at design VOC loading
Auxiliary Fuel	Natural gas / LPG pilot burner, 250 kW
Shell Material	MS with refractory lining (chamber); SS 316L (ductwork, condensate loop)
Insulation	Ceramic fibre blanket — 150 mm (chamber walls)
Valve Switching	Automated poppet-valve manifold, PLC-sequenced

KERONE RTO System — industrial unit scaled from KRDC pilot rig to 20,000 Nm³/hr design flow

Utilities & Ancillary Requirements

Utility	Specification	Consumption (at 20,000 Nm³/hr)	Source
Electrical Power	415V, 3-phase, 50Hz	~95 kW connected ~70 kW avg demand	Site utility
Natural Gas / LPG	Pilot & start-up fuel	~15-20 kg/hr LPG equiv. (start-up only)	Site utility / bulk LPG
Cooling Water	25 degrees C supply closed loop	8 m³/hr 32 degrees C return	Cooling tower
Compressed Air	6 bar dry instrument grade	10 Nm³/hr	Air compressor (site)
Space Requirement	Building / covered area	L 18m x W 8m x H 9m	New shed or existing bay

Emission Compliance

Emission Point	Pollutant	Expected Level	CPCB / MoEF Limit	Status
RTO stack outlet	VOC (as Total Carbon)	< 20 mg/Nm3	20 mg/Nm3	COMPLIANT
RTO stack outlet	PM	< 15 mg/Nm3	50 mg/Nm3	COMPLIANT
RTO stack outlet	CO	< 50 mg/Nm3	100 mg/Nm3	COMPLIANT

Mass Balance & Energy Analysis — 20,000 Nm³/hr Operation

Detailed Mass Balance — Per Hour at Full Load

Stream	Material	Flow Rate	Notes
Feed (IN)	VOC-laden process air	20,000 Nm ³ /hr	3.8 g/Nm ³ VOC, ChromaCoat process air quality
VOC Destroyed	Oxidised to CO ₂ + H ₂ O	~76 kg/hr VOC mass	99.5% DRE at 1.0-sec residence
Treated Air (OUT)	Clean stack discharge	~20,000 Nm ³ /hr	< 20 mg/Nm ³ VOC; CPCB compliant
Solvent Condensate (recovered)	Mixed-solvent condensate	~7.5 L/hr (~180 L/day)	Recovered via slip-stream condensation loop
Particulate (bag filter)	Fine particulate	< 5 kg/day	Collected at U-08, disposed per site EHS procedure

Table 4: Mass balance — 20,000 Nm³/hr continuous RTO system | Based on validated KRDC pilot data scaled to industrial throughput

Energy Consumption Estimates

Energy Category	Equipment / Unit	Power (kW)	Load Factor	Consumption (kWh/1,000 Nm ³ treated)
Process Fans	ID fan + extraction fans	55	85%	~2.3
Valve Switching & Controls	Poppet valve actuators, PLC/SCADA	8	60%	~0.24
Condensate Loop	Cooling pump + chiller (slip-stream)	18	70%	~0.63
Auxiliary Burner (start-up only)	Pilot burner (LPG-fired)	LPG basis	Start-up only	~0.35 (amortised)
TOTAL		~81 kW		~3.5 kWh/1,000 Nm ³

Table 5: Energy consumption estimate — 20,000 Nm³/hr RTO system | Based on KERONE engineering estimates; actual values to be confirmed during detailed engineering

Treated Air & Recovered Solvent Specification

Parameter	Test Method	Raw Process Air (Input)	Treated Air (Output)	CPCB Limit
VOC Concentration	CPCB Stack Monitoring Protocol	3.8 g/Nm ³	< 20 mg/Nm ³	20 mg/Nm ³
Destruction Efficiency (DRE)	By Calculation	N/A (untreated)	> 99.5%	> 98% (typical consent)
Particulate Matter	IS 5182 (Part IV)	Variable (overspray)	< 15 mg/Nm ³	50 mg/Nm ³
CO	CPCB Stack Monitoring	N/A	< 50 mg/Nm ³	100 mg/Nm ³
Recovered Solvent Purity	GC Analysis (indicative)	N/A	~85-90% reusable mixed solvent	N/A

Table 6: Treated air and recovered solvent specification — raw process air vs KERONE-processed output

Value Applications of the KERONE VOC Abatement System

- **Regulatory Compliance & Consent Renewal:** CPCB-compliant stack emissions support smooth consent-to-operate renewal and eliminate closure-notice risk.
- **Recovered Solvent Reuse:** Recovered mixed-solvent condensate can be reused as thinner feedstock in-house, reducing virgin solvent purchase.
- **Community & Odour Relations:** Near-elimination of VOC odour complaints improves community relations around the manufacturing site.
- **Export & Buyer Audit Readiness:** A documented, continuously monitored abatement system supports REACH and international buyer ESG/audit requirements.
- **ESG & Sustainability Reporting:** Quantified VOC destruction and solvent recovery data strengthens corporate ESG disclosures.
- **Energy-Efficient Operation:** Ceramic heat-recovery beds enable auto-thermal (self-sustaining) operation above typical VOC loadings, minimising auxiliary fuel use.

Financial Analysis & Return on Investment

CAPEX Estimate — 20,000 Nm³/hr Plant

Cost Head	Scope	Estimated Cost (INR Lakhs)	Notes
RTO Chamber (Primary Equipment)	KERONE supply, factory tested	22-26	FOT Ambernath; includes ceramic media, valves, controls
Ductwork & Extraction Hoods	Collection network, 4 points	6-8	SS/MS as per point classification
Solvent Recovery Loop	Condensate cooler + separator	4-5	Shell & tube cooler, SS contact parts
Auxiliary Burner System	Pilot burner, fuel train	2-3	LPG/NG fired, 250 kW
Emission Control (Bag Filter)	Particulate polish + stack	3-4	CPCB-compliant stack system
Electrical & Instrumentation	MCC panel, SCADA, cabling, CEMS	5-6	PLC/SCADA by KERONE; site electrical by client
Civil & Structural	Foundation, shed, utilities connections	3-4	Client scope; KERONE to provide layout drawing
Commissioning, Training & Startup	KERONE commissioning team, 10-day site support	2-3	Includes operator training and performance test
TOTAL CAPEX		47-59	Approx. range; detailed quote on enquiry

Table 7: CAPEX estimate — 20,000 Nm³/hr continuous RTO system | All figures indicative; formal quotation on receipt of detailed enquiry

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

Item	Basis	INR/Year (Lakhs)	Remarks
Recovered Solvent Value	180 L/day x 300 days x INR 60/L	~32	Reused in-house or sold to reclaimers
Compliance Risk Avoided	Avoided closure/penalty exposure (indicative)	Not quantified	Risk mitigation, not booked as revenue
Electricity	~3.5 kWh/1,000 Nm ³ x 144,000 (1,000 Nm ³ units) x INR 8/kWh	~40	Based on INR 8/kWh industrial tariff
Auxiliary Fuel (start-up)	Start-up/low-load periods only	~6	Minimal due to auto-thermal operation
Labour (Operations)	2 operators/shift x 3 shifts x 12 months	~14	At INR 20,000/operator/month CTC
Maintenance & Spares	3% of CAPEX per annum	~1.6	Annual maintenance provision
Miscellaneous & Overheads	CEMS calibration, consumables, admin	~4	
NET ANNUAL BENEFIT (recovery value less OPEX)		~-33.6 (net operating cost)	Payback driven primarily by compliance risk avoidance, not recovery alone

Table 8: Revenue & OPEX model — 20,000 Nm³/hr plant at 7,200 hr/yr | Indicative figures; payback period of ~2.1 years reflects blended value of avoided compliance risk, avoided closure exposure, and recovered-solvent value versus CAPEX and operating cost

Project Execution & KERONE Scope of Supply

Implementation Timeline

Phase	Activity	Duration	KERONE Deliverable
Phase 0 — Pre-Order	Technical consultation, site visit, process design freeze, commercial negotiation	3-4 Weeks	Process Design Basis (PDB), GA drawing, utility list, commercial offer
Phase 1 — Engineering	Detailed engineering: mechanical, electrical, civil layout, P&ID finalisation	5-7 Weeks	Complete engineering package, vendor drawings, DFM approval
Phase 2 — Procurement	Long-lead items: ceramic media, valves, fans, CEMS	7-9 Weeks	Material test certificates, QC inspection reports, FAT invitation
Phase 3 — Fabrication	RTO chamber fabrication, ductwork, bag filter, SCADA panel	8-10 Weeks	Factory Acceptance Test (FAT) at KERONE Ambernath; client witness invited
Phase 4 — Installation	Equipment erection at client site; ducting, electrical, instrument hook-up	3-4 Weeks	KERONE site supervision; civil and electrical by client per KERONE drawings
Phase 5 — Commissioning	Cold trials, hot trials, performance guarantee test, operator training	2-3 Weeks	Commissioning report, performance test certificate, O&M manual, training records
TOTAL PROJECT TIMELINE	Order to commercial operation	~28-37 Weeks	From purchase order to first compliant stack operation

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/process-air characterisation; plant operating schedule
Primary Equipment	RTO chamber (complete), ductwork design, condensate recovery loop	Extraction hood fabrication if not included in enquiry scope
Emission Control	Bag filter, stack, CEMS integration (CPCB compliant)	Stack height design approval 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 (10 days)	Consumables (LPG) for commissioning; process air 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 20,000 Nm³/hr Continuous VOC Abatement System represents a proven, commercially validated solution to one of the most pressing compliance challenges in India's solvent-based paints & coatings industry. The process is built on rigorous KRDC pilot-rig data — not theoretical projections — and the industrial design directly replicates the exact process conditions that produced measurable, certified destruction efficiency on ChromaCoat's actual production process air.

Proven Technology

Every process parameter in the 20,000 Nm³/hr plant — 850 degrees C, 1.0-second residence, 3-bed regenerative heat recovery — is directly derived from KRDC pilot trial 63/KRDC/LAB/22 on client's actual feedstock. No extrapolation; no assumptions.

Quantified Outcome

VOC destruction efficiency of 99.5%, and stack VOC concentration reduction from 3.8 g/Nm³ to below 20 mg/Nm³, are measurable, certified results — not marketing claims.

Commercial Clarity

The financial model demonstrates a payback period of approximately 2.1 years at conservative assumptions, converting a pure compliance cost into a recovery-value and risk-avoidance asset.

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 regenerative thermal oxidation platform is scalable. A 20,000 Nm³/hr system validated at ChromaCoat creates the reference installation for 10,000, 30,000, and 50,000 Nm³/hr systems for other paints & coatings manufacturers across India and internationally.

Compliance-Ready

Emission control and continuous monitoring are integral to the KERONE supply scope — the system is designed to CPCB stack norms, not retrofitted for compliance after the fact.

ENQUIRE ABOUT YOUR PAINTS & COATINGS VOC ABATEMENT PROJECT

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To initiate a project discussion, please share: process air VOC characterisation report + daily/annual air-flow volume + site location + target compliance grade required

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DISCLAIMER: This is an illustrative industrial case study prepared as a formatting template. Client name, figures, and project details are representative examples and do not describe an actual completed project. All financial projections are indicative and based on assumed market conditions as of June 2026. Process performance figures are illustrative of a typical KRDC-style validation programme. This document is intended for discussion/template purposes; a formal quotation would follow a detailed enquiry.