IDHANT

IDHANT ENGINEERING PRIVATE LIMITED

Engineered Asset Protection I Energy Conservation I ESG Enablement

#heretoprotect

MAKE IN INDIA

NET ZERO 2070

MSME
MICRO • SMALL • MEDIUM • ENTERPRISES

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Site photograph: Sudarshan Chemicals Ltd, Mahad, Raigad, Maharashtra

Pioneering on-site surface coating treatments for infrastructures

About Idhant

IDHANT

IDHANT is a multidisciplinary industrial engineering company driven by innovation, precision and execution excellence. We specialize in surface engineering solutions that protect critical assets from corrosion, heat, abrasion, and weather-related deterioration across industrial, commercial, and institutional environments.

Established in 2019 and incorporated in 2023, Idhant has built a strong reputation for on-site coating applications in complex operating conditions, including high humidity, corrosive fumes, thermal stress and continuous plant operations.

Our strength lies in our engineering-first approach that includes understanding substrate conditions, exposure environments and operational constraints before designing and applying coating systems. This enables us to deliver solutions that improve energy efficiency, enhance safety and significantly extend the service life of structures and equipment.

Through engineered energy efficiency and asset life extension, Idhant contributes to India's Mission Net Zero 2070 by reducing energy demand and associated carbon emissions at the asset level.

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The Problem

1. Escalating maintenance costs due to corrosion, heat ingress, abrasion and water damage
2. Energy losses in industrial and commercial facilities
3. Asset downtime caused by conventional repair and coating practices

The Solution

1. On-site engineered coating applications
2. Application without shutdowns (non-hazardous areas)
3. Up to 40% surface temperature reduction
4. Up to 30% energy savings
5. Anti-corrosion and abrasion protection
6. 3x or more asset life extension
7. Structured SOP and AMC support
8. Performance assurance and warranty

Core services

TRC

Thermo-reflective coating

- Applicable on any surface
- Up to 40% surface temperature reduction
- Massive drop in ambient temperature
- Up to 30% certified energy savings on air conditioned buildings
- Life expectancy > 10 years

ACT

Anti-corrosion coating

- On-site application
- Chemically neutral membrane
- Excellent resistance to fumes, dust, heat, salinity and moisture
- Applicable on sheets and structures
- Rust neutralising as pre-treatment enables coating application on rusty surfaces

ABPC

Abrasion protection coating

- On-site application
- Chemically neutral membrane
- Non sticky surface
- Excellent protection against abrasion
- Enables swift flow of sand ensuring improved casting quality

Waterproofing

Waterproofing

- Hydrophobic membrane
- Gap filling by core material
- Standard and mechanised surface preparation process
- Weather proof coating
- Extended longevity of structure life
- Dust resistant, anti-algae, anti-mold, anti-fungal coating membrane

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Execution Framework

1. Technical evaluation and site study
2. Substrate and exposure assessment
3. Customised coating system selection / adaptation
4. On-site formulation and controlled application
5. Post application inspection and performance assurance
6. Warranty, AMC and lifecycle support

Compliance & Safety Orientation

1. Water-based, eco-friendly, zero-VOC material systems
2. Standardized surface preparation and application protocols
3. Trained application teams with safety-first execution practices
4. Responsible waste handling and site housekeeping

Our sustainability philosophy

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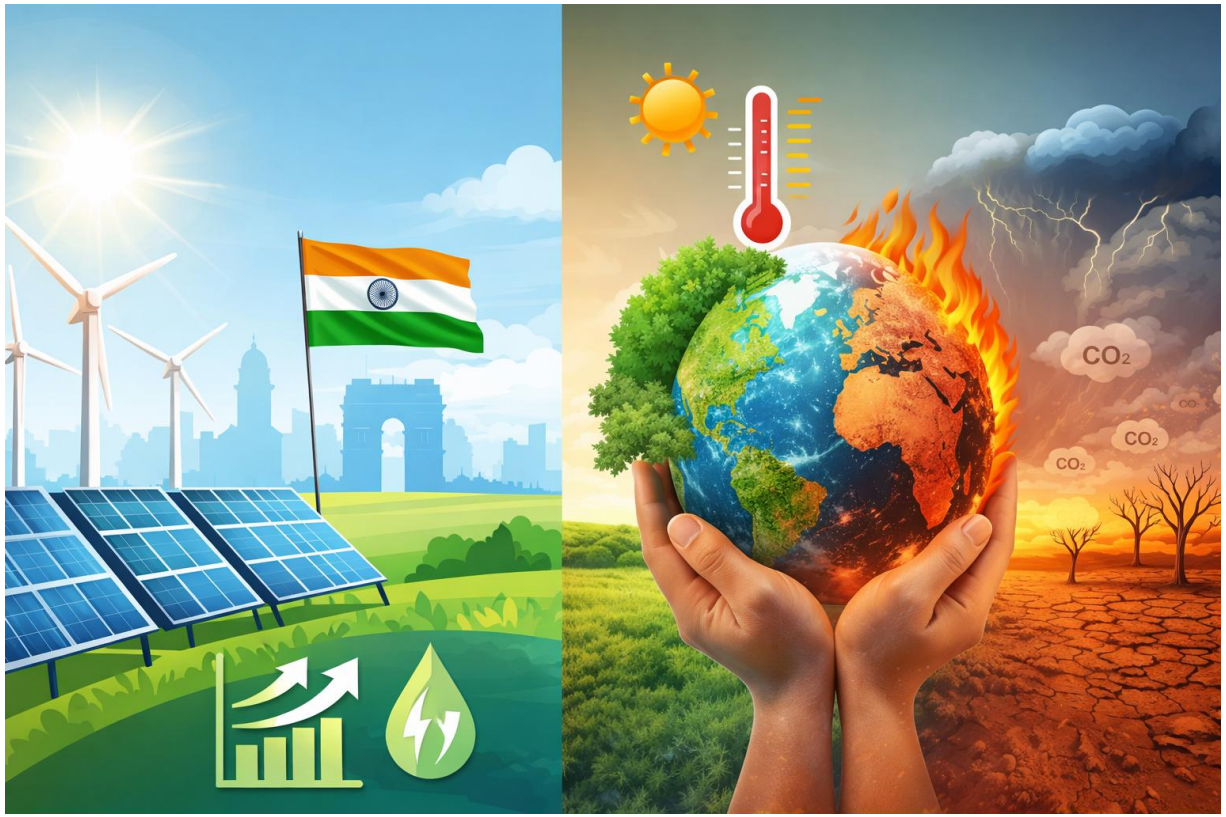
At Idhant, sustainability is embedded in engineering execution and not treated as a compliance exercise. Our coating and surface engineering solutions are designed to reduce energy consumption, extend asset life, minimize material waste and lower the overall environmental footprint of industrial and built assets.

By enabling energy conservation at the asset level, Idhant contributes directly to national energy efficiency objectives and long-term climate resilience.

ESG Enablement Through Engineering



Carbon Footprint and Carbon Credit Enablement

By delivering verifiable reductions in energy consumption and extending asset lifecycles, Idhant's solutions support carbon footprint reduction initiatives. These outcomes can be mapped to ESG reporting, internal carbon accounting, and future carbon credit and offset frameworks under evolving regulatory and voluntary markets.

Green Products and ESG Enablement

1. Water-based, eco-friendly coating systems
2. Zero / low VOC formulations suitable for sensitive environments
3. Reduced waste generation through life extension of assets
4. Alignment with ESG, sustainability, and net-zero roadmaps

E – Environment

Energy Conservation as a Service

Idhant's thermo-reflective and protective coating systems reduce heat ingress into buildings, equipment, and infrastructure. This directly lowers cooling energy demand, peak electricity loads and associated greenhouse gas emissions, making energy conservation a practical, measurable service delivered at the asset level.

Carbon Footprint Reduction

1. Reduction in Scope 2 emissions through lower electricity consumption
2. Reduction in embodied carbon by extending asset service life
3. Lower material replacement, repair frequency, and waste generation

Impact Area	Sustainability Outcome
Thermal load reduction	Lower energy use and emissions
Corrosion protection	Extended asset life
Abrasion reduction	Reduced material loss
Waterproofing	Structural durability and waste reduction

Green Products & Materials

1. Water-based coating systems
2. Zero / low VOC formulations
3. Safer application for workers and occupants
4. Reduced environmental impact during application and lifecycle

S – SOCIAL

Idhant prioritizes safety, skill development and responsible on-site execution. Our application teams are trained in standard surface preparation, safe handling of materials and controlled application practices, ensuring minimal disruption and risk at operational sites.

1. Improved workplace safety through non-toxic, low-VOC systems
2. Healthier indoor and industrial environments
3. Protection of public and community infrastructure

G – GOVERNANCE

Idhant follows a structured, transparent execution model supported by documented SOPs, performance assurance and warranty compliance. Our governance approach emphasizes accountability, ethical operations, and long-term partnerships with clients.

1. Standardised execution SOPs
2. Performance-backed delivery and AMC support
3. Alignment with ESG reporting and sustainability disclosures
4. Compliance with client EHS protocols and site-specific safety requirements

Carbon Impact Calculation

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Parameter	Before: Bare Profile Sheet Roof	After: TRC Coated Roof	Net Savings / Impact
Cooling Energy Intensity (kWh/m^2/year)	110	45	65
Roof Area (m^2)	10,000	10,000	
Annual Cooling Energy (kWh/year)	11,00,000	4,50,000	6,50,000
Energy Reduction (%)			≈ 59%
Electricity Tariff (₹/kWh)	8	8	
Annual Electricity Cost (₹/year)	88,00,000	36,00,000	52,00,000
CO_2 Emissions (tCO_2/year)	900	370	530

***Tentative data for calculation purposes only**

Key assumptions for calculation purpose:
- Roofing: **Bare GI / colour-coated profile sheet**
- Insulation: **None**
- Climate: **Warm–hot Indian climate** (Composite / Hot & Dry)
- Building type: **Industrial / warehouse / factory**
- Cooling system: **Split / packaged AC**
- Operating hours: **8–10 hours/day**
- Indoor setpoint: **24–26°C**

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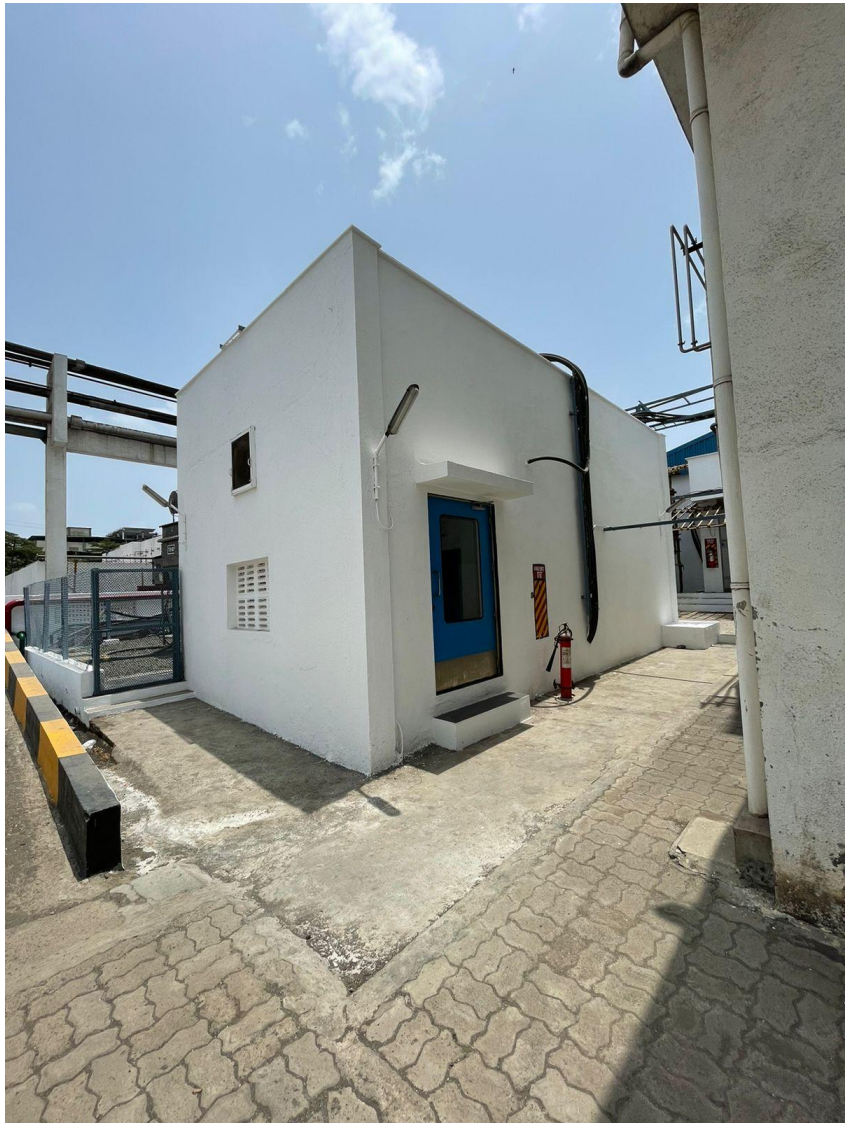
Thermo-reflective coatings / Waterproofing

- On-site application
- Up to 40% surface temperature reduction
- Up to 93% sunlight reflection
- Applicable on all surfaces (metals, RCC, wood, ceramics etc.)
- Up to 30% energy savings on air-conditioned buildings
- Water-based materials
- Eco friendly
- Hydrophobic membrane – advantage on RCC
- Rust protection on metals
- Easy to maintain, backed up by AMC
- Life expectancy > 7 years



Site photograph: Control Panel Room, FDC Limited, Roha, Raigad, Maharashtra

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Anti-corrosion treatments

- On-site application
- Chemically neutral membrane
- Applicable on sheets and structures
- Elasticity 250%
- Non-sticky hydrophobic membrane
- Heat resistance up to 140 Degrees Celsius
- Water-based materials
- Eco friendly
- Zero VOC
- Standard process
- Easy to maintain, backed up by AMC
- Life expectancy > 3x

Site photograph: Furnace Area, Ved Industries, Ichalkaranji, Kolhapur, Maharashtra

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Waterproofing treatments

- 250 microns of hydrophobic membrane over RCC surface
- Gap filling by core material
- Surface preparation by trained team
- Heat resistant membrane
- Chemically neutral membrane
- Elastic membrane
- Wear resistant
- Dust resistant
- Anti-algae anti-fungal membrane
- Matte finish membrane

Site photograph: Waterproofing over 90 years old building at Nagpur, Maharashtra

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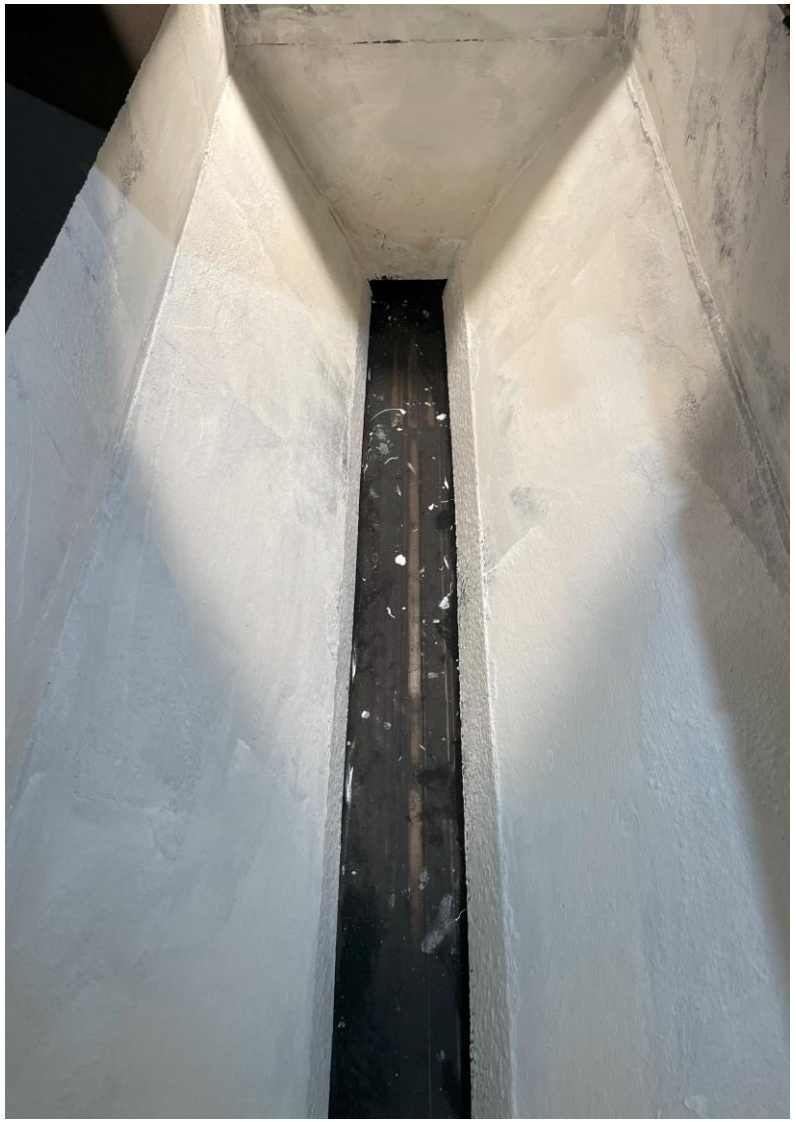
Abrasion protection treatments

- On-site application
- Sand-hoppers in foundries
- Chemically neutral membrane
- Swift flow of sand
- Zero ratholing due to swift flow
- No flaking
- Heat resistance up to 140 Degrees Celsius
- Non-sticky layer
- Zero VOC
- Easy to maintain, backed up by AMC
- Life expectancy > 3x conventional practices



Site photograph: Batch Hopper, S J Iron, Shiroli MIDC, Kolhapur, Maharashtra

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Works done

1. Sudarshan Chemicals Ltd, Roha and Mahad, Raigad, Maharashtra
2. Neelikon Food Dyes and Chemicals Ltd, Roha, Maharashtra
3. FDC Limited, Roha, Maharashtra
4. Indus Biotech Limited, Pirangut, Pune, Maharashtra
5. Pyrotek India Private Limited, Sanaswadi, Pune, Maharashtra
6. Zanvar Group – S J Iron, Kolhapur, Maharashtra
7. Ved Industries, Ichalkaranji, Kolhapur, Maharashtra
8. Vedanta Aluminium Ltd, Jharsuguda, Odisha
9. Jai Hind Electricals, Shivapur, Pune, Maharashtra
10. Fine Fittings LLP, Bhosari MIDC, Pune, Maharashtra
11. Supercraft Foundry Private Limited, Miraj, Sangli, Maharashtra
12. Various residential projects
13. Various temple pathways across Maharashtra, Karnataka and Goa

Customers feedback

"We appreciate timely completion and excellent workmanship"

- C B Joshi, DGM, Civil, Sudarshan Chemicals Ltd

"We compliment outstanding performance of anti-corrosion treatment done over our ETP structure"

- Manoj Rane, Sr Manager, Works, Indus Biotech Ltd

"Expert service resulted in reduced power costs by 30%"

- Manoj Bhole, Maintenance Manager, FDC Limited

"Idhant's treatments are very useful for foundry applications to save on enourmous damages due to corrosion"

- Sandeep Pawar, Zanvar Group

"Our structure at furnace area is treated by anti-corrosion treatment and is performing well in high humidity, acidic vapour, high heat and corrosive dust laden air"

- Mahesh Date, CMD, Ved Industries

Application areas

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- Dairy farms
- Food processing units
- Cold storages
- Steel plants
- Commercial buildings
- Transport vehicles
- Smelting units
- Hospitals
- Schools
- Pharmaceutical industries
- Airports, shipyards and ports
- Containers
- Pipelines and ONGCs
- Warehouses
- Power plants
- Bridges
- Religious places
- Plant and machinery
- Automobiles
- Residential complexes
- Guest houses
- Hotels
- Malls
- Government buildings

Work Photographs

All photographs are actual site photographs – Idhant Engineering Private Limited

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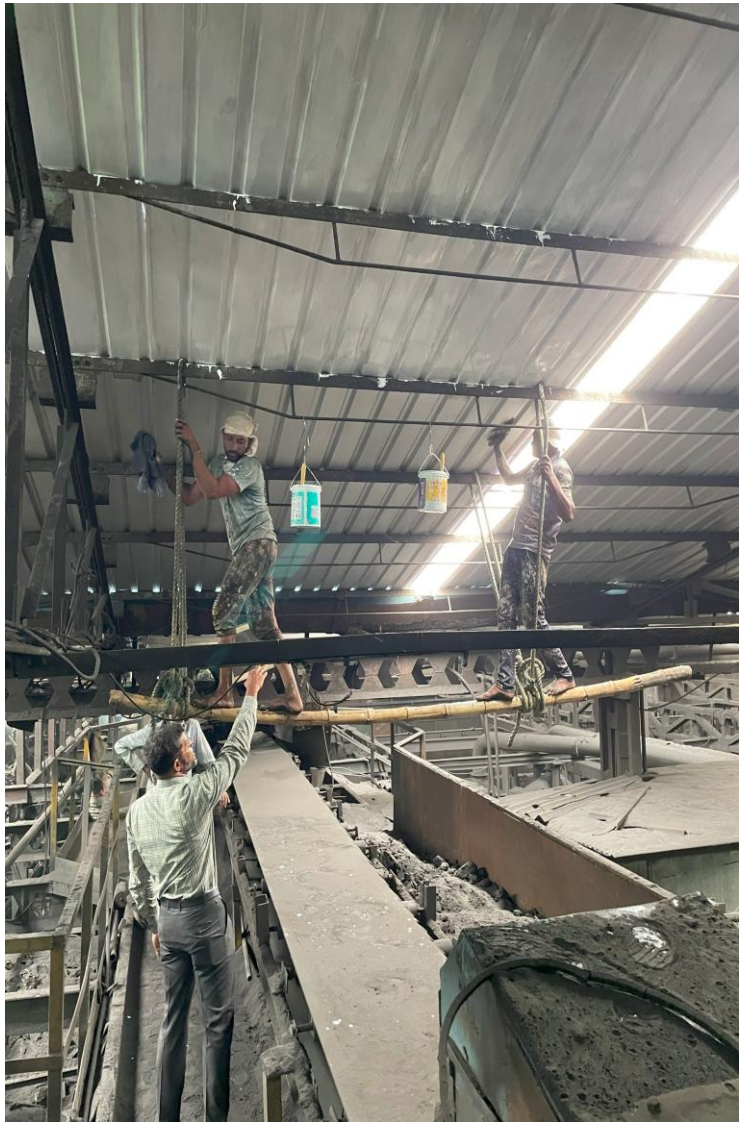

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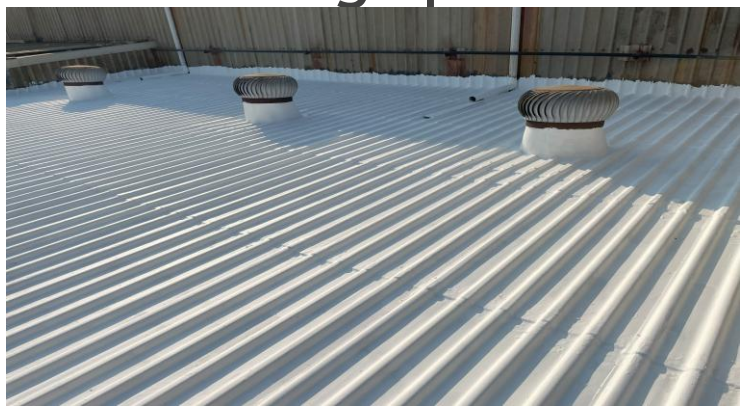
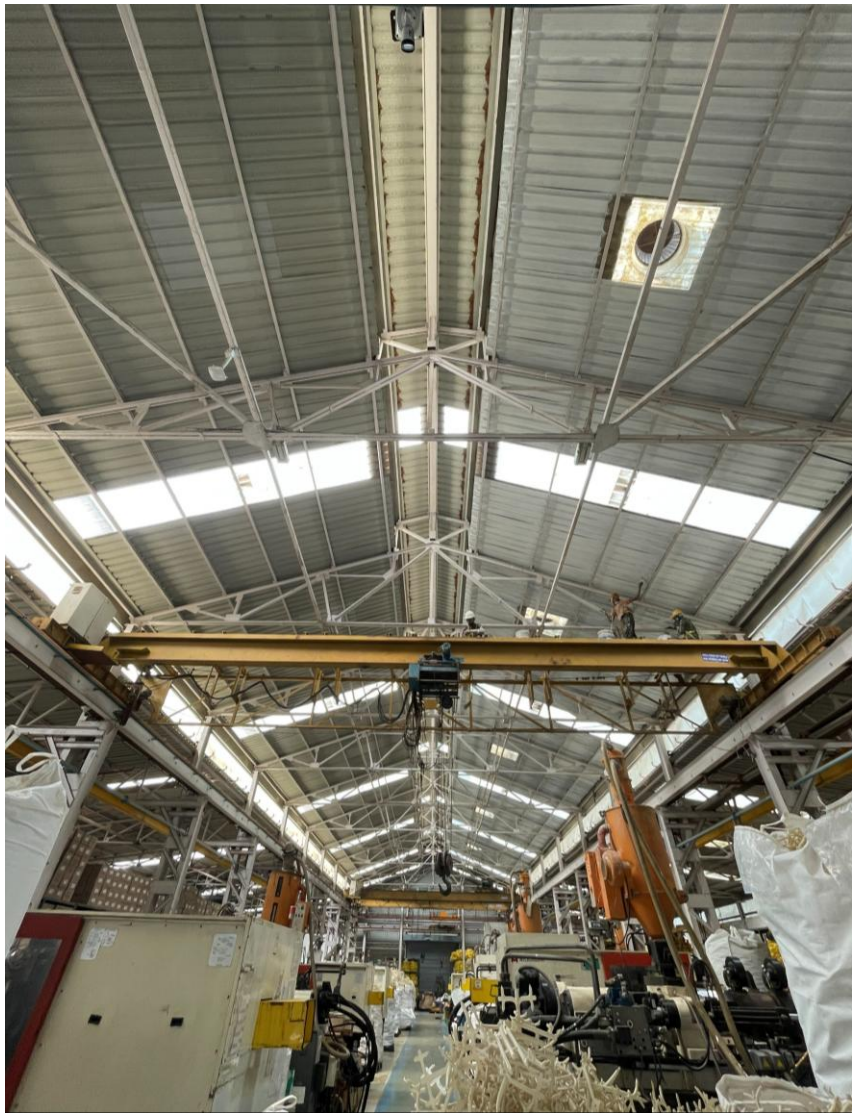
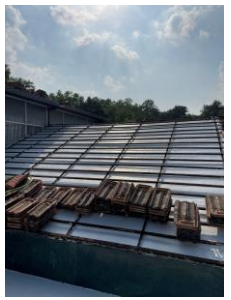
Work Photographs









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Essential links

Client testimonials
Work images
YouTube - @idhantengineering
Sangramsinh Ghorpade's LinkedIn

Reach us

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