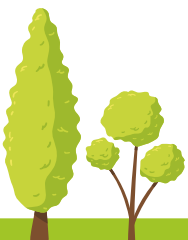


**SEE
PROFITS
NOT JUST
OLD TYRES**



KGN
INDUSTRIES

...and mother Earth will bless you



INTRO

The tyre pyrolysis process provides a sophisticated and highly efficient method for recycling used tyres into valuable by-products, including Pyro-Oil, Carbon Black, and Scrap Steel. This 24-hour operation involves processing tyres whether whole, baled or shredded within the reactor vessel.

Initially, the tyres are heated using biomass briquettes, coal, pyro water, oil under controlled temperature & pressure.

Inside the enclosed reactor vessel, the raw material undergoes thermal decomposition at temperatures ranging from 300 to 350 degrees Celsius in the absence of oxygen. This process ensures that the tyres break down into simpler molecules without combustion. The resulting vapours are then directed through a series of processing tanks and heat exchangers

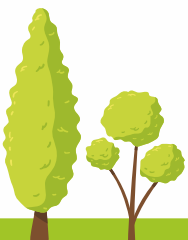
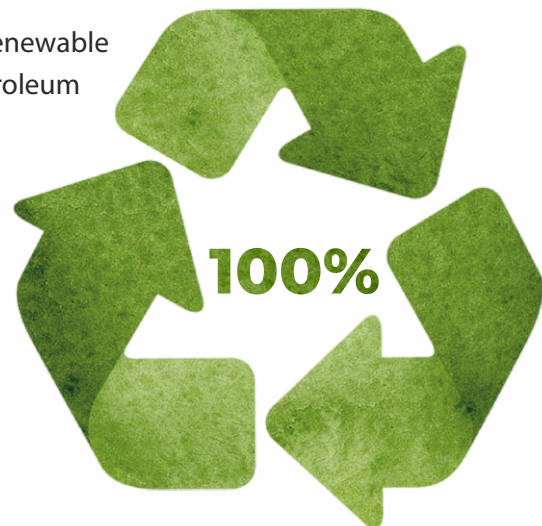
(condensers), where they are cooled and transformed into liquid Pyro-Oil. Any residual hydrocarbon gases that cannot be condensed are repurposed within the process as fuel to sustain the heating process, thereby enhancing overall efficiency.

Upon completion of the pyrolysis cycle and once the reactor has cooled to ambient temperatures (approximately 40 degrees Celsius), the solid residues i.e Carbon Black and Scrap Steel are extracted. Carbon Black is unloaded into jumbo bags using a carbon chute attachment designed to prevent spillage, while the Scrap Steel is efficiently removed using a mobile hydra crane. This advanced system not only maximizes resource recovery but also underscores our commitment to environmentally responsible tyre recycling.

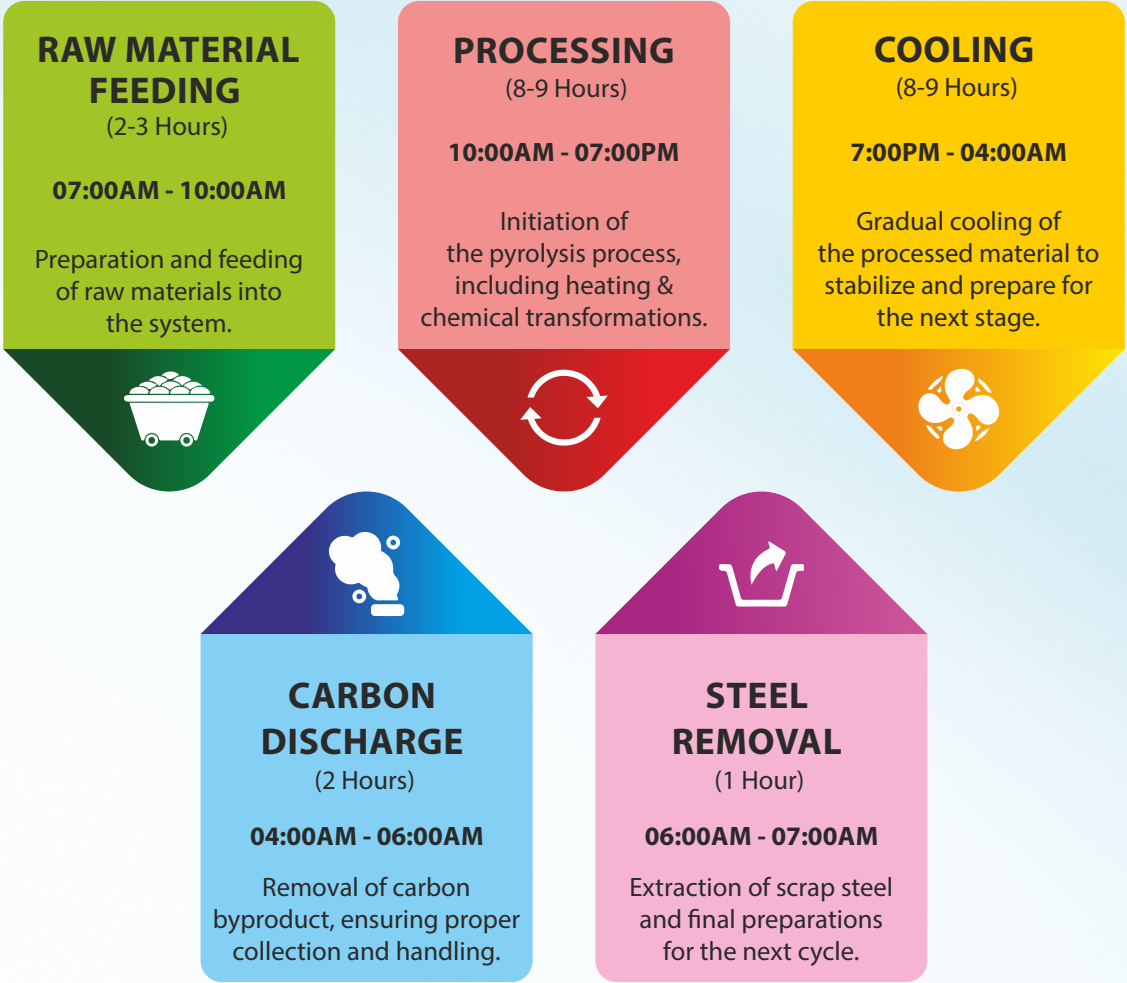


STANDOUT ATTRIBUTES OF THE PLANT

- **Achieves 100% Waste Tyre Recycling:** No rubber residues are left inside the reactor after the process.
- **Abundant Raw Materials:** The plants use waste or scrap tyres, which are readily available worldwide.
- **Cost-Effective Raw Material:** Waste tyre raw material is significantly cheaper than other industrial raw materials.
- **Affordable and Accessible:** Scrap tyres are both low-cost and easily obtainable.
- **Economical Waste Management:** Provides a cost-efficient solution for handling waste.
- **Eco-Friendly Process:** No chemicals are used, making the process environmentally friendly.
- **Pollution-Free Operation:** The process does not result in environmental pollution during or after its completion.
- **Valuable Outputs:** Converts waste tyres into economically valuable products and by-products namely Oil, Carbon & Steel.
- **Most Cost-Effective Technology:** The most affordable tyre recycling technology available globally.
- **Versatile Processing:** Capable of processing all forms of rubber, including and beyond waste tyres.
- **Sustainable Energy Alternative:** Offers a renewable energy source to replace non-renewable petroleum products and natural gas.
- **Global Waste Management Solution:** Provides an effective, low-investment solution for managing global waste tyres, with high feasibility and a short recovery period.



24 HOUR PROCESS CYCLE SCHEDULE



OUTPUT PROFILE

Pyrolysis Oil (38-45%): The primary product of the tyre pyrolysis process is Pyrolysis Oil, also known as Tyre Oil. This versatile oil serves as a cost-effective and sustainable alternative to Light Diesel Oil (LDO) and Furnace Oil (FO), often matching or even exceeding their performance. Ideal for use in industrial furnaces or boilers, the yield of Pyrolysis Oil is directly influenced by the quality of the raw material.

1



Carbon Black (35-40%): Carbon Black is a valuable byproduct of the pyrolysis process, boasting a carbon-rich composition. It serves various industrial purposes, with a primary application as fuel in cement industries.

2



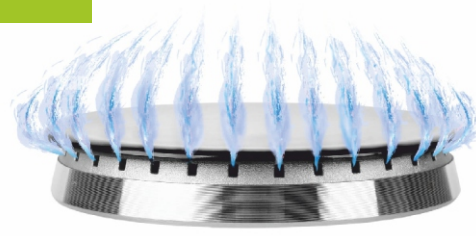
Scrap Steel (13-15%): Scrap Steel is the third high-value byproduct of the pyrolysis process, derived from the steel beads found in radial tires. Pyrolysis steel has a good market demand. The scrap steel is sold to rolling mills as raw material, where it is transformed into valuable products by further processing.

3

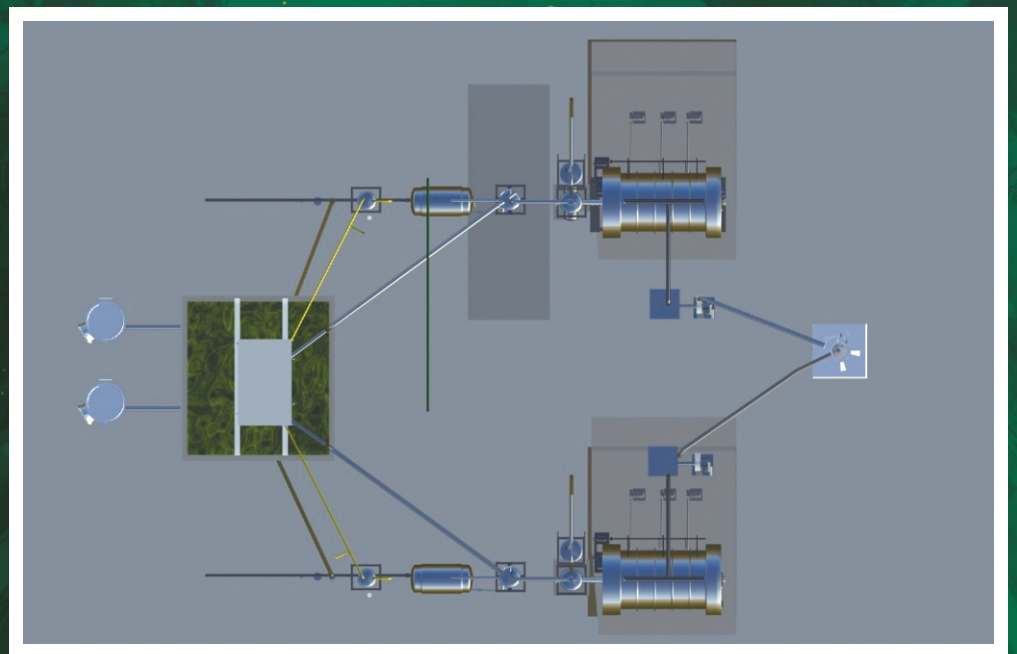
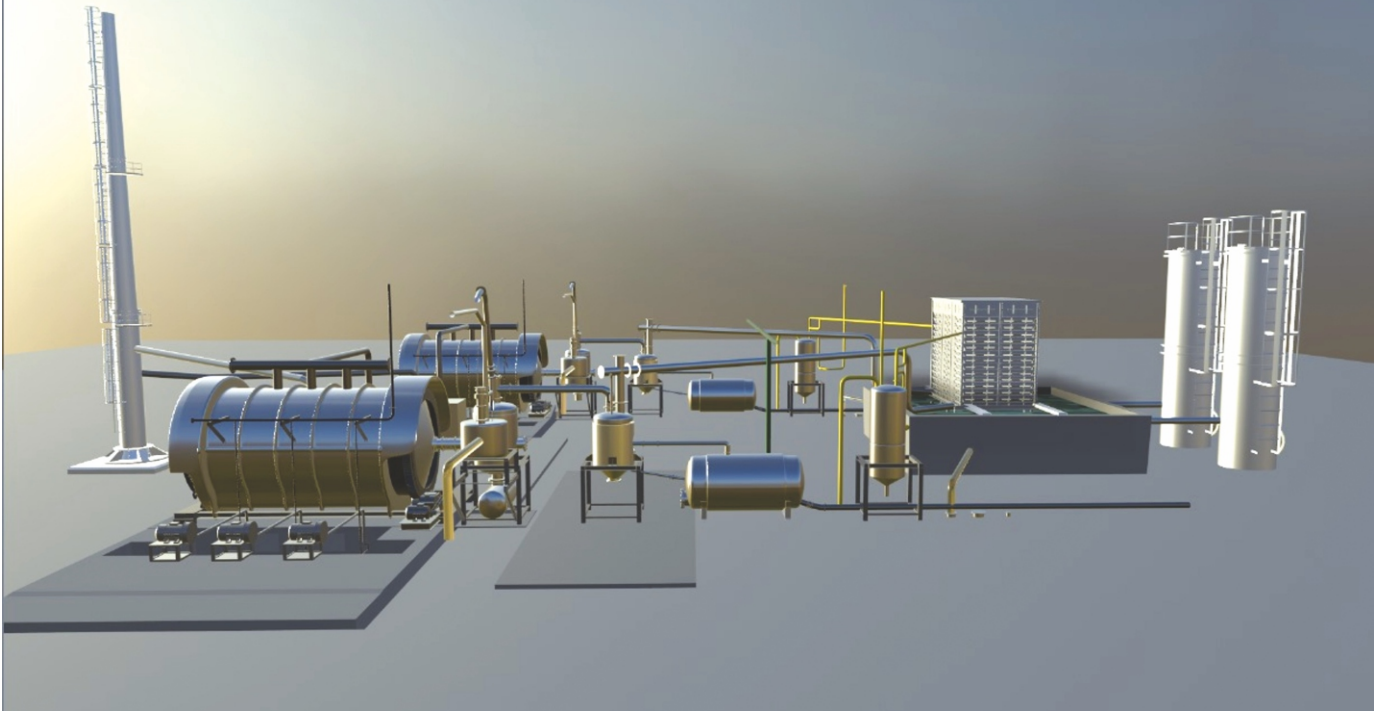


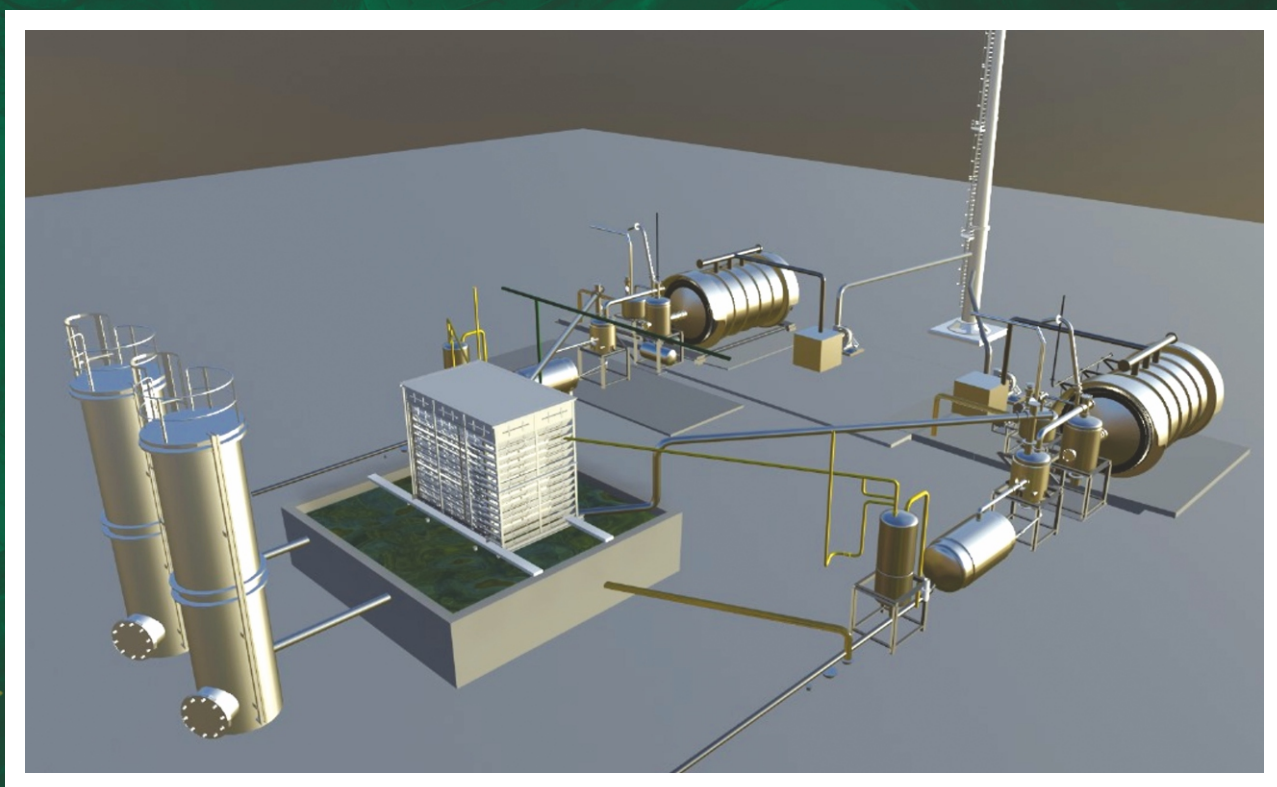
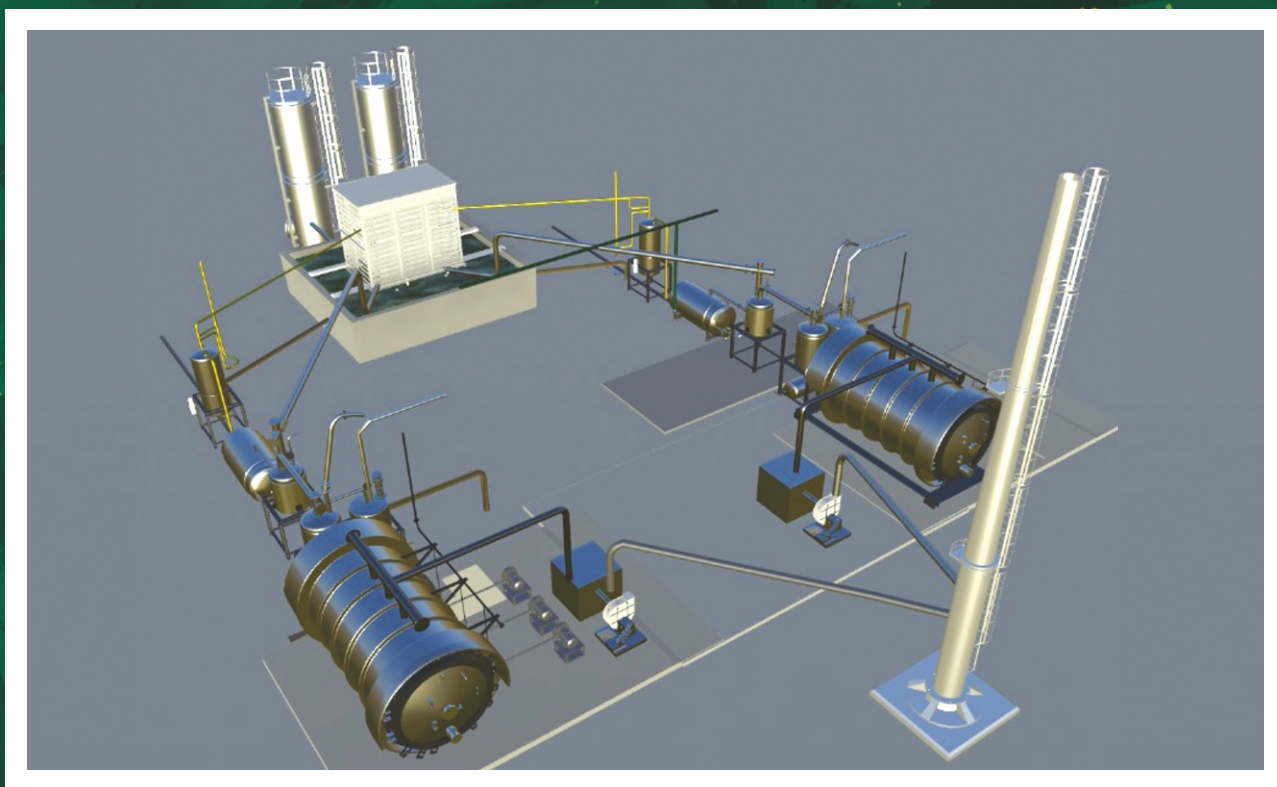
Pyro Gas (10-14%): Pyro Gas is the final byproduct that begins to emerge around three hours into the pyrolysis process. This uncondensed gas, rich in methane (CH_4), is a cost-effective fuel source, replacing biomass briquettes for the remainder of the operation. By repurposing Pyro Gas, we not only enhance efficiency but also achieve significant cost savings, turning a byproduct into a key energy asset.

4



DIFFERENT VIEWS OF THE PLANT



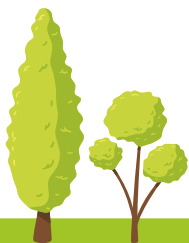


PROJECT PREREQUISITES



EQUIPMENT LIST: ABAP

No.	EQUIPMENT NAME	Qty
1	Reactor Set: A) Heat insulation cover (Jacket) B) Suction Hood on the insulation cover C) Base Frame	01 Set
2	Reactor Gearbox with 5HP Motor	01 Set
3	Primary Gas tank along with Heavy oil Collection Tank	01 Set
4	Secondary Gas Tank	01 Nos
5	Coil Condensers	01 Set
6	8" Horizontal Condenser	01 Nos
7	Gas Distribution Tank	01 Nos
8	30 MTR Height (100 Feet) Height Self Support Chimney with Auto Gas Flaring System	01 Set
9	Chimney ID Fan with 5 HP Motor	01 Set
10	Alkaline Wet Scrubber with 1 HP Pump	01 Set
11	Mist Eliminator	01 Set
12	Cooling Tower (100 TR)	01 Set
13	Operating Oil Tanks 3KL Capacity & 6KL Capacity	01 Set
14	Analogue Control Panel with Digital Gauges	01 Set
15	Oil Storage Tanks (optional): Available in various Dimensions and Capacities.	As per requirement
16	PLC System: <ul style="list-style-type: none">• Temperature & Pressure Auto Cut off• Emergency Alarm• CO Sensors• Real time data available on your smartphone	01 Set
17	ETP (Effluent Treatment Plant) for Pyro water Purification	01 Nos
18	Pyro Water Burning System with 7.5 HP Air Compressor	01 Nos
19	Gas Bypass System <ul style="list-style-type: none">• Secondary gas outlet provision on the reactor door in case of emergency.	01 Nos
20	Nitrogen Generator <ul style="list-style-type: none">• Nitrogen gas generation for self-utilization within the facility.• Flushes out hydrocarbon gases inside and depressurizes the reactor eliminating the risk of any accidents.	01 Set



COMPANY PROFILE

OVERVIEW:

KGN Industries Established in 1999 by Mr. Imtiyaz, KGN Industries is an ISO 9001:2015 certified company renowned for its expertise in steam boiler erection, maintenance, and fabrication of high pressure vessels. With over 40 years of industry experience, Mr. Imtiyaz has led the company to become a pioneering force in the fabrication sector. In just over a decade, KGN Industries has established itself as a leading manufacturer in the market.

PRODUCT PORTFOLIO

KGN Industries specializes in the manufacturing of:

- Tyre Pyrolysis Plants
- High Pressure Tanks
- Chemical Reactors
- Storage Tanks (SS & MS)
- Industrial Chimneys
- Pharmaceutical Process Equipment

Our products are distinguished by their exceptional durability, high performance, and ease of maintenance. Each product complies with stringent industrial and international quality standards, making them widely used across various industries.

Client Relations and Experience:

Our commitment to maintaining long-term relationships with clients is a cornerstone of our business philosophy. This dedication is reflected in our enduring partnerships, with many customers remaining with us for over 35 years. We take pride in our extensive experience with

quality procedures adopted by notable companies, including Aditya Birla Group, JSPL, Dr. Reddy's, Divis Labs, Laurus Labs, Asian Paints, Lloyds, Gland Pharma, NSL, NCL, Dukes, Vishnu Chemicals, BIL, TPL, B.V., BHEL, Thermax, Thermopads, HBL, CCCL, and Tata Coffee.

Infrastructure and Workforce:

KGN Industries operates three state-of-the-art manufacturing units located in Hyderabad, Telangana, India, covering a combined area of 250,000 square feet. Our sophisticated infrastructure is supported by a team of skilled professionals who are dedicated to maintaining high quality levels. Our engineers possess extensive experience in fabrication, including coded vessels, ensuring that all projects meet the highest standards.

Expertise and Services

At KGN Industries, our team brings over 40 years of practical experience in fabrication work, specializing in steam boiler erection and repair. This extensive expertise has been instrumental in our foray into the pyrolysis field, allowing us to design and implement highly safe and robust machinery.

Our Comprehensive Approach

We offer a full spectrum of services for pyrolysis projects, encompassing:

- **Technical Guidance:** Assistance with obtaining necessary approvals, including NOC from the Pollution Control Board (PCB), permissions for Small Scale Industries (SSI), NOC from the Gram Panchayat, and NOC from the Factory Inspector.



- **Civil Design:** Development of structural designs tailored to project requirements.
- **Machinery Manufacturing:** Production of highest quality Tyre Pyrolysis Plant machinery & equipment.
- **Installation:** Comprehensive installation of machinery and associated infrastructure.
- **Operator Training:** Training programs designed to ensure effective and safe operation of the equipment.
- **Service:** A one-year warranty against technical defects, with ongoing technical support and guidance for the lifetime of the equipment.

Commitment to Quality

Our dedication to long-term business relationships is reflected in the premium quality of our products and services. We maintain a rigorous approach to both theoretical and practical aspects of pyrolysis plant design and implementation. Our focus on durability and superior quality sets us apart in the market, as we continuously upgrade our facilities and equipment to stay ahead in the industry.

Customer-Centric Approach

KGN Industries is committed to delivering the highest level of service and quality. Our quality-conscious approach and dedication to excellence have established new standards across the global market. We pride ourselves on our uncompromising quality standards, unparalleled service, and personalized attention, all aimed at achieving total customer satisfaction.

Our ongoing success and growth are testaments to our ability to meet and exceed the expectations of our clients, ensuring that we continue to provide the best products at the best price.

OUR TEAM

At KGN Industries, our dedicated team of 226 professionals drives our success and innovation. Our organizational structure is designed to ensure excellence in every aspect of our operations:

Production Team: 180 employees Focused on delivering high-quality manufacturing and fabricated products.

Installation & Maintenance Team: 30 employees Specialized in the efficient installation and upkeep of machinery to ensure optimal performance.

Marketing & Administration Team: 10 employees Committed to promptly addressing customer inquiries, providing detailed information, and maintaining robust business relationships.

Design and Engineering Team: 6 employees

Experts in creating and refining designs, ensuring our projects meet the highest standards of engineering excellence.

Each team member plays a crucial role in maintaining our commitment to quality and customer satisfaction, contributing to our reputation as a leader in the industry.





KGN

INDUSTRIES

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