Klean Industries: Advancing Tire Recycling Technologies to Help Solve Climate Change

Klean Industries is pleased to announce that it is continuing to improve its technology and output products that help solve climate change.

Klean Industries - End-of-Life Tyre Pyrolysis & Tire Recycling Recycling System

VANCOUVER, BRITISH COLUMBIA, CANADA, April 24, 2023 /EINPresswire.com/ -- Klean Industries Inc ("Klean"), a specialist in the manufacturing of integrated tire pyrolysis plants that produce the highest quality recovered carbon blacks and recovered biofuels is pleased to announce that it is continuing to improve on its technology and output products that help solve climate change by using technologies that minimize the environmental impact of recovered fuels and improve tire pyrolysis processes. As a result of building several projects globally, Klean has developed additional technologies that can be used to help recycle old tires by converting them into fuel. This fuel can be consumed in a manner that results in the dramatic reduction of the environmental footprint of end-of-life tires ("EOLT") otherwise destined for the landfill.

> As a company, we are focused on never-ending improvements to our technology portfolio. This ensures Klean delivers its customers the highest possible returns both environmentally and financially. "
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> *Jesse Klinkhamer, CEO of Klean Industries Inc*

Scrap tires represent a tremendous solid waste disposal issue across the planet. While waste tires can be physically recycled into rubber and polymer-based products such as sports fields and rubber mats, these applications only address a small volume of the old tires produced annually and discarded, which typically end up in a landfill or are incinerated as tire-derived fuel ("TDF"). Used tires when stockpiled are also a breeding ground for mosquitoes which in certain regions of the world can pose a health risk.

Klean's tire recycling solutions use a pyrolysis process to heat tyre chips at a temperature of 600°C to 700°C, in the absence of oxygen to deconstruct the rubber in tires into biodiesel fuel. This results in the production of a usable and high-value consumable fuel that can be used to create new carbon blacks, chemicals, and energy.

Klean new technologies can significantly enhance the performance of the biofuel produced from end-of-life tyres by further reducing the environmental impact of tire pyrolysis oils by using an emulsion technology. Emulsion technologies allow water to be mixed with fuel, creating benefits that lower emissions and increase thermal efficiency. Under normal conditions, water and fuel oil do not mix well, however, Klean has adapted a patented technology that makes this possible. By mixing the water with fuel, Klean's technology creates a cleaner burning fuel by allowing microscopic droplets of water that are inserted into the fuel oil. The combustion results are significant and the emissions of any oil as a fuel can be dramatically reduced. When the fuel oil is combusted with the emulsified water, the fuel bursts into steam and hydrocarbons which shatters the fuel content in microscopic droplets which allows the smaller droplets to combust faster and more completely saving money, reducing both maintenance costs of the combustion process and emissions of the combustion process itself.

This method is also combined with patented oxidative desulfurization processes which further reduces emissions and effectively removes sulfur constituents. The hydrotreating process currently used globally to reduce sulfur releases massive amounts of CO2 using conventionally produced hydrogen. These traditional hydrogen production technologies also require the management of hydrogen sulfide which produces challenging operating conditions and extremely high temperatures and pressures. Klean's new technology removes the sulfur that is present in the pyrolysis oil by an oxidative sequence utilizing much lower temperatures and pressures than commonly used by refinery hydrotreaters. This technology provides a cleaner, more environmentally friendly solution for the removal of sulfur which can now be fully recovered and recycled for reuse in industry, creating additional industrial symbiosis.

For more information on Klean's industries integrated end-of-life tire pyrolysis technology, please visit our website www.kleanindustries.com

About Klean Industries

Klean Industries ("Klean") provides best-in-class technologies and solutions in the waste-to-value industry. Our international team of award-winning experts has decades of experience in the design, engineering, and manufacturing of the highest-quality equipment to convert waste streams into valuable energy and resources. Our unique products and services are a result of combined knowledge in the design of recycling, resource recovery, waste management, and power generation projects. Our global project management expertise safeguards timelines and budgets enabling projects to be delivered in less time and at lower costs.

Klean uses proprietary technologies to rapidly develop projects that produce the highest quality

fuels, recovered carbon blacks, and green hydrogen from various kinds of feedstocks. Our know-how and technical skills provide a specialization in building projects that use advanced thermal technologies such as pyrolysis, gasification, and carbonization, which convert end-of-life tires, waste plastics, and municipal solid waste into domestic energy, sustainable commodities, and new cleantech jobs. We create a symbiosis between waste, resources, and energy. Klean Industries is the link between the low carbon, circular economy, and the goal of zero waste to landfill.

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YouTube ~ www.youtube.com/KleanIndustries
Facebook ~ www.facebook.com/KleanIndustries
Instagram ~ www.instagram.com/kleanindustries
Twitter ~ www.twitter.com/kleanindustries

CORPORATE HEADQUARTERS

Klean Industries Inc.
Suite 2500 - 700 W. Georgia St.,
Vancouver, BC,
Canada, V7Y1B3
(T) +1.604.637.9609
(T) +1.866.302.5928
(F) +1.604.637.9609

Emma Goldman
Klean Industries Inc
email us here
Visit us on social media:
Facebook
Twitter
LinkedIn
Instagram
YouTube