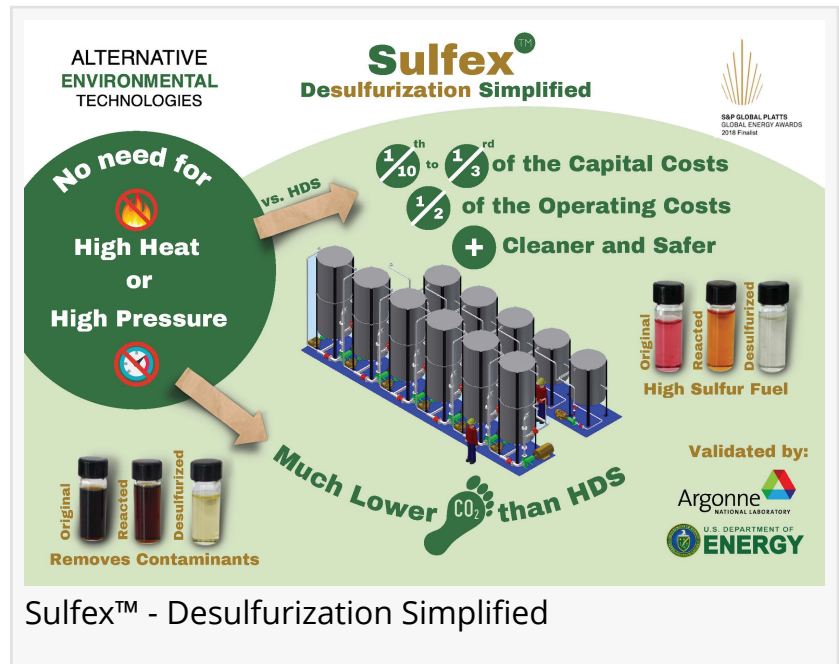


U.S. Patent Office To Issue Another Patent for Alternative Environmental Technologies' Sulfex™ Desulfurization Tech

The intellectual property that is set forth in the newest patent further protects significant features and application methods of the Sulfex™ technology

RENO, NEVADA, U.S.A., November 2, 2023 /EINPresswire.com/ -- [Alternative Environmental Technologies Holdings Corp.](https://www.einpresswire.com/Alternative-Environmental-Technologies-Holdings-Corp) ("AET") has just been notified of the imminent issuance by the U.S. Patent Office of yet another patent directed to its Sulfex™ Desulfurization Technology. The issuing patent provides additional, broad protection to features of the Sulfex™ system and further confirms the uniqueness of the Sulfex™ technology.



The infographic, titled "Sulfex™ Desulfurization Simplified", compares the technology to traditional Hydrodesulfurization (HDS). It features a central 3D bar chart showing a significant reduction in capital and operating costs. Text highlights that Sulfex™ requires "No need for High Heat or High Pressure" (vs. HDS), resulting in "1/10th to 1/3rd of the Capital Costs" and "1/2 of the Operating Costs". Additional benefits include being "Cleaner and Safer" and having "Much Lower CO₂ than HDS". The process is shown to "Remove Contaminants" and is validated by Argonne National Laboratory and the U.S. Department of Energy. A small award logo for "SAP GLOBAL PLATINUM GLOBAL ENERGY AWARDS 2018 Premier" is also present.

AET's Sulfex™ technology is a unique technology and process of removing sulfur and similar undesirable impurities from distillates. It is much safer than the traditionally used hydrodesulfurization ("HDS") processes and plants since Sulfex™ does not use high temperatures and pressures that are typical with HDS. Instead, Sulfex™ removes Sulfur from hydrocarbon fuels at substantially lower and safer temperatures and pressures. It massively reduces the CO₂ emissions generated from HDS and supporting processes like steam methane reforming. The CO₂ reduction varies between 70% and 90% for typical applications. It eliminates the toxic H₂S generated by HDS processes. Also, because of the low temperatures and pressures it is believed that gas flaring will be significantly reduced.

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We are thrilled that another of our portfolio companies is making great strides in further developing their technology”

Steve G. Stevanovich, SGS Asset Management, Chairman & CEO

Sulfex™ does not use exotic, high maintenance precious metal catalysts nor does it utilize

troublesome & high maintenance cavitation or ultrasonic process equipment unlike other oxidative desulfurization processes.

The Sulfex™ process achieves distillate fuel Sulfur levels of less than 10 ppm, and produces a fuel which is ready for use. The process has been independently verified by the U.S. Department of Energy's Argonne National Labs (www.anl.gov) with mass and energy balances validated by two major EPC's and has also been beta tested in Thailand. [The first commercial unit of 1000 barrels per day](#) is now being installed in Virginia, USA. The plan is to expand this unit by 4000 to 5000 bpd shortly after commissioning. Discussions with prospects are underway in North America and the Middle East for additional units of up to 10,000 bpd.

The intellectual property that is set forth in the newest patent further protects significant features and application methods of the Sulfex™ technology. The patent is directed to a system that uses the patented cross-flow of fuel, reagents and catalysts found within the standard Sulfex™ desulfurization plant. In this generation it uses a new physical arrangement that reduces capital costs, operating costs, and plant footprint making it ideal for smaller operations, such as pyrolysis oils. Through these features Sulfex™ achieves high rates of desulfurization while minimizing catalyst and reagent use within the system while maximizing the fuel that can be processed by the catalysts and reagents. Further, such a configuration reduces processing time for such fuel processed within the system.

AET's Vice President of Business Development, Barry Dallum stated "The achievement of yet another patent on the Sulfex™ technology displays our advancements on this disruptive technology. This process has a much lower capital investment, operating cost, and carbon footprint while offering significantly safer operating conditions than other desulfurization processes. The technology has been tested on middle distillate fuels, heavy fuel oils, intermediate streams within oil refineries, pyrolysis oil and distressed solvents with success at reducing contaminants. In addition, because of the simplicity of design compared to current desulfurization processes, the design to commissioning cycle time has decreased by approximately 50%!"

SGS Asset Management Chairman and CEO and AET Executive Director, Steve Stevanovich stated "We are thrilled that another of our portfolio companies is making great strides in further developing their technology."

About Alternative Environmental Technologies

Alternative Environmental Technologies ("AET") is an environmental technology company dedicated to comprehensive cost-effective solutions to environmental problems centering on the processing and usage of hydrocarbons. With numerous worldwide patents and patent applications, AET is the worldwide master licensee of the world's most extensive emulsified fuel technology platform.

Using its protected technologies, AET has developed products that provide economical ways to address the increasingly stringent environmental and emission regulations globally to:

- Remove as much as 99.9% reductions of all sulfur compounds found in existing high sulfur fuels and middle distillates sourced from various refineries;
- Enhance combustion efficiency of fuel oil for industrial furnaces and boilers;
- Substitute water for expensive light distillates (i.e. diesel) in producing heavy fuel oil (HFO);
- Reduce Nitrogen Oxide (NOx) emissions, the key hurdle to global adoption of biofuel and biodiesel-based products; and
- Remove sulfur from petroleum in ways that are both more economical as well as more environmentally friendly than methods in current use.

For more information, please contact AET at info@alt-enviro-tech.com or by phone at +1 775 309 4555 or visit us online at www.alt-enviro-tech.com.

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