Turbine Filter

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DPF filter and its problems Global environmental concerns over diesel vehicle emissions have led to regulations like the EURO-4 standard in Europe and recent EPA mandates in the US. While the adoption of DPF filters by manufacturers aligns with standards, concerns persist regarding regeneration, upkeep, and environmental effects. There are thousands of deaths a year, all related to DEE (Diethyl ether). Inhaling diesel engine exhaust (DEE) is the primary exposure route. Frequent exposure increases the risk of lung cancer by up to 40%. Disadvantages of the DPF filter are changing or cleaning the filter is an expensive procedure. The car's efficiency relies on a regeneration process that can fail on short trips, causing clogs. Only a specialist can replace the filter, and removing it harms the environment. Innovative solution - Turbine filter The Turbine Filter provides an affordable and user-friendly invention to environmental issues. It aims to separate solid particles from diesel engine exhaust gasses using centrifugal force. In the construction of the prototype, we used common materials. Using innovative design, the turbine filter provides a practical and affordable alternative to traditional DPF systems in the future, improving emissions control and significantly reducing the harmful environmental impact. Our prototype solves the issue of high-temperature gasses from the muffler using fire-resistant textiles and ceramic elements, making it environmentally friendly. Conducting scientific experiments in our conditions was not possible due to the lack of equipment for testing. Our invention and research contributes to the field of emission control technology by providing an alternative solution to the problems associated with traditional DPF systems.

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