



ESD-SIC'S PARTNERSHIP WITH OLIECENTRALE NEDERLAND AND SHELL

ESD SIC achieves up to 5% fuel¹ and fuel-related CO₂ emission savings!

The Farmsum/Delfzijl-based company ESD-SIC is one of the world's largest silicon carbide manufacturers. As an innovative and socially responsible company, ESD-SIC produces high quality silicon carbide in an extremely sustainable and efficient manner. Oliecentrale Nederland (OCN) and Shell are partners to help ESD-SIC achieve targets in the areas of operational reliability, cost efficiency and environmental impact.

The logistics on the site of Farmsum form an important part of the business process. Large volumes of basic raw materials and end products are constantly being moved around on the site. For this purpose, ESD-SIC have a variety of machines at its disposal, such as heavy wheel loaders and excavators. Hence, OCN advised ESD-SIC to switch to **Shell FuelSave Diesel** for these machines, to further optimize their operating process. This innovative

fuel helps to clean up injectors of the diesel engines from existing deposits and to prevent further deposit build-up*. This has a number of advantages including supporting reduced fuel consumption and CO₂ emissions, while helping the machines stay in optimum condition*.

"On the advice of OCN, we switched to Shell FuelSave Diesel. The cleaning properties of the fuel are of great importance to us, given the intensive and crucial use of our machines. Equally important are the improved fuel economy and a corresponding reduction in the CO₂ emissions we have achieved with Shell FuelSave Diesel."**

Richard Middel, ESD-SIC Director

¹ Based on multiple field tests of the customer. Compared to regular diesel without additives. Customer benefits vary according to type of operation, vehicle, driving conditions and driving style.

* Compared to regular diesel fuel without additives. As experienced by customer rather than Shell protocols. Benefits will vary according to type of operation, vehicle, driving conditions and driving style.

** Customer statement. Compared to regular diesel fuel without additives. As experienced by customer rather than Shell protocols. Benefits will vary according to type of operation, vehicle, driving conditions and driving style.

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ESD-SIC bv

"The decision to go with Shell FuelSave Diesel is in line with our business strategy"

Richard Middel



Business-Critical Factor

The availability of wheel loaders and excavators is critical in the production process and ESD-SiC carries out its own machinery maintenance. Uipko Detmers is the enthusiastic head of the maintenance department and speaks about his work with passion: "It is 'heaven' to work with these machines." The machines are monitored continuously, maintained with great care and replaced every four years. Detmers relies on OCN for the best products in the field of lubricants and fuels. He met the switch to Shell FuelSave Diesel as follows*:

"Shell FuelSave Diesel improves machine reliability, provides more torque and better fuel stability, helps with injector cleanliness and maintenance and reduces downtime. In addition, Shell FuelSave Diesel reduces fuel consumption and in turn CO₂ emissions."

*Customer statement. Compared to regular diesel fuel without additives. As experienced by customer rather than Shell protocols. Benefits will vary according to type of operation, vehicle, driving conditions and driving style.



Shell FuelSave Diesel with DYNAFLEX Technology²

The further developed and more precise diesel engine technology makes it even more important to prevent build-up of carbon deposits on injectors in order to minimise any efficiency losses. This is why Shell FuelSave Diesel is specially formulated with DYNAFLEX Technology², with exclusive dual cleaning effect. Shell FuelSave Diesel is designed to clean up injector deposits and to help provide better fuel economy³ in both newer and older engines.



Further information on the SiC world market

The semi-finished silicon carbide (SiC) produced by ESD-SiC is used in grinding and polishing agents, diesel particulate filters and as an additive for the cast iron industry, to mention a few examples. ESD-SiC is the only company in the world that uses a special SiC process technology, which allows the gas released from the production process to be reused in order to generate energy. With its own power plant, the company regenerates 20 percent of its own energy demand. Other facilities that help to produce as environmentally responsibly as possible are a desulphurization plant and a water purification plant. In addition, the company makes every effort to reduce the CO₂ emissions and to be a good neighbour for the environment. In the environmental and process technology fields, ESD-SiC is a leader in the SiC world market.

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TOGETHER ANYTHING IS POSSIBLE

www.shell.com/commercialfuels

² DYNAFLEX Technology and DYNAFLEX Formula are Shell's latest generation of advanced petrol and diesel formulations.

³ Compared to regular diesel fuel without additives. Actual benefits may vary, depending on type of vehicle, driving conditions and driving style. Internal Shell tests and customer trials have shown that the fuel economy achieved depends on the age of the vehicle and the type of operation.