## Our Innovations Your Advantage

Thinking outside the box, finding a way where others don't, challenging "the usual way", and solving challenges with an original approach. Call it what you want, but at Dinex this is simply a fundamental part of our culture, which is particularly well exemplified by the patents we produce. Patents that reflect our continuous strive for better and more competitive solutions, and demonstrates how Dinex honors it's partnerships by never settling.

going the extra mile



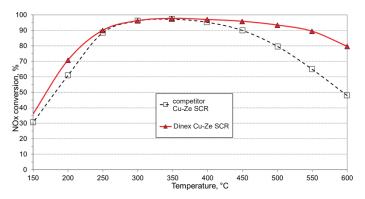
April 2021

## Let us look in detail at two of the innovations we worked on last year.

## **Ammonia SCR**

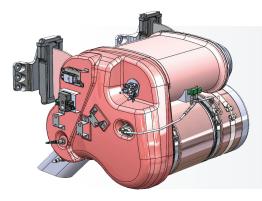
On the catalyst front we worked quite intensively in 2020 on our ammonia SCR technology and filed a patent for this innovative invention. In a nutshell, the invention focused on a copper based zeolite and a nanocrystalline aluminum compound that combined with other oxides, stabilizes the SCR functionality and improve the durability under hydrothermal conditions. This is especially important when thinking about how the product performs after hundreds of thousands of km on the road.

When looking at the overall performance of the invention one can easily see how much better it performs compared to a commercial reference. Over the whole temperature window the technology shows higher NOx conversion at low temperatures and at high temperatures a more stable behavior.



## **Canning Design**

On the canning side of things we stayed busy in 2020 looking for creative solutions to optimize canning in more ways than one resulting on an invention that shows how well our designs scale and adapt to the customer's space envelope. The invention centered around a design solution to fit a heavy-duty diesel Euro VI system in approximately the same space, as the one used by a Euro V system, maintaining similar connection points and inlet pipe routing while increasing catalyst volume, improving thermal performance, and having ease of filter serviceability as a priority.



Using, fresh and original thinking our researchers and engineers find inspiration in challenge and raise to it by coming up with creative approaches that serve not only the technical purpose they are designed for, but also serve the purpose of staying innovative by constantly looking at what can be done better.





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