CASE STUDY CS051

Improvement of Cleaning and Degreasing of Components Between Machining Operations at a Major European Automotive Company

Global Advantech's ultra-green aqueous degreasers clean and degrease as well as conventional industrial degreasers, but typically operate at lower temperatures and have a longer operational life between changes.

In the production of car engine and gearbox components, each item is normally cleaned after each machining and milling operation to remove all traces of swarf and fine metal particulates. This ensure that no swarf/metal particulates are left to interfere with the next machining/ milling operation and cause damage, leading to either costly rejection or early failure of an engine or gearbox.

Global Advantech's degreaser technology was chosen for cleaning and degreasing between machining operations for engine and gear box components after extensive evaluation by engineers at the automotive manufacturing company for a number of reasons:

- It was possible to reduce the cleaning solution temperature from 70°C down to 40°C, saving approximately half of the energy previously required to heat the solution.
- The product concentration was lower in use, typically 0.5% in water instead 2.0% to 3.0% with the degreasers previously in use.
- The product solution lasted up to 20 times longer before needing to be replaced, because it did retain oils and greases in stable emulsion so there was no rapid degradation in cleaning performance. The oils and greases were removed with an oil separator and the solution recycled to the washing machine.
- The degreasers substantially reduced health and safety issues, they were not classified as hazardous, whereas the previous degreasers in use were classified as either irritant or corrosive.

The final financial analysis for cleaning and degreasing between each machining operation using Global Advantech's degreasers showed an overall 90% cost saving compared to the previous use of traditional degreaser formulations.

Global Advantech Limited

Exceptional clean technologies for a sustainable future.....

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