

SHELL OMALA S4 GX*

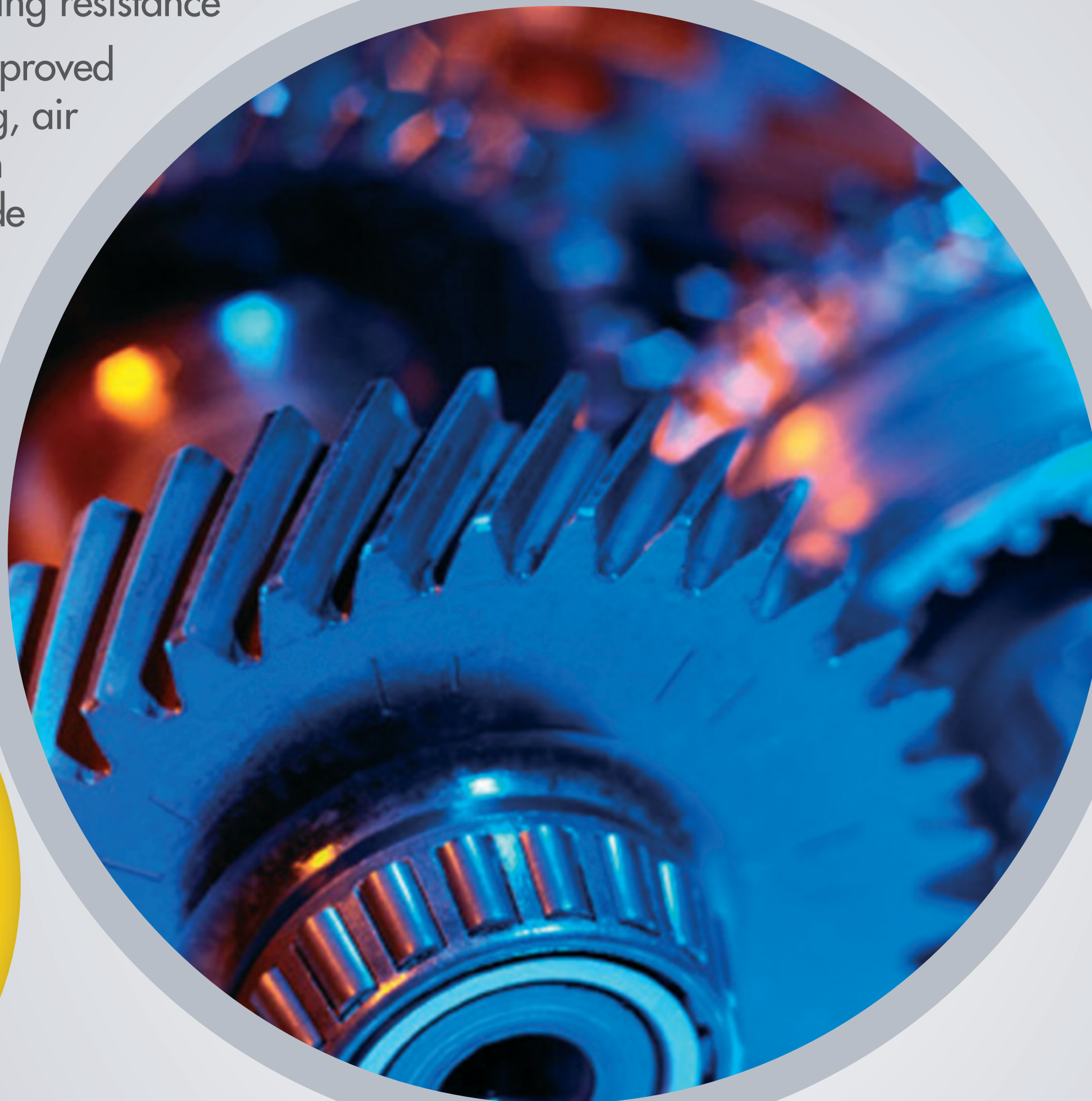
Next generation gear oil designed to protect at higher temperatures

Defining the challenge

- To evolve the existing product to meet with new OEM specifications for gear oils for Power, Mining and General Manufacturing
- In addition, goal was to develop an oil with:
 - Extended oil life – more oxidatively stable allowing longer oil drain intervals
 - Better wear protection – better load-carrying performance and micropitting resistance
 - Better system efficiency – improved surface properties: foaming, air release and demulsification and compatibility with a wide range of seals and paints.

Benefit

- Lasts up to 4 times longer**
 - High micropitting resistance with lower wear
- Excellent seal compatibility
 - Up to 25% less friction coefficient***



Designing the solution

- The need to find an oil that demonstrated oxidation resistance at high temperatures
- For wind turbine applications it was necessary to find a base fluid that could achieve the target levels of load-carrying performance and micropitting resistance; key was finding the right balance between Extreme Pressure (EP) performance and other measures such as rust resistance
- The Shell Technology Team also obtained knowledge of the micropitting phenomenon by collaborating with industry bodies such as the University of Munich's Research Centre for Gears (FZG).

Developing the technology

- After rigorous bench and rig testing, the best candidate was selected
- Candidate employed an unusual polymeric base oil but passed the full micropitting test with excellent performance in long-term dynamic seal test and oxidative stability in the 150°C tests.

Demonstrating the value

- A single product that meets both industrial and wind turbine gear requirements
- Over 170 data points obtained to prove that Shell Omala S4 GX* meets or exceeds the many wind turbine OEM gear oil specifications
- Its proven performance has led to approval by over 70 OEMs.

DESIGNED TO MEET CHALLENGES

*Shell Omala S4 GX is the new name for the Shell Lubricant formerly known as Shell Omala HD

** than conventional mineral gear oils in the same application

*** compared to mineral oils



Shell Lubricants