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Expanite sets new standards in sustainability with verified LCA data

Too much talk – too little data. That's how Expanite, the surface hardening specialist, sums up the state of sustainability in the heat treatment industry. But now, Expanite is changing that narrative. As the first company in the surface hardening and heat treatment industry, Expanite has completed an independently verified Life Cycle Assessment (LCA) that documents the environmental footprint of its hardening technologies. The results confirm what Expanite has long claimed: that its processes have a low climate impact thanks to a low CO₂ footprint and no use of toxic materials.

Transparency:

"When we started the project of documenting our CO₂ footprint for the Expanite processes, we quickly realised that while there was plenty of talk and flashy PowerPoint presentations out there, actual data is not available", says Thomas Sandholdt, CEO of Expanite. "We believe transparency builds trust, especially in an industry that has traditionally not been very open. We know from discussions with our customers that compliance is a big challenge, as data is hard to come by. That is why we commissioned an independent EU-based consultancy company to conduct a full LCA of our processes, documenting our environmental footprint."

Independent data confirms Expanite's low environmental footprint:

The findings of the LCA were very positive. The climate impact of Expanite's processes on stainless steel surface hardening leads to only 0,23-0.46 kg CO₂ eq per kg of treated material. When compared to the 10.5 kg CO₂ eq/kg emissions of untreated stainless steel, the Expanite process adds only 2-14% of greenhouse gas emissions. This very low impact justifies investing or switching to Expanite is environmentally responsible and economically sound. The LCA documents that the Expanite processes are free from fluoride, hydrochloric acid and/or cyanides. The processes generate no toxic waste and, perhaps even more importantly, do not use solvents. The soot emissions from the Expanite processes are so low that there are no health risks. All Expanite sites are fully compliant with local and national environmental standards.

Challenging conventional heat treaters

"We know from our market research that sustainability, including decarbonization, is increasing in importance when selecting suppliers. Transparency has always been at the core of our business. Our doors are open, and customers are always welcome to visit our treatment centers around the globe. Expanite was born out of a wish to provide a more sustainable heat treatment solution. We challenge the industry: ask your current suppliers to provide data on their heat treatment solution. If they cannot show you documentation, maybe it is time to talk to Expanite," says Thomas Sandholdt with a smile.

Expanite's sustainable advantages are not only about carbon footprint. By combining the two process steps, Expanite eliminates the so-called eggshell effect, which occurs in most surface hardening methods. This gives you a superior material performance for numerous applications, including pumps and valves for the food processing industry. Other applications that enjoy the uniform benefits of improved wear, galling and corrosion are Automotive, Oil & Gas, Marine and many others.

About Expanite

Since 2010, Expanite has provided proven and reliable heat treatment and surface hardening solutions for stainless steel, titanium, nickel-based and other speciality alloys. Our solutions improve wear, galling and corrosion resistance, thereby extending the lifetime of critical components, minimising the need for virgin materials. The company has its head office in Hillerød near Copenhagen and service centers and licensees in the USA, Germany, Korea, and China. The patented business model allows for license agreements whereby customers may implement the technology in their production lines. www.expanite.com.

