Cast Iron or Aluminium – Which Cylinder Block Material is Best for the Environment?

Automotive legislation focusses only on tailpipe emissions, ignoring the energy consumed during vehicle manufacture. But the production of every kilogram of primary aluminium generates 10 kg of CO\textsubscript{2}. Even with the favourable assumption of infinite recycling, the production of an aluminium cylinder block consumes 1.8 to 3.7 times more energy than the production of a cast iron cylinder block. Can the up-front energy burden of aluminium be recovered during the lifetime of the vehicle? Recent research says no.

To read more about the cast iron vs. aluminum life cycle study, click the link:

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SinterCast is the world’s leading supplier of process control technology for the reliable high volume production of Compacted Graphite Iron (CGI). With at least 75% higher tensile strength, 45% higher stiffness and approximately double the fatigue strength of conventional grey cast iron and aluminium, CGI allows engine designers to improve performance, fuel economy and durability while reducing engine size, weight, noise and emissions. The SinterCast technology is used for the production of petrol and diesel engine cylinder blocks and exhaust components for passenger vehicles, medium-duty and heavy-duty cylinder blocks and heads for commercial vehicles, and industrial power engine components for agriculture, marine, rail, off-road and stationary engine applications. SinterCast supports the series production of components ranging from 2.7 kg to 9 tonnes, all using the same proven process control technology. As a specialist supplier of precision measurement and process control solutions to the metals industry, SinterCast also supplies a suite of tracking technologies, including the SinterCast Ladle Tracker\textsuperscript{®}, SinterCast Cast Tracker\textsuperscript{®} and Operator Tracker\textsuperscript{TM}, to improve process control, productivity and traceability in a variety of applications. With 55 installations in 14 countries, SinterCast is a publicly traded company, quoted on the Small Cap segment of the Nasdaq Stockholm stock exchange (SINT). For more information: www.sintercast.com

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