

UK/MIT Sustainable Autos

LEXINGTON, Ky. March 6, 2007 - Researchers at the University of Kentucky (UK) and the Massachusetts Institute of Technology (MIT) have partnered to study how the increased use of aluminum in automobiles could increase fuel efficiency and reduce emissions contributing to climate change.

The project, funded by the Alfred P. Sloan Foundation, aims to help sustain the viability of the automobile manufacturing industry at a time when it faces increasing challenges. It is of particular importance to Kentucky, a state whose economy relies greatly on aluminum production and automobile manufacturing.

The grant was awarded to UK's Sloan Center for a Sustainable Aluminum Industry (CSAI) and MIT's Materials System Laboratory (MSL). Also partnering in the research is the International Motor Vehicle Program (IMVP) at MIT and the Wharton School at the University of Pennsylvania; the Aluminum Association in Arlington, Va.; and Secat Inc., a for-profit company with ties to UK.

"This research is especially critical in Kentucky, which ranks fourth in the nation in automobile manufacturing and third in truck manufacturing, and where aluminum represents the state's sixth largest employer. Aluminum currently is the second largest automotive material in terms of content. Our study is intended to show whether additional use of aluminum in automobiles can reduce the 'carbon footprint' generated by vehicle use," said Subodh Das, executive director of UK's CSAI and president and CEO of Secat.

Das predicts that consumers will become more focused on the materials of automobile construction as awareness grows of the positive impact that mass reduction has on improving fuel efficiency and reducing greenhouse gas emissions.

Over the next year, the researchers will prepare a coherent framework to evaluate the role of materials in automobile economic and environmental sustainability. A second phase of the project will apply the framework to evaluate the potential strategic opportunities enabled by specific aluminum technologies.

The project's initial phase began in January 2007.

Key researchers on the project are Das; Frank Field III, senior research engineer at MIT's Center for Technology, Policy and Industrial Development, which houses the MSL, and research director for the IMVP; and Randolph Kirchain, assistant professor at MIT with a dual appointment in both the Department of Materials Science and Engineering and the Engineering Systems Division.