

# Step change to advanced automotive recycling

The aluminium company Hydro has signed a cooperation with Austin AI Inc. (AAI), Texas, on joint development of advanced technology to sort automotive aluminium alloys. New developments can bring a step change to efficient, robust recycling of manufacturing scraps and later on used cars.

## Rick and Kjetil

The automotive industry boosts the use of aluminium to build lighter cars that emit less CO<sub>2</sub>. Their press shops are stamping different sheet components mostly made of 5xxx or 6xxx aluminium alloys. This requires separation of production scrap and makes recycling complex already for production remains, as well as at the end of life phase.

The persistent gap in clean fractioning of 5xxx and 6xxx alloys for recycling can soon be solved: AAI's technology, based on laser induced breakdown spectroscopy (LIBS), brings advantages compared to other LIBS configurations and has already shown good test results in sorting these alloys for clear separation and clean recycling.

AAI will install a pilot scale sorting facility at Hydro's research and development center in Bonn, Germany. Hydro scientists will gradually advance its processes and features, together with AAI. The aim is to increase the effectiveness of the sorting system and ensure high quality sorting results for the required throughput. Then, the technology can be expanded for full scale industrial use.

"We are optimistic and hope this will close the loop with automotive fabricator scrap and end-of-life vehicle scrap for new car body sheet, substantially saving energy, resources and process effort – another push for sustainable light-weighting with aluminium. Thus it is a next step on the way to make Hydro a preferred partner for carmakers and a carbon neutral company by 2020," says Kjetil Ebbesberg, Executive Vice President of Hydro, who leads the Rolled Products business.

Hydro is boosting body sheet capacity by 150,000 tpy with the EUR 130 million automotive line 3 at the rolled products plant in Grevenbroich, Germany. Just 18 months after laying the foundation stone, it has started to supply customers and is qualifying products for leading automotive companies.

"By developing robust processes, based on LIBS technology, Hydro can accommodate the needs of our automotive industry customers for converting their production scrap today – and help to master future challenges in end-of-life recycling for cars, with more aluminium in them," says Klaus Vieregge, Head of Hydro's R&D Center in Bonn. "We are pleased with the positive feedback and high interest from several of our key automotive customers."

Austin AI, Inc. (AAI), builds on 15 successful years of providing unique sensor-based sorting equipment to recycling industry clients around the globe. Its LIBS technology has tested success in several other scrap aluminium sorting challenges, such as separating wrought from cast scrap, and removing scrap magnesium from a fraction shredded light metals.

The cooperation with Hydro is rooted in first R&D trials back in August 2015 and now structured by a comprehensive work plan.

Published: November 29, 2016

<https://www.hydro.com/en/global/media/news/2016/step-change-to-advanced-automotive-recycling/>