

Roland Scharf-Bergmann, Chair, EA Recycling Division

Q1. Can I ask how does Hydro measure its recycling programme progress towards the carbon neutral target for 2020?

We look at all aspects of our supply chain, including mining, primary aluminium production, and energy consumption in processing on the one side. Then we look into the aspects of the use phase. Depending on where the aluminium goes, there are different levels of CO2 savings going against it. The savings are higher in transportation, e.g. with automotive sheet. The post-consumer scrap recycling side is also saving energy.

Q2. Hydro has a present total of around 2.1 Mt primary capacity and 1.0 Mt remelt/recycling capacity, including stand-alone remelters, recycling facilities and additional casthouse capacity at primary plants. What recent investments have you made to increase your post-consumer scrap processing?

Hydro has invested in developing new technology at its Clervaux Remelter in Luxembourg in 2016 to enable the more efficient recovery of metal from post-consumer scrap that comes from shredding operations in chip form. There is first a delacquering stage which preheats the metal in a delacquering furnace (Insertec), then the most optimum way to melt is to feed into the liquid metal is via a submergence unit, which we developed together with ALTEK, but have applied uniquely. We had an issue with fluid flow, so we ran simulations to establish a way to optimise the flow. With ALTEK we tested then applied the method successfully.

Q3. How will the EA Scrap Classification Manual benefit the industry?

It will increase visibility of the complexity

of different scrap types, also with the administration in legislation for imports and exports, where scrap is declared under certain

waste codes, they are able to check against photos whether the scrap is being declared in the right way. The main purpose is in traceability and data accuracy. There is approximately 1 Mt of aluminium scrap leaving the EU annually.

Q4. The Karmoy Technology Pilot was 70% completed at the end of 2016. When is it due for completion and what is the nature of the so-called 'creep ambition' from Hydro here?

The Pilot plant will be started in the fourth quarter of 2017. The 'creep ambition' is a further evolution of primary metal production, with several new features to give higher productivity and lower power consumption. Doing that means magnetic fields are going to be different from standard cells, and managing operations will require more automation than ever. Some of the Pilot technology items we will be able to roll out to our existing smelters, in a tailored way depending on individual setups. This will give us our 'capacity creep' in our existing plants. Don't forget that even the pilot will be producing 75,000 tpy of primary aluminium.

Q5. Hydro has signed a co-operation agreement with Austin AI Inc. (AAI), Texas, on joint development of advanced LIBS technology to sort automotive aluminium alloys?

We looked at a number of European suppliers for this LIBS application. The approach taken by AAI was different

and we have tested it and found it worked better. We saw that AAI was a small engineering company, so we felt that by combining our development knowhow with them in sorting

for the elements appearing with aluminium, we could better protect any solution we

develop, to still give us an edge.
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