

April 2016

Ultra clean cathode foil for top performance from eco-friendly batteries

Hydro has created a special battery foil **HyLectral**, which ensures unmatched constant surface quality, eco-friendlier battery production and an optimum efficiency in use, it says. This achievement greatly impressed the judges of the Alufoil Trophy 2016 competition who gave it an award in the Technical Innovation category.



This special aluminium foil has been developed for use as cathode current collectors in Lithium-Ion batteries. The performance of these batteries is primarily determined by a high cycle stability, in conjunction with satisfactory retained capacity. This requires a very clean surface and high metal purity. Hydro has developed a chemical degreasing process after rolling to achieve a foil in as-rolled robustness, with constant cleanliness of the surface.

Underlining the judging panel's decision Head judge Louis Lindenberg, global packaging sustainability director for Unilever said, "This cathode material is a breakthrough in batteries for renewable energy technology, to secure either electro-mobility or stationary power, particularly in remote locations. It can serve as the catalyst for a reliable transition from fossil based sources of power supply to renewable."

The established thermal process of degreasing foil can deliver a potentially softened material, which could still contain irregularities or impurities on the surface. Replacing them with eco-friendly water-based systems enables the aluminium foil to combine as base substrate and current collector, with low electrical transition resistance, for optimum transmission of electric current, says the company.

"We are particularly pleased with this award, as sustainable societies and industries need clean, reliable and affordable power supply. Also, being part of a solution here is an important step towards our goal to become a carbon neutral company by 2020," commented Manfred Mertens, head of Hydro's Rolled Vision team.

Currently the company is partnering with battery producer Leclanché in a pilot project in the Azores to provide rechargeable cells with a long service life. The ultimate vision is to secure a constant, reliable supply of power based on renewable energy sources like wind or photovoltaics, which do not always provide stable power generation.

The Alufoil Trophy is organised by the European Aluminium Foil Association. There are five categories – Consumer Convenience, Marketing + Design, Product Preservation, Resource Efficiency and Technical Innovation. Judges also gave an award for Overall Excellence. For 2016 there were 11 winners.

High resolution pictures can be downloaded and all winning entries can be viewed at www.alufoil.org

Further information:

Cédric Rauhaus, Manager Communications

The European Aluminium Foil Association is the international body representing companies engaged in the rolling and rewinding of alufoil and in the manufacture of aluminium closures, alufoil semi-rigid containers and of all kind of flexible packaging. Its more than 100 members include companies in Western, Central and Eastern Europe.