



Virtual cross-fertilisation workshop

Driving sustainable aluminium: recycling and critical raw materials for aluminium alloys in e-mobility

8-9 Nov 2022

The SALEMA project

The automotive industry is facing multiple challenges to meet the goals of the European Green Deal. The need to produce new, high-performance but lightweight materials is now compelling. So is the need to decrease our dependency on imported raw materials, while creating a sustainable economy for the future. Due to the focus on lightweight materials and the shift to electrification in mobility, aluminium alloys see a continuous rise in content per vehicle. Today, aluminium alloys reach about 15% of the mass of large-scale production cars and around 30% in the case of electric vehicles. Thus, the European automotive sector needs reliable aluminium sources that are less dependent on critical raw material imports.

The [SALEMA project](#) aims to reduce the dependency on critical raw materials (CRMs) such as silicon and magnesium in aluminium alloys. One objective thereby is to develop new aluminium alloys that minimise the primary sourcing of CRMs, by maximising their sourcing from scrap metal recycling. The suitability and performance of these new aluminium alloys will be evaluated for three different manufacturing processes (high pressure die casting, extrusion and stamping) that will be used to produce five demonstrators [representing different e-vehicles parts](#). The integration of scrap metal recycling is essential to create a sustainable circular economy, serving as a reliable source for high-quality alloys.

The online cross-fertilisation workshop

The Innovation Hub of European Aluminium organises the first online event related to the SALEMA project 'Driving sustainable aluminium: recycling and critical raw materials for aluminium alloys in e-mobility' on the mornings of November 8 and 9.

This workshop aims to address the challenges and opportunities of CRMs reduction for aluminium alloys in e-vehicles. As detailed in the program on the following pages, these aspects will be addressed from policy (Session 1), market (Session 2), and technological (Sessions 3 & 4) perspectives. Additionally, synergies with other EU projects will be analysed in Session 4. A Q&A exchange will follow the sessions in combination with networking opportunities during the coffee breaks, where participants will be invited to engage in discussion with the speakers and each other in a user-friendly virtual area.

The event targets EU policy specialists, academic and industrial experts, and key players in the sector of aluminium in e-vehicles.

The workshop is free of charge. The deadline for registration is the 3rd of November, 2022. Only registered participants will have access to the workshop. [Registration is available here.](#)

First Day of Virtual Workshop, 8th November 2022

09:00 Welcome and introduction

Paul Voss, Christian Leroy, European Aluminium

09:10 Introduction to the SALEMA project

Francesca Cavezza, European Aluminium

09:20 - 10:30 - Session 1: European policy landscape for CRM, aluminium and mobility

Moderator: Chris Heron, Eurometaux

09:20 Welcome and introduction by moderator

09:25 Towards a CRM policy strategy supporting e-mobility in Europe

Massimo Gasparon, Director of the European Raw Materials Alliance (ERMA)

09:50 End-of-life vehicle directive (ELV) and its implication for the aluminium industry

Benedetta Nucci, European Aluminium

10:10 Moving to e-mobility: opportunities and challenges in terms of EU policy

Cecilia Mattea, Transport & Environment

10:30 Online networking & coffee break

11:00 - 12:25 - Session 2: Challenges and opportunities for key materials in e-vehicles

Moderator: Pia Alina Lange, European Aluminium

11:00 Welcome and introduction by moderator

11:05 Collaboration with Automakers on Carbon Transparency

Hao Wu & Wenjuan Liu, RMI

11:25 Carbon footprint & circularity challenges for e-vehicles: main outcomes from the BATMAN project

Romain Billy, NTNU

11:45 Sustainability in the automotive sector: an OEMs prospective

Daniele de Caro, Stellantis

12:05 The challenges in batteries recycling

Ronald Gillner, Hydrovolt

12:25 Final remarks: Comments and wrap up by moderators

12:35 Online networking & coffee break

13:15 End of the first day

Second Day of Virtual Workshop, 9th November 2022

09:00 Welcome and introduction

Christian Leroy, European Aluminium

09:10 Introduction to the SALEMA project

Manel da Silva, Eurecat

09:25 - 10:50 - Session 3: Moving to smarter recycling of aluminium for vehicles

Moderator: Philippe Meyer, Novelis and Co-chair of the Innovation Hub

09:25 Welcome and introduction by moderator

09:30 On low CRMs alloy for foundry, extrusion and stamping

Prof. Franco Bonollo, University of Padova

09:50 Aluminium recycling challenges for aluminium automotive alloys: an industrial perspective

Ruggero Zambelli, Raffmetal

10:10 The Multipick technology for more circular aluminium

Gregory Lewis, Comet Belgium

10:30 The AUSOM project and deep learning methods for LIBS-based sorting

Dillam Diaz Romero, KU Leuven and Jonas Petersson, Swerim AB

10:50 Online networking & coffee break

11:20 - 12:25 - Session 4: Aluminium alloys and e-mobility: challenges and opportunities

Moderator: Patrik Ragnarsson, European Aluminium

11:20 Welcome and introduction by moderator

11:25 End-of-life recycled aluminium alloys for the automotive sector: challenges and opportunities

Prof. Geoff Scamans, Brunel University and Innoval Technology

11:45 Low carbon footprint aluminium EV battery housings require innovative design for disassembling

Claudio Mus, Endurance Overseas

12:05 New partially recycled high-performance aluminium alloys for extruded lightweight battery packs

Sylvia Andreas Cruz Torrez, Eurecat

12:25 Final remarks: Comments and wrap up by moderators

12:35 Online networking & coffee break

13:15 End of the workshop

