



Project managements' corner

Two years in to the project the consortium is pleased with the progress and well on its way to wrap up project results from a wide range of scientific fields and integrate them in a common framework. There are some interesting results from the material field of SuPLight that we want to focus on in this newsletter. For the rest of the project you are welcome to follow us in www.suplight-eu.org.

Best regards,
Sverre Gulbrandsen-Dahl, Project coordinator

Founded by the European Commission
SEVENTH FRAMEWORK PROGRAMME:
Call identifier:
FP7-NMP-2010-SMALL-4
Activity code:
NMP-2010-3.1-1: New industrial models
for a sustainable and efficient production

The newsletter will this time focus on interesting findings from WP2 – Development of new wrought alloys with closed-loop recycling characteristics.

The SuPLight project was initiated with the main goal to address novel industrial models for a sustainable and efficient production based on 75% recycling in high-end structural components.

Usage of EOL-scrap (End Of Life) in high-end structural components certainly induces doubt in ability to manage the alloy chemistry in the standard range, which could result in serious challenges regarding the production process and the product performances, both dependent on the alloy chemistry. In order to recognize the major challenges, a series of experiments were performed within SuPLight WP2. Focus was on impact of the wider tolerances in alloy chemistry (regarding both the trace elements and the main alloying elements-Si, Fe and Cu) on the traditional production process. The traditional production process consists of several steps including the most challenging, extrusion step, which is sensitive to the alloy chemistry. An alternative production process without extrusion step was also considered in order to overcome potential difficulties that could be confronted in the traditional production process. In parallel, a quantification of impact of the recycling alloy chemistry on the product performances was obtained.

Right before the SuPLight meeting hosted by HAI in Chalkida, Greece (July 3 – 5, 2013), the third and last deliverable focused on material characterization was completed. The main conclusion based on the results published in these deliverables is that the projected level of recycling in the high-end structural components can be reached if the sorted scrap categories are applied. Otherwise, the product performances are more affected by the wider tolerances in the alloy chemistry than the production process.

Short notice:

SuPLight will appear in a range of conferences in 2013/2014. International Conference on Extrusion and Benchmark, October 8-9, 2013 in Dortmund is coming up.

The SuPLight profile:



Tomaz Sustar,
C3M

Short facts: Ph.D. in numerical modeling at University of Wales, Swansea (UK)
Core competence: finite element modeling, material modeling
Main contribution in SuPLight: Development of material plugin which provide all the necessary material parameters for different types of finite element analysis and sustainability models based on alloy composition and its process route. In this manner the complexity of material parameters dependency on chemical composition will become transparent to the user of the framework.