

## Aditivne tehnologije za mala i srednje velika poduzeća

Projekt *Aditivne tehnologije za mala i srednje velika poduzeća* sufinancirala je Europska unija iz *Europskog fonda za regionalni razvoj* u iznosu od 560 000 eura, trajao je dvije godine, a završava krajem ožujka 2015. Glavni cilj projekta je povećanje potencijala za konkurentnost i inovativnost hrvatskih malih i srednjih poduzeća u proizvodnom sektoru.

Tijekom provedbe projekta odabran je 41 pilot-projekt malih i srednjih poduzeća (slike 1 – 3), a za proizvodnju predloženih proizvoda primijenjeno je pet različitih aditivnih postupaka dostupnih u *Centru za aditivne tehnologije* ili pri partnerima *Centra*. Riječ je o postupcima *PolyJet Matrix*, *PolyJet*, taložno očvršćivanje (FDM), selektivno lasersko srašćivanje poliamida i selektivno lasersko srašćivanje metala.

Hrvatska mala i srednja poduzeća putem pilot-projekata dobila su više od 500 000 kuna. U sklopu projekta osnovan je *Centar za aditivne tehnologije* pri *Fakultetu strojarstva i brodogradnje*, koji pruža usluge izrade proizvoda od plastike i metala u raznim područjima primjene te edukaciju potencijalnih korisnika.

11. ožujka 2015. godine održana je završna konferencija s više od 120 sudionika (slike 4 – 6). Nazočne su pozdravili Gordan Maras, ministar malog poduzetništva i obrta, prof. dr. sc. Miljenko Šimpraga, prorektor za inovacije, transfer tehnologije i komunikacije *Sveučilišta u Zagrebu*, i prof. dr. sc. Zvonimir Guzović, dekan *Fakulteta strojarstva i brodogradnje*. Održano je sedam predavanja koja su vrlo dobro prihvaćena.

## Additive Technologies for Small and Medium-sized Enterprises

The project *Additive Technologies for Small and Medium-sized Enterprises* has been co-funded by the European Union from the *European Fund for Regional Development* in the amount of 560,000 euro, it took two years, and it is to be completed by the end of March 2015. The main goal of the project is the increase of potentials for the competitiveness and innovativeness of the Croatian small and medium-sized enterprises in the production sector.

During the implementation of the project forty-one (41) pilot-projects of small and medium-sized enterprises were selected (Figures 1 – 3), and for the production of the proposed products five different additive procedures available at the *Additive Technologies Centre* or at the partners of the *Centre* were applied. These are the following: *PolyJet Matrix*, *PolyJet*, fused deposition modelling (FDM), selective laser sintering of polyamides and selective laser sintering of metals.

The Croatian small and medium-sized enterprises received through pilot projects more than 500,000 kuna. As part of the project the *Additive Technologies Centre* was founded at the *Faculty of Mechanical Engineering and Naval Architecture*, and it provides services of manufacturing products of plastics and metal in various areas of implementation, and the education of potential users.

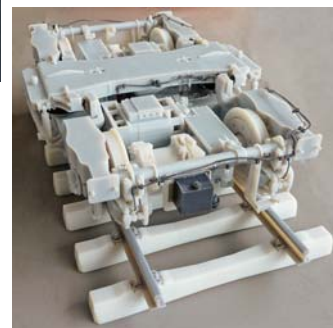
On 11 March 2015 the final Conference was held with more than 120 participants (Figures 4 – 6). The audience was welcomed by Mr. Gordan Maras, the Minister of Entrepreneurship and Crafts, Prof. Miljenko Šimpraga, Ph.D., vice-rector for innovations, technology transfer and communications of the *University of Zagreb*, and Prof. Zvonimir Guzović, Ph.D., the Dean of the *Faculty of Mechanical Engineering and Naval Architecture*. Seven lectures were given and they were very well received.

Maja RUJNIĆ-SOKELE



SLIKA 1 – Medalja načinjena selektivnim laserskim srašćivanjem metala

FIGURE 1 – Medal made by selective laser sintering of metal



SLIKA 2 – Model postolja elektromotornog vlaka načinjen postupkom *PolyJet Matrix*

FIGURE 2 – Model of the electric railcar bogie made by *PolyJet Matrix* procedure



SLIKA 3 – Pramodel nadgrobnog lampiona načinjen postupkom taložnog očvršćivanja

FIGURE 3 – Primary model of a gravestone lantern made by fused deposition modelling procedure



SLIKA 4 – Otvorenje konferencije

FIGURE 4 – Conference opening ceremony



SLIKA 5 – Voditelj projekta prof. dr. sc. Mladen Šercer

FIGURE 5 – Project manager, Prof. Mladen Šercer, Ph.D.



SLIKA 6 – Sudionici konferencije

FIGURE 6 – Conference audience