



**The Using of Waste Heat Arises
from Surface Finishing Baths in Dye
Process in Extrusion Aluminium
Process**



smart

advanced manufacturing

ORGANISATION PROFILE

Leading Organisation: Zahit Aluminium San. ve Tic. A.Ş

Personnel: 526

Size: 22.000 ton/year billet casting, 25.000 ton/year extrusion profile production, 3.360.000 m² aluminium composite panel

Products: Aluminium billet and aluminium profile, B-1, B-2 and A2 aluminium composite panel

Technical area: Aluminium billet production and extrusion

R&D project expertise: Zahit Aluminium has a R&D Center approved by the ministry of industry and technology since 2017. Total 53 project has been conducted in R&D. 24 R&D Researcher and Technician are working in project development department. Also 6 Researcher who acknowledged expert are working as a project specialist.

PROPOSAL INTRODUCTION (I)

Vision: main project goal

Its aimed to use and recycling the waste heat of surface finishing process which is defined pre-surface finishing and anodic oxidation coating process. Thus, it is provide to ecosystem and saves energy by using this recycling process. This project contains that the waste heat of surface finishing process is used in the dye process of the extrude aluminium profile. Its mean that the waste heat of surface finishing process can be recycle and use for other surface finishing process.

Motivation: why the project is necessary

The requirement to increase of global efforts play a critical role for sustainable world. The sustainable and inclusive global economy has become the priority agend of the international community. In recent years, the economy, effective use of energy, clean energy, energy management and also recycling of waste heat and management are more important in the production sector. The increase in energy requirements in almost every field due to advancing technology and industrialization has caused efficiency to be one of the underlined topics. Also all of them are important for the company to maintain its continuity, competitiveness.

Content: which are the developments to be made in the project

R&D studies will be deeply started with the determination of the base-case analysis for anodic oxidation coating and dye process in terms of energy consumption. The measurements of the loss energy amount will be analysed in anodic oxidation coating process. The analysis and design studies will be carried out on heat recovery systems. The energy analysis, heat transfer analysis and also economic analysis were performed for designed heat recovery system. Its mean that the efficiency and productivity will be analysed.

PROPOSAL INTRODUCTION (II)

Expected outcome: descriptions of the results to be obtained in the project

The project is an specific work in terms of energy management, energy recycling and also energy efficiency.

The project will provide to reduce of the energy usage.

Its aimed to beginning of the energy management in company.

Impacts: what will be the expected market impact of the project

In this project, it is aimed to reduce consumption by using energy effectively. Also its aimed to define the road map of green cycle via this project. Also this project will accelerate the transition green economy with low carbon in company. Thus, the inclusive, sustainable and also recycle process can be integrated in serial production process.

Schedule: start and end dates for the project. Duration.

Start Date: 01.06.2022

End Date: 01.06.2023

Duration: 12 Months

PARTNERS

Current Consortium: list of partners already involved in the project
Zahif Aluminium San. ve Tic. A.Ş, Adana TURKEY

Partner search: type of partner searched and countries of origin (if necessary).
Any (University, Research Center, Big or Small Company)



CONTACT INFO

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