



NECMETTİN ERBAKAN  
UNIVERSITY  
FACULTY OF AVIATION  
AND SPACE SCIENCES

## PROJECT INFO SHEET

### PROJECT STAFF INFO

<b>Name-Surname/Title</b>	Mesut UYANER, Prof. Dr.
<b>Department</b>	Aeronautical Engineering
<b>Role in the Project</b>	Executive

### Low Velocity Impact Behavior of AI Wire Reinforced Layered Composite

<b>Partners/Participants/ Stakeholders</b>	<b>If applicable</b>
<b>Research Topic</b>	Engineering
<b>Impacts of the Projects</b>	<p>Due to its recycling capability and its contribution to zero waste, a masterpiece work will emerge for those who will work on this subject due to the studies to be made on the laminated composite material produced. In addition, as a result of this thesis, an SCI publication with a large number of citations will be delivered.</p> <p>It is considered to be used as an essential reference in the determination of the laminated composite, which is intended to be used in the areas where the aircraft is designed to be produced with national means, where it is desired to be durable but light. In this context, it is thought that it will be the main reason for preference because it meets the requirements sought for the firm/companies producing for the defense industry and because of its recycling feature and because it meets the desired conditions on behalf of our state.</p>
<b>Keywords</b>	Recycling, Zero Waste, Layered Composite, Low Velocity Impact, AI Wire Reinforcement
<b>Start-End Date</b>	11.11.2021 - continued
<b>Project Budget</b>	16,390.00 TL

## Summary

The assets of our world are decreasing day by day by being used in line with some needs, and some of them are disappearing. Recycling is of great importance for a more livable environment and future lives. Our laminated composite material will be produced using recycling material. It is aimed that this material can be used in many different places, including the wing of the aircraft, which is under intense tension and tends to various positions on the ground and in the air. This material will be used to simulate several events that may happen during its life cycle; the "Low-velocity impact" test will be applied, such as bird strike, stone strike, and the fall of some tools during repair and maintenance. Various layer sequences will be traced for the production of the material. The most suitable material will be decided by observing the damage the material has suffered at which energy level by being exposed to different impact energies.

## Expected and/or Achieved Results