

LabNotebook

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1 Introduction

This day, our group did the tension test and the SEM imaging.

1.1 Goals

Generate data for tension testing and generate images from SEM.

2 Purpose

These data will provide opportunity for analysis, which can provide insight into material properties.

3 Setup

We used our previously prepared samples for the SEM imaging which were created with the charpy impact tester. The samples for tension testing were prepared beforehand.

3.1 Materials

1018 steel as received, 1018 steel annealed, 6061 Al as received, and 6061 Al annealed, in the dogleg shape.

3.2 Tools

We used an extensometer during our tensile testing in order to record strain data. We also used the SEM and the tension tester.

4 Procedure

4.1 Tension Test

After sanding our samples to remove oxide layers which may interfere with data, we put them into the tension tester. After attaching the extensometer, we ran the software with preset values. After running the program for each sample, the collected data was stored.

4.2 SEM

We used carbon tape to attach our samples to the viewing plate, and the TA took images and we stored it.

5 Results

The resulting data can be found in the LabData directory for Lab2.

6 Observations

Since steel was stronger it made a louder noise.