

ELIF ONER SHBEH

MSc. Metallurgical and Materials Engineer

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ACADEMIC QUALIFICATIONS

MSc	The University of Sheffield, Faculty of Engineering Department of Materials Science and Engineering Advanced Metallurgy Project: “Casting a 5053 Wrought Aluminum Alloy by Non-Conventional Techniques” Supervisor: Dr. Plato Kapranos Graduated with Distinction (Best Student Prize)	09/2015
BSc	Middle East Technical University (METU), Faculty of Engineering Department of Metallurgical and Materials Engineering Graduated with Honor (3.00/4.00)	06/2014

HONORS AND AWARDS

Best Student Prize MSc in Metallurgy/ Metals Engineering The University of Sheffield, Graduated with Distinction	09/2015
High Honor Student Middle East Technical University	06/2014
Honor Student Middle East Technical University	06/2013
High Honor Student Middle East Technical University	01/2013
Honor Student Middle East Technical University	01/2012
Best Student Prize (Full Success Scholarship) ISTEK Acibadem Science High School	06/2008

RESEARCH EXPERIENCE

Casting of 5053 Wrought Aluminum Alloy by Nonconventional Methods (Semi-solid Metal Processing)- The University of Sheffield	2015
<ul style="list-style-type: none">Investigated the suitability of 5053 wrought aluminum for semi-solid metal processing (Thixoforming) by evaluating the developed microstructures through	

different feedstock production routes (Cooling Slope Casting, Semi-Solid Rheocasting and Strain Induced Melt Activated (SIMA) process) to achieve non-dendritic microstructure.

- Carried out metallographic examinations of the cast samples to observe evolution of the grain structure through the semi-solid feedstock production techniques. The grain size and the shape factor of the samples are calculated using image-processing software (ImageJ) from optical microscopy micrographs.
- Performed tensile testing on the specimens to observe any influence of the obtained microstructures on mechanical properties.
- Characterized the fracture surfaces of test specimens by Scanning Electron Microscope (SEM) to define failure modes of the samples.

Production of Oxide Sputtering Target

2014

- Designed experimental procedure to produce oxide sputtering target powder.
- Produced Al-doped ZnO powders by Sol-Gel method.
- Performed calculations related to calcination, pressing and sintering steps.
- Characterized the grain growth and densification of powders by SEM, XRD and EDS imaging.

“Pressure Acid Leaching of Çaldağ Lateritic Nickel Ore: An Alternative to Heap Leaching”

2012-2014

- Carried out literature review and prepared reports.
- Performed experiments under the supervision of Prof. Dr. Yavuz Topkaya.
- Investigated the leachability of Çaldağ lateritic nickel ore under high pressure acid leaching (HPAL) conditions with the responsible research assistants.

WORK AND PROFESSIONAL EXPERIENCE

Research and Development Engineer

05/2019-Present

ASAŞ Aluminum Industry and Trade Inc., Turkey

Main Responsibilities:

- Developing test methods and standards supporting design of new materials.
- Developing, conducting and analyzing research and development of new alloys.
- Preparing and presenting reports related to R & D projects.
- Managing, coordinating and providing expertise to the projects.
- Managing development of new alloys and improvement of materials and manufacturing processes.

Sales and Application Engineer 10/2017- 05/2019
Marmara Metal Mamülleri Tic. A.Ş. (Distributor of Morgan MMS), Turkey

Main responsibilities:

- Providing technical support and expertise to customers in Aluminum and Steel production plants.
- Introducing new products and applications in the market, giving sales presentations and demonstrations.
- Installing and testing of materials and products.
- Responding to customer feedback, accordingly informing and coordinating sales team and improving customer service.

Global Technology Team- Sales and Application Engineer 10/2016-10/2017
Morgan Advanced Materials-Molten Metal Systems, Germany

Main responsibilities:

- Investigating key market needs for improvement of existing products and leading the development of new crucibles for non-ferrous applications.
- Analysis of competitors' crucible performance in Turkish market.

Initiated Projects in Morgan MMS:

- The Effect of Copper Oxide on Mullite Formation (Energy Saving Project)
- Performance analysis of ZrO₂ crucibles in Turkish Market related to energy efficiency and lifetime

Undergraduate researcher at Middle East Technical University 02/2012-06/2014

- Worked on the project of "Pressure Acid Leaching of Çaldağ Lateritic Nickel Ore: An Alternative to Heap Leaching" under the supervision of Prof. Dr. Yavuz Ali Topkaya.

VOLUNTARY EMPLOYMENTS

Istanbul Technical University 01/2013

- Worked in the material characterization labs under the supervision of Prof. Dr. Onuralp Yücel.
- Carried out materials characterization for commercial partners such as Istanbul Technical University and the Industrial Steel Making Plants.
- Attended workshops in sample preparation lab, chemical analysis lab, characterization lab (i.e. XRD, XRF, SEM).

Prof. Dr. Adnan Tekin Materials Science and Production 06/2011
Technologies Applied Research Center (ATARC)

- Worked in materials science and production technologies applied research center under the supervision of Prof. Dr. Onuralp Yücel.
- Completed workshops in the sample preparation lab, hydrometallurgy and pyro metallurgy labs.

INTERNSHIPS/ SUMMER EMPLOYMENT

Ferro Casting Industry and Foreign Trade Co.

09/2013

- Completed internship at Melting/Casting Unit, Thermal Processing Unit (i.e. Stress relieving and annealing processes), Core Shop.
- Carried out casting stimulations by Magma software with R&D team.

Sarkuysan Electrolytic Copper Co.

06/2012

- Completed internship in the following departments:
 - Refining Department- Anode Casting and Tank house (Electrolysis Process)
 - Continuous Casting- Continuous Billet Casting Departments
 - Wire Drawing Department- Bare wire production, Tin and Nickel plated wire production, multi-wire drawing, flat wire and profile production
 - Copper tube and Busbar Production Department
- Carried out metallographic examination for quality control department.

LANGUAGES

- Turkish: Native Language
- English: Advanced
- German: Intermediate

IT SKILLS

- Microsoft Office
- Origin Lab Data Analysis and Graphics Software
- Finite Element Analysis (FEM) Simulation
- C Programming
- Key Creator 3D Design Software
- CES Selector Materials Selection Software
- Thermo-Calc Software
- Logo Software
- Edraw Max