

# JESÚS CAMPUZANO

Master of Science in Metallurgy

INSTITUTO TECNOLÓGICO DE MORELIA

## - Professional experience

### Alternative Method for High-Speed Steel Heat Treatment: Joule Heating

Instituto Tecnológico de Morelia. August 2024-Present

- Investigation on the influence of Joule heating on phase transformations, carbide dissolution kinetics, and microstructural refinement over M35 high-speed steel as an alternative to conventional heat treatment processes.
- Presenter in TMS 2026 San Diego, CA.

### Steelmaking Laboratory Collaborator

Instituto Tecnológico de Morelia. August 2024-Present

- Casting of special steels for research purposes such as medium or high manganese steels, dual-phase steels and electrical steels.

### Team Co-Leader - Bladesmithing Competition, TMS 2026

Instituto Tecnológico de Morelia. August 2025- March 2026

- Design, forge and fabrication of a Roman Gladius sword.

### Mechanical Performance of a Si-Mo-V Alloyed UHSS Steel Under Isothermal Heat Treatment Conditions

Instituto Tecnológico de Morelia. August 2023-May 2024

- Congress report for the TMS 2026 155th Annual Meeting & Exhibition.  
[https://link.springer.com/chapter/10.1007/978-3-032-13828-6\\_139](https://link.springer.com/chapter/10.1007/978-3-032-13828-6_139)

### Summer Internship

Ternium Largos Norte, Apodaca, Nuevo León. June-August 2023

- Led an initiative to improve operations in the roller workshop which allowed the reduction of operational interruptions in the rolling mill.

### Team Leader - Cast in steel Competition, Cleveland, OH ITM - Fundidora Morelia - October 2022- April 2023

- Design, cast and finish of an African Spear Point

## • Awards

- **Special citation - Hands On Process in Bladesmithing competition.**
- **Honorable mention- Innovation On Process in Cast in Steel Competition.**
- **Steel Intern Scholarship AIST- USA**

## • Courses

### Application of metallurgical knowledge for cost reduction in the manufacture of safe steels, free of inclusions and defects.

AIST, Veracruz, 2026.

### Heat Treatment

ASM International, 2026

### Modern electric furnace steelmaking

AIST, Louisville, Ky, USA 2024.

### Secondary Steelmaking

Steel University, 2023.

### Electric Arc Furnace Operation

Steel University, 2023.

## • Professional Summary

Materials Science Engineer and M.Sc. student in Metallurgy in closing stages with extensive knowledge in steelmaking, casting processes, and in a large part of steel-related processes, with a strong background in problem-solving and process optimization. Characterized by dedication and commitment. Seeking opportunities to improve and continue growing professionally.

## • Soft skills

- Problem-solving
- Leadership
- Teamwork
- Assertive communication
- Decision-making
- Critical thinking

## • Hard skills

- Steelmaking
- Casting Process
- Heat Treatments
- Material characterization
- Casting Process
- Solidification

## • Languages

English

B2



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Jesús Campuzano