

## TRAINING CERTIFICATE

I, the undersigned Olivier DELAHAYE, Director of the **TOULOUSE INP FORMATION CONTINUE**, training service of the Toulouse INP Institute, 6 Allée Emile Monso 31029 TOULOUSE, registered under the activity number 7331P000631 hereby certify that :

**Monsieur VAZQUEZ TOVAR Guillermo**

Has attended the

**SATA-2022 SUMMER SCHOOL**

Held in **Toulouse from the 27/06/2022 to the 01/07/2022**. The attendee was present for the entire duration of the school, equivalent to 26 hours of training.

Nature of the training (article L 6313-1 of the French Labor Code) : 1° Actions de formation

Objectives :

- Knowledge of the CALPHAD method
- Understanding of the experimental and ab initio methods to acquire thermodynamic data
- Performing thermodynamic calculations using the Thermo-Calc software
- Performing a thermodynamic assessment using the CALPHAD method
- Acquiring insight on CALPHAD thermodynamic databases and their applications

Evaluation of the acquired knowledge : ACQUIRED      Positive score of the multiple-choice test = 17/20

This certificate is provided for all legal purposes.

Toulouse, July the 5, 2022

The President of Toulouse INP Institute  
 pp Director Olivier DELAHAYE

Signé par : Olivier DELAHAYE  
 Date : 06/07/2022  
 Qualité : Directeur de la Formation Continue



**TOULOUSE INP**  
**FORMATION CONTINUE**  
 6, Allée Emile Monso  
 BP 34038  
 31029 TOULOUSE CEDEX 4  
 Tél. 05 34 32 30 87

Original document