Welding simulation Assignment

Casting and Welding (S1-23_MTJCZC315))

Assignment:

Perform the following isotherm analysis of the laser welding of **Nickel 200 and 1018 steel material** using the given process parameters.

1. **ISO 2D**
2. **ISO 2.5D**
3. **ISO 3D**

All the process parameters are fixed based on the last three digits of the roll number "XXX".

202236JC"**XXX**"

- Process parameters for the isotherm analysis
  a. Weld speed (mm/s) = $\{(XXX) * 10\}$
  b. Laser power = 1500 + (500* XXX)

Instructions:

- Perform the isotherm analysis using the above provided process parameters; other parameters such as base plate temperature and plate thickness can be assumed.
- Compare the temperature distribution plots of each material for the isotherm analysis and assess the weldability of each material using the selected process parameters. The comparison result should be handwritten typed results are not acceptable.
- Prepare a single PDF containing the list of parameters selected, screenshots of isotherm analysis and handwritten comparison reports for evaluation.