



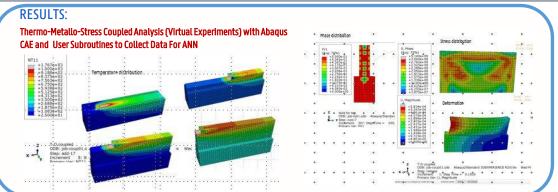
The 4th International Conference on Numerical Modelling in Engineering (NME 2021)

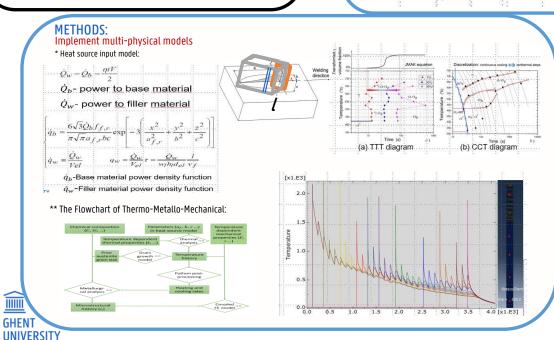
August 24-25, 2021, Online via MS Teams

SOETE LABORATORY – EMSME (EAO8)

Yong LING The FE Modelling and with ANN Tool to Predict Microstructure and Hardness for Low Carbon Steel WAAM Components

CONTEXT: Various Components made by WAAM WAAM- one of 3D printing processes, Wire arc additive manufacturing. Define the printing strategy for quality of the components are underway.





CONCLUSION:

- A numerical tool has been developed which can be used for virtual experiments of WAAM process.
- Conduct series of numerical simulations on the scaled model of WAAM plate to collect data for ANN training.
- Add JMAK model in AMBMAIN to obtain data (UTS and HV distribution) for low alloy steel.
- Design an inverse model for low carbon alloy steel with ANN Tool to realize "Properties -> fractions of phase volume-> WAAM processing parameters". → The simple WAAM strategy tool.

Contact

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