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Swerea Sicomp

Experience

- Technological platform leader for Manufacturing and Processing Sciences at Swerea SICOMP
- Work with implementing material models for composite processes for example flow of short fibre composites and curing models in LSDyna.
- Earlier (2017) Lecturer in master degree courses in Biocomposites and undergraduate courses in Material and Manufacturing based on Ashby Material Selection process as well as Ecodesign processes
- Reviewer for Composites Part A
- Have not been part of agreeing vocabularies, classifications and ontologies in the fields of modelling, characterisation and/or materials processing yet

Issues to discussion in composites terms

- Handling of fibre fraction, distribution and orientation in fluid mechanics and the final output for composite
- Homogenisation of properties, what properties needs to be described
 - From reinforcing efficiency to material properties in differing sizes of solid elements
- Rheology behaviour of composite – standard models and associate material properties for input to processing software such as for 3D Timon, Moldex 3D and other injection molding software.
- Fibre-matrix interface as well as metal composite interface (mechanical and electrical)
- Warpage and residual stresses: input required for their prediction
- Fibre fabric descriptions and associated mechanical properties. Agreement on terms, on fabric shear properties for drapability.
- Creep behaviour: standard model of prediction and required parameters.