TmmFE_HT
For Heat Treatment Solutions

From TherMet Solutions Private Limited

Example of heat treatment simulation of a spoked steel wheel

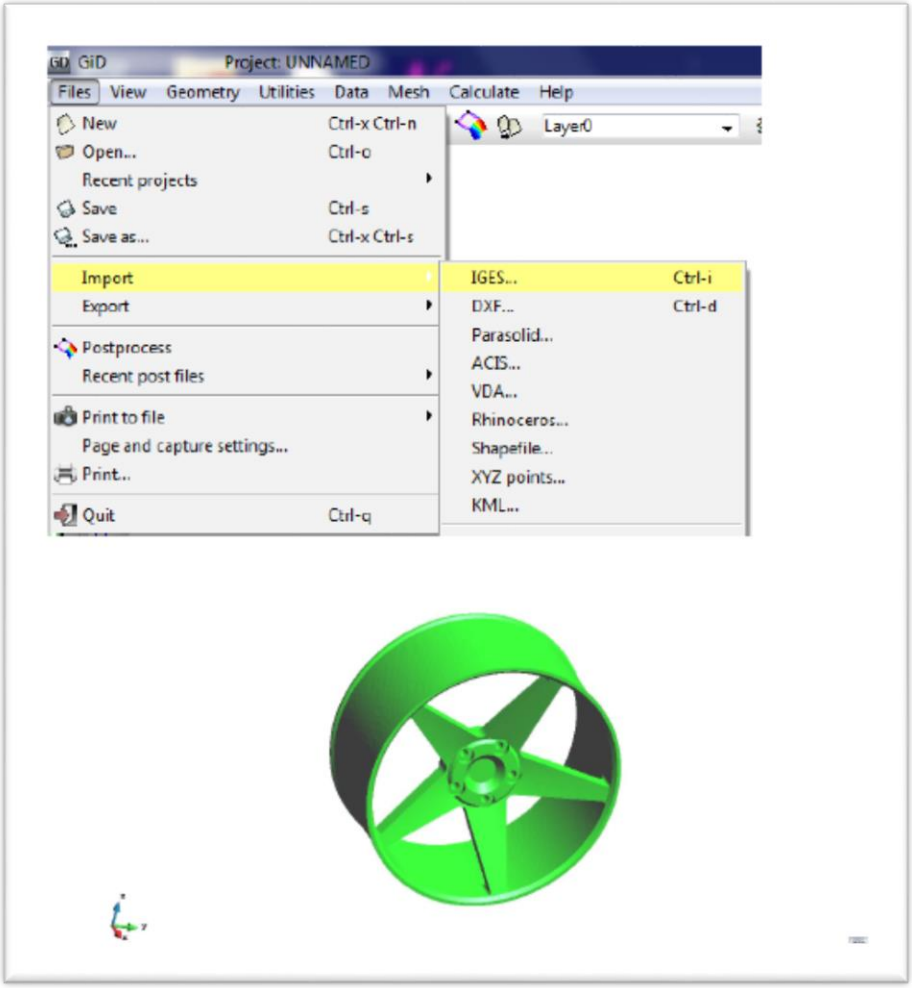


Fig 1. The solid model of the component is imported into the FEM Preprocessor software, GiD

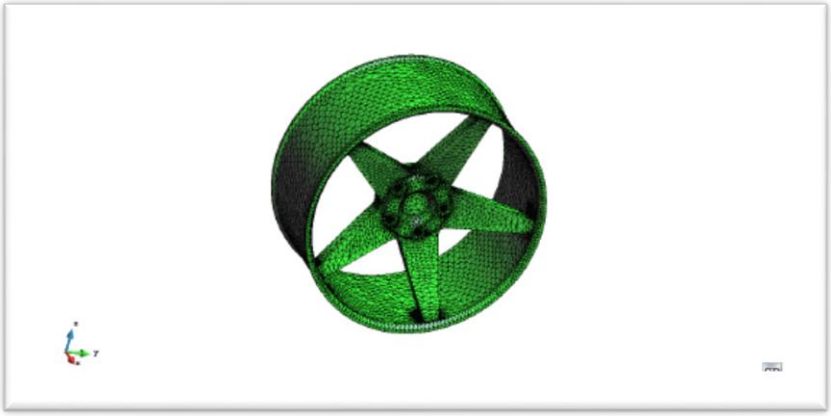


Fig 2. The solid model is discretized for finite element analysis

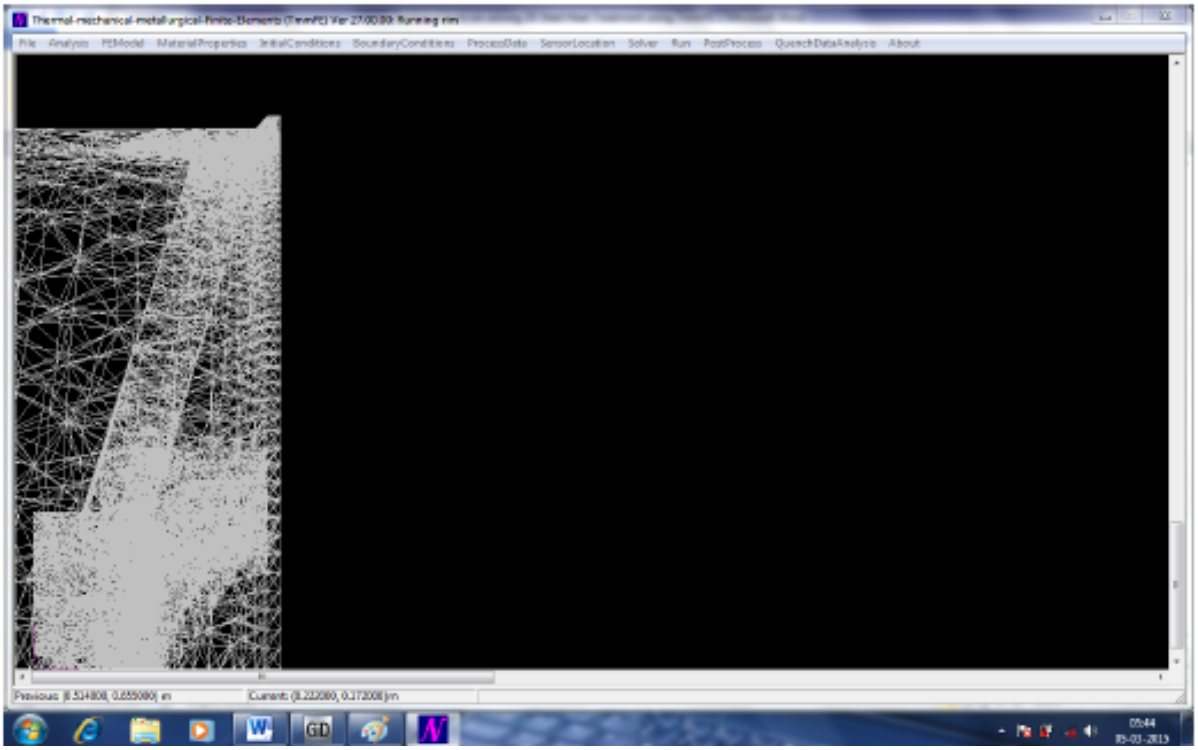
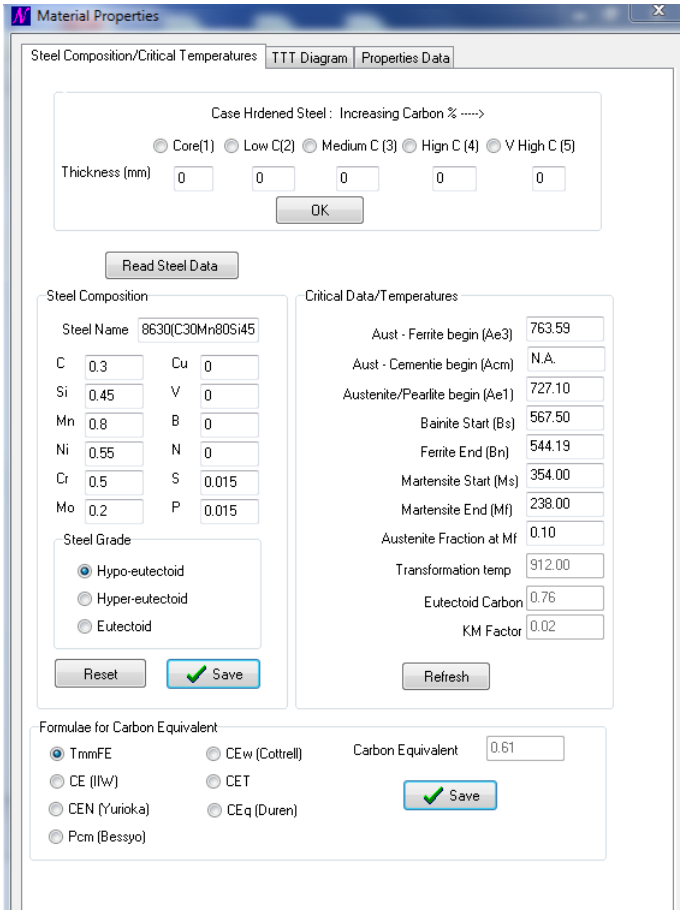


Fig 3. The discretized finite element model is imported into TmmFE_HT software for simulation



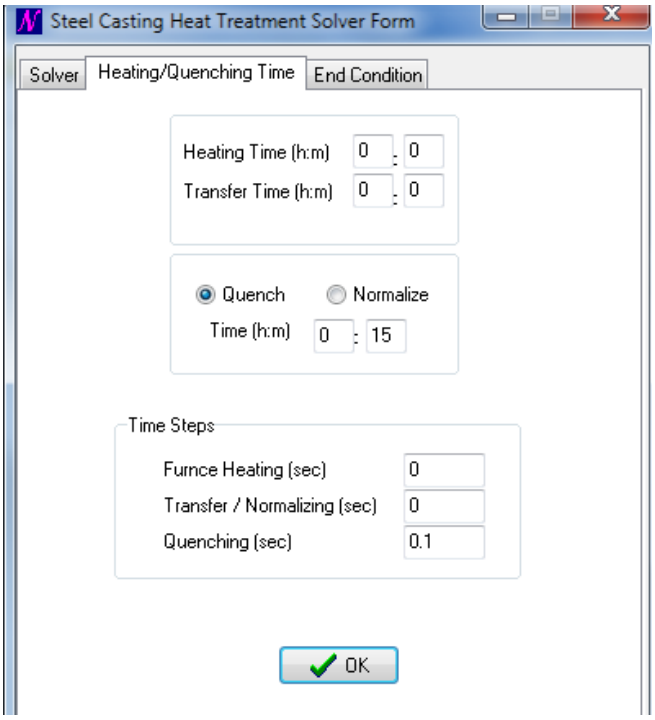


Fig 4. Chemical composition of the steel, preheating time, transfer time and quench time are input to TmmFE_HT software along with other parameters

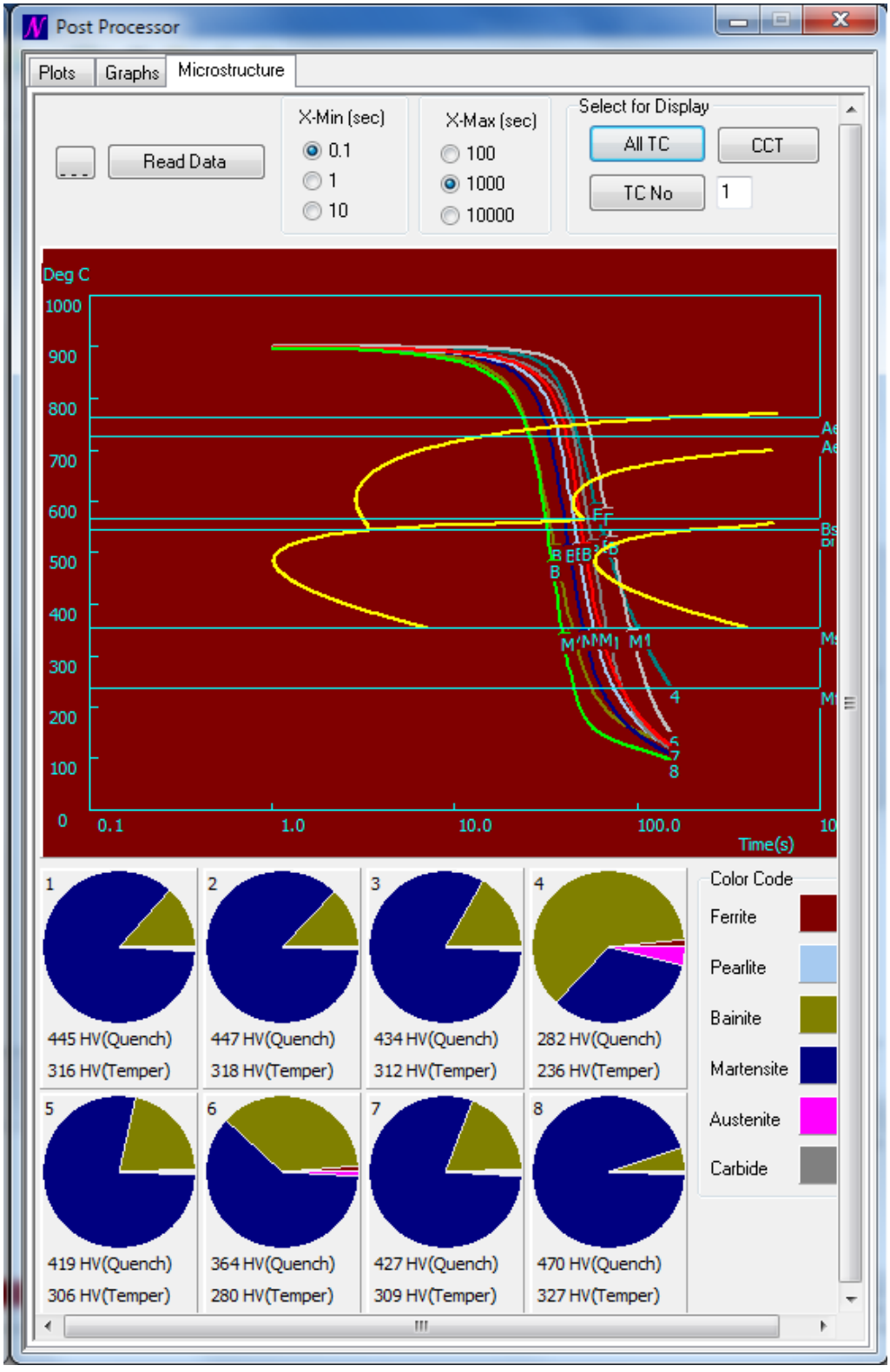


Fig 5. TmmFE_HT output shows the microstructure distribution, as quench hardness and tempered hardness at selected locations. The cooling curves are shown superimposed on the TTT curve for the steel.

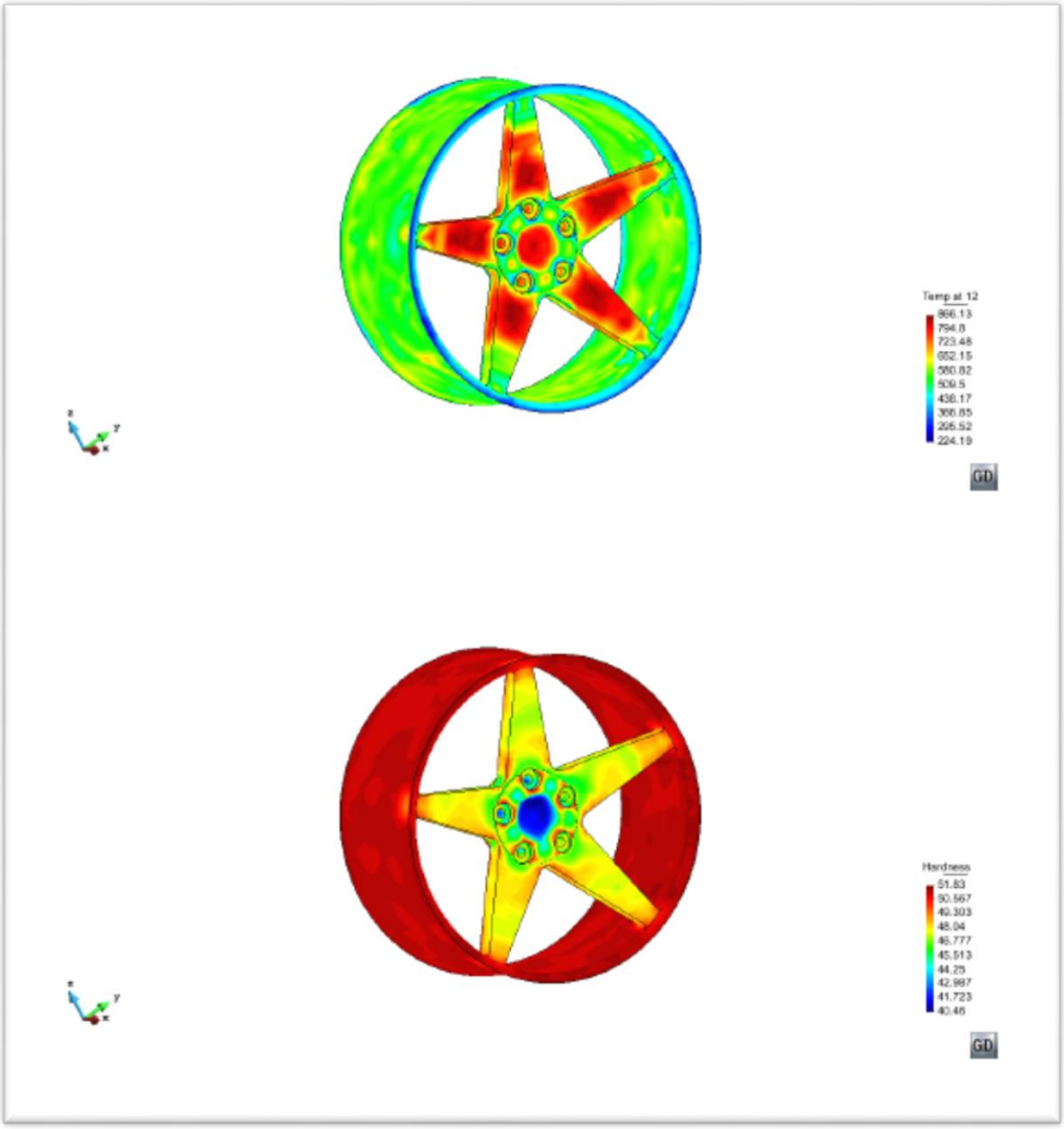


Fig 6. The simulation results are exported to Gid Postprocessor where it is viewed in 3D format.