

CAE Analyses for effective axial welding of the steel cylinders with High Frequency Induction Heating method

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High frequency induction heating is often used for joining the metal parts. Generally this method needs electro-magnetic heating process with thick electrodes and high voltage current resulting much optimization time. In this article we discussed how to get simple but practical method with highly efficient blank-heating using special electrode positioning and section settings. With several inspections for those ideas we developed a highly efficient analytical High frequency Induction Heating Welding models for joining the steel pipes axially. We propose the usages of this kind of simple analysis models for the efficient development of the automobile parts or many other industrial products.

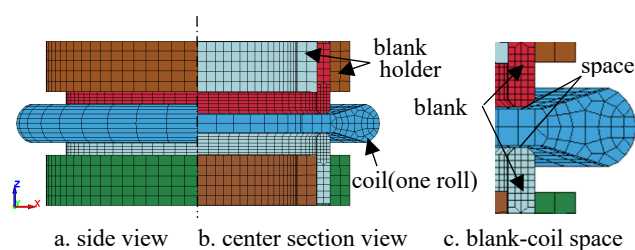


Fig.1 3D analysis model

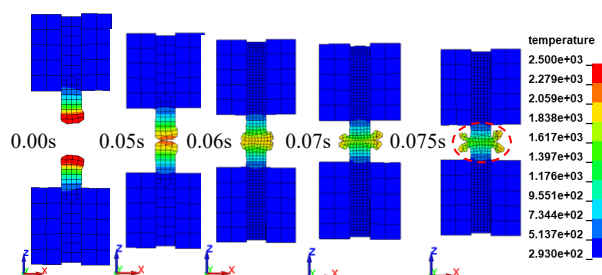


Fig.2 Deformation and temperature change of the model