

Material Processing for Base Technology of Manufacturing

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Deformation Processing of Materials Lab.

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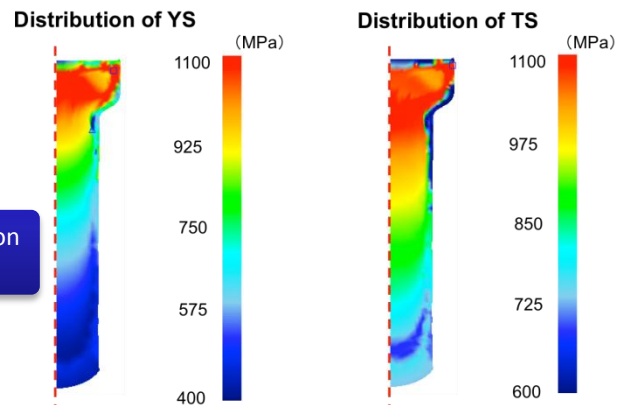
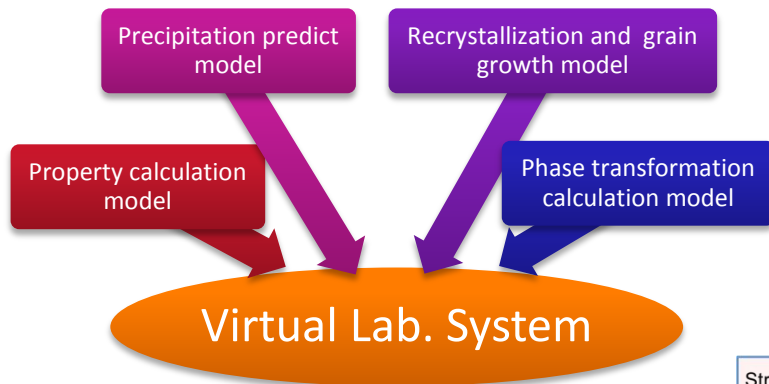
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FEM System for Controlled Forging of Auto Parts with Gradient Strength

Controlled forging process which can make products being distributed mechanical properties is desired. However, we have to control temperature, strain and strain ratio exactly to obtain desired material properties. In order to address this agenda experimentally, we have to spend a lot of time and cost. Therefore, Virtual Lab. System (VLS) for controlled forging has been developed in our laboratory. We can predict product property accurately using VLS.



Strength is distributed depending on solid solution and precipitation of VC.

Cold Forge Bonding of Steel and Aluminum Alloy

Bonding process between Al and Fe has been needed to make light weight body of automobile. However, it is difficult to bond using welding process. We have developed bonding process by using cold extrusion process.

