



# Generalety – Your choice for engineering designs





## Company Profile

- Generalty is a leading global engineering and outsourcing service provider with offices in USA, Canada and China.
- It is specialized in CAD/CAE in vehicle crashworthiness, durability, NVH, CFD, multi-body dynamics, aircraft structures and sheet metal stamping.
- Its core business includes CAD/CAE services, contracted R & D, training, contract employment and outsourcing services.
- With many years of track record for design and engineering, Generalty consistently delivers a competitive advantage to more than 60 customers in automotive, aerospace, metal stamping, raw materials and construction industries.

**High Quality**  
**Low Cost**  
**Speedy Delivery**



### ■ Mission

To assist our customers to reduce design & manufacturing costs, shorten time to market and improve product quality by applying and advancing engineering technologies in automotive, stamping and aerospace industries.

### ■ Objectives of CAD/CAE

- Avoid Design Changes after Production Launch
- Reduce Cost of Testing and Prototyping
- Reduce Production Cost
- Shorten Development Time
- Improve Performance and Quality
- Improve Customer Satisfaction

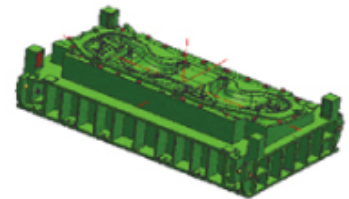
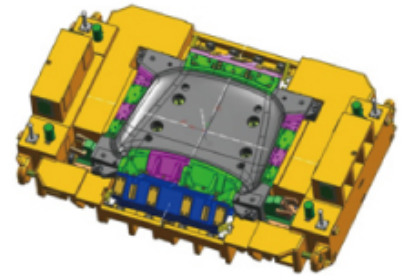
### ■ Customer Base

Chrysler, Ford, GM, Magna, Alcoa, USS, ABB, BE and over 60 automotive and aerospace suppliers in component manufacturing, tooling, stamping and raw materials.



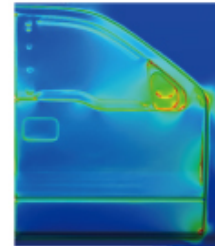
### Sheet Metal Stamping CAE

- Simulation of Tubular Bending and Hydroforming
- Simulation of Tailor Welded Blank Forming
- Simulation of High Strength Steel Forming and Springback
- Simulation of Laminated Steel Forming
- Simulation of Hot Stamping
- Wrinkling/Buckling/Failure Analysis
- One Step/Incremental Simulation
- Explicit/Implicit Simulation



### Stamping Die Designs

- Progressive Die Designs
- Transfer and Line Die Designs
- Binder & Addendum Designs
- Draw Die Development
- Die Structure Designs
- Die Design Detailing
- Tooling Buyoff Assistance



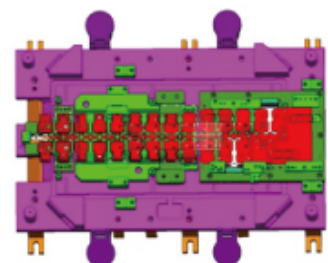
### Process Designs and Troubleshooting

- Blanking, Nesting, Piercing, Bending
- Drawing, Stretching, Flanging, Restriking
- Camming, Trimming, Hemming
- Tubular Bending & Hydroforming
- Sheet Hydroforming
- Circle Grid & Thickness Strain Analysis
- Cost Reduction Strategies



### Press Machine and Die Structures

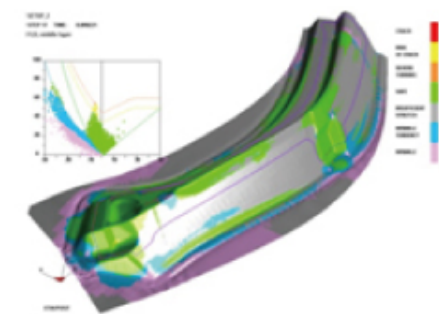
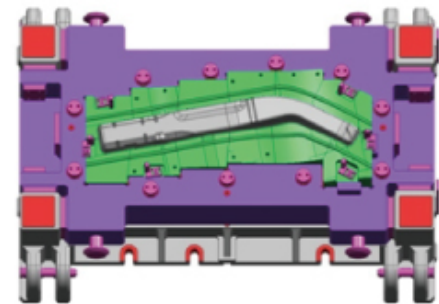
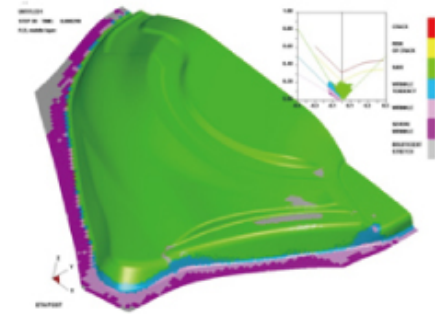
- Press Capacity Evaluation
- Press Machine Design and Analysis
- Die Structural Design and Analysis
- Simulation of Press Line and Material Motion





**Material Expertise**

- Cold / Hot Rolled Steels
- HDGA/GI, EG Steels
- Low Carbon/High Strength Steels
- Dual Phase, TRIP, Martensite, Boron Steels
- Laminated Materials
- Material Property Database
- Forming Limit Diagrams
- Material Selection & Cost Estimation

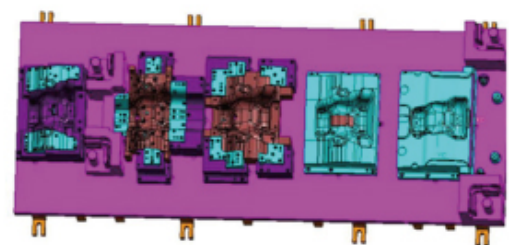


**Low Cost Tool & Die Making**

- Blanking Dies
- Draw Dies
- Trim Dies
- Progressive Dies
- Transfer Dies

**Low Cost Metal Supplies**

Ta, Nb, W, Mo, Ti & Mg in all forms: ribbon, foil, sheet, wires, rod, strip, bar, plate, seamless tube, capillary tube, welded tubing sputtering target & powder etc. in conformity with ASTM.





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