



Generalety – Your choice for engineering designs





Company Profile

- Generalety 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, Generalety 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.

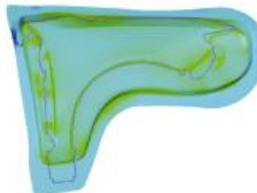
Tooling and Metal Stamping

- Progressive, Transfer, Stage Die Designs
- Binder, Addendum and Draw Developments
- Process Design & Troubleshooting
- Press Capacity Evaluation
- Press Machine Design and Analysis
- Blank Size Development and Nesting
- Material Cost Estimation
- Cost Reduction Strategies
- Tubular Bending and Hydroforming
- Forming of Tailor Welded Blanks
- Forming of High Strength Steels
- Springback Estimation and Compensation
- Forming of Laminated Materials
- Tool & Die Making



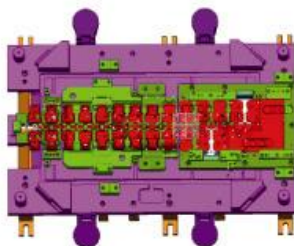
Structures & Durability

- Linear Stress Analysis
- Nonlinear Stress Analysis
- Analysis of Drum Drop Test
- Analysis of Palm Print
- Analysis of Seatbelt Pull
- Analysis of Dent Resistance
- Analysis of Oil Canning
- Fatigue Life Analysis
- Material Selection for Light Weight Vehicle Design



Vehicle Dynamics

- Multi-body Dynamics
- Chassis and Suspension Systems
- Powertrain & Transmission Systems



Vehicle Crashworthiness

- NCAP Frontal Impact
- IIHS Side Impact
- Rear Impact
- Side Pole Impact
- Roof Crush
- Rollover
- Body Structural Design
- Material Database
- Selection of Light Weight Materials
- Design for Cost and Weight Reductions

Vehicle NVH

- Mode Analysis (Normal, Operating, MPF)
- Static/Dynamic Stiffness Evaluation
- Noise Performance
- Shock/Boom Performances
- Beaming and Aftershake Performances
- Mobility Evaluation/Analysis

Outsourcing Services

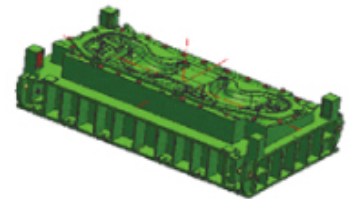
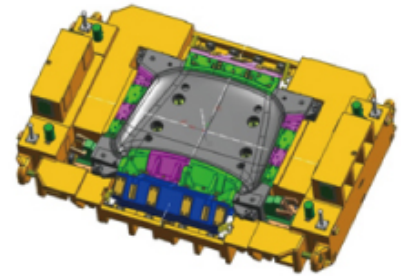
- Stamping Tools & Dies
- Fixtures
- Stamping Parts
- Plastic Parts
- Raw Materials





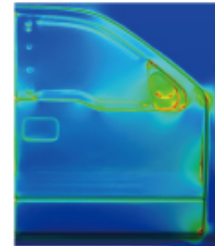
Sheet Metal Stamping CAE

- 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



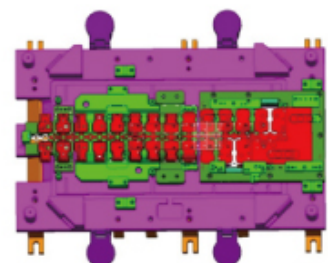
Process Designs and Troubleshooting

- 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

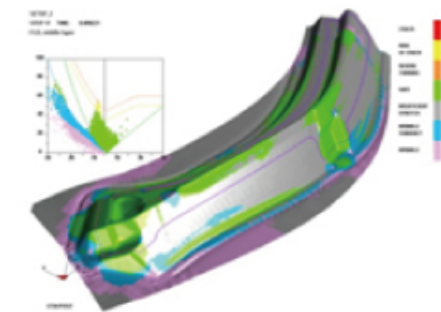
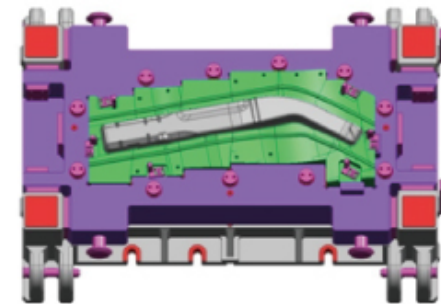
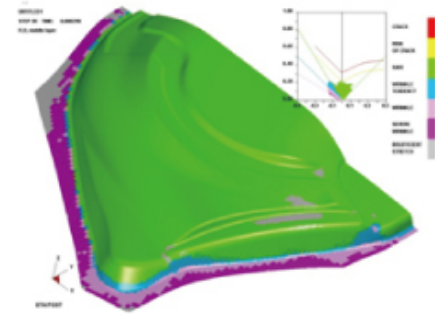
- Press Capacity Evaluation
- Press Machine Design and Analysis
- Die Structural Design and Analysis
- Simulation of Press Line and Material Motion





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

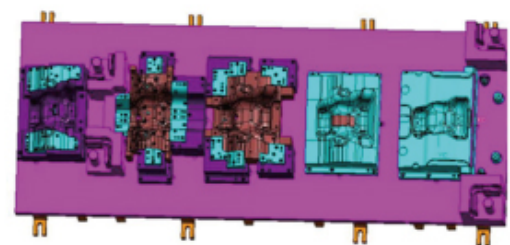


Low Cost Tool & Die Making

- 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.





Generalety, LLC

36159 Plymouth Road, Livonia,
MI 48150, USA
Tel: +1-734-522-1488
Fax: +1-734-468-6362
Email: info@generalety.com
www.generalety.com

Generalety Canada, Inc.

10 Post Oak Dr,
Unit 13,
Richmond Hill, On. L4E 4H8
Canada
Email: info@generalety.com

Generalety Beijing

205D, No. 2 Shangdi Xinxu Rd.
Haidian District, Beijing, China
Tel: +86-10-8289-5647
Email: info@generalety.com
www.generalety.com.cn

Generalety Suzhou

625 Binhe Rd, Unit 5-608
New District, Suzhou, China
Tel: +86-512-6878-6276
Fax: +86-512-6878-6276
www.generalety.com.cn