# METAL FORMING SYSTEMS, INC.

Software Products

Process Design Software

NAGFORM

NAGFORM is a rule based software program for automatic and manual design of forming sequence for formed parts. The sequence designs created in NAGFORM can be tested effortlessly in NAGSIM.2D/3D simulation software. NAGFORM can be used to:

- ➢ Obtain alternative designs in minutes
- ➢ Create reusable sequence-design templates
- ➢ Create 'Generic' tooling for FEA simulation
- ➢ Create DXF, STEP, SolidWorks output
- ➢ Obtain loads, pressures, strain, surface area
- ➢ Select machines for a sequence
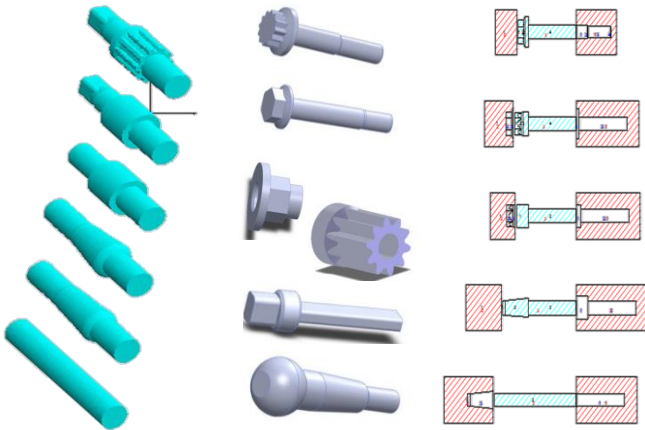
NAGFORM_Lite

NAGFORM_Lite is an entry version of NAGFORM for 1/5 the cost. It has full modeling capability of NAGFORM program with Manual Progression design including volume, surface area, strain, load and pressure calculations. Templates of most IFI Standard parts, SolidWorks/STEP interface and Library Tooling components are also available with this version.

NAGFORM_Sheet

NAGFORM_Sheet is a sequence design program for Sheet Metal Forming processes mainly the Deep Drawing process. It is available as a separate program or as an additional module in NAGFORM.

NAGFORGE

NAGFORGE is a knowledge based software program for automatic and manual design of forging sequence for hot and warm forged parts.

FEA Simulation Software

NAGSIM.2D

NAGSIM.2D is a powerful nonlinear finite element software program for the computer simulation of two-dimensional metal forming processes including sheet metal Forming processes. It can simulate large plastic deformation of the part as well as the elastic deformation of the tools.
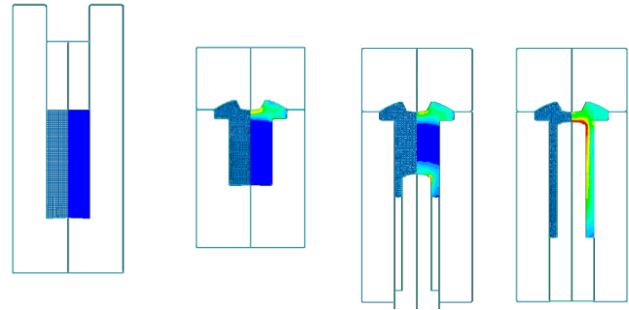

NAGSIM_GEN.2D

NAGSIM_Gen.2D is a powerful, general purpose nonlinear finite element analysis (FEA) software program that quickly and accurately simulates two dimensional hot, warm or cold metal forming processes. It can simulate large plastic deformation of the part and elastic deformation of the tools.

NAGSIM.3D

NAGSIM.3D is a general purpose FEA program for simulating 3D cold, warm and hot metal forming processes including the sheet forming processes. NAGSIM.3D is used to:

- ➢ Determine mechanical properties of formed part
- ➢ Reduce die trials and costly mistakes
- ➢ Improve tool life
- ➢ Predict defects such as laps, non fill
- ➢ Optimize preform shape
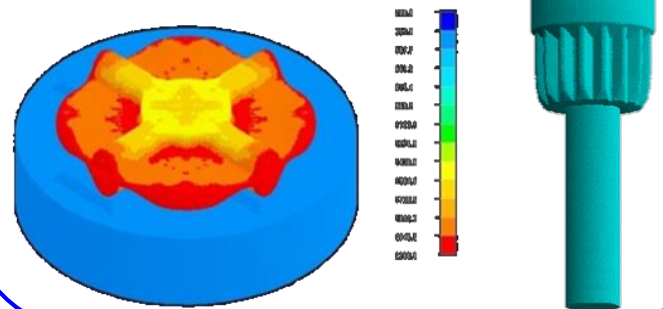
Training on "Fundamentals of Cold Forging"

Metal Forming Systems, Inc. offers a three day Educational Course on 'The Fundamentals of Cold Forging'. These classes are offered both at our Canton MI office and client's on-site. The main purpose of this course is to provide a basic understanding of the cold forging process and its design for manufacturing cold forged parts. This course can serve as a refresher for experienced employees and a great orientation for new engineers, designers and operators.