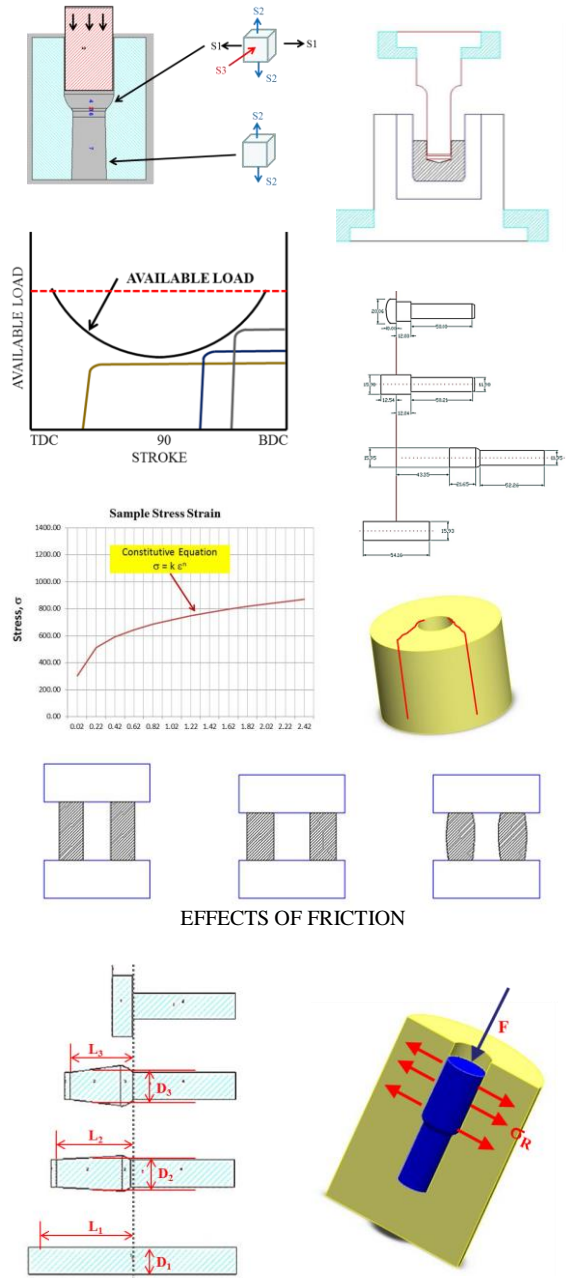


Overview

MFSI now provides a 3-day intensive class on “The Fundamentals of Cold Forging”. Following topics are discussed in this training course:

1. Introduction to Metal Forming
 - Basic introduction to the Metal Forming Process.
 - Cold, Warm, and Hot Forging
 - Basic Terminologies
2. Introduction to Cold Forging Process
 - Advantages and Disadvantages of Cold Forging
 - Examples
3. Basics of Metal Deformation – Theory behind metal deformation (Stress / Strain / Force / Friction)
4. Material Properties and Behavior
 - Elastic / Plastic Deformation
 - Yield Strength
 - Tensile Tests / Compression Tests
 - Various Cold Forged Materials
5. Machines for Cold Forging
 - Mechanical presses, Hydraulic presses, Screw presses, Forging hammer, Special machines.
 - Forming Loads
6. Basics of Forging Sequence Design
 - Sequence Design
 - Progression Layout
7. Basic Forging Processes
 - Main Processes (Forward Extrusion, Backward Extrusion, Heading, Trimming etc.)
 - Process Advantages, and Calculations
8. Sequence Design Rules
9. Preform Shapes – Forming methods of different preform shapes.
10. Forging Sequence Layout - Essential requirements and sample layouts
11. Practical considerations in sequence design
12. Load and Design calculations
13. Introduction of Finite Element Analysis (FEA)
14. Tool Design –
 - Common Tool Materials
 - Tool Failure and Tool Life
 - Interference Fit
15. Software program 'NAGFORM' for sequence design – Progression Design and Default Tooling using NAGFORM.
16. Validation of design through FEA simulation – NAGSIM software program.



“Fundamentals of Cold-Forging” class is held at the MFSI office or On-Site. For more details on the training class schedule or a company specific training, please contact a MFSi representative at:

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