Manufacturing with Plastics (Plastic Hammer Head)

Dr. George Muench
Precision Combustion, Inc.
North Haven, CT

1 Introduction – The Plastic Hammer
   What is a Plastic?
   What is a Hammer?

2 The Physics of Hammering – A hammer is an energy transformation device
   Work and Energy transformation during stroke
   Conservation of energy during strike
   A Hammer is a Force Multiplier

3 Overview of Plastics
   Synthesizing of polymers
   Demonstration of Nylon Synthesis
   Chemical structure

4 Plastics versus Metals (and Ceramics) – Properties versus Performance
   Density
   Hardness
   Strength
   etc

5 Manufacturing of a Plastic Hammer
   Injection Molding
   Machining

6 Applications of the Plastic Hammer