HyperForm Technologies, Inc.
La Jolla, Ca.

Advanced Elevated Temperature Forming Technology For Sheet and Plate Titanium
Advanced SPF Process Brings New Capabilities to Aerospace Projects

• HFT uses an advanced SuperPlastic Forming Process
• No SPF Press
• Self-Contained Form Tooling + Vacuum Furnace
• Used for “planar” and 360° Barrel Shapes
• Results: high yields, precision components, precise repeatability, reduced cost, reduced lead times
HFT High Temperature Forming Process Brings Precise, High Repeatability To Titanium Forming

High Precision Sheet Titanium Forming - HPST

• Ultra clean processing - no alpha case
• Precisely controlled vacuum furnace forming environment
• Maximum run-to-run repeatability
• Brings Precision Forming Process to Sheet and Plate
  - Plate forming for NC machined components reduces material starting thickness
Innovative Forming Tooling: Faster, Lower Cost, Longer Lasting

- HPST tooling – dimensionally very stable
- Doesn’t wear from repeated cycling
- Lasts the life of any titanium forming project
- Rapid to engineer and build
HPST Formed Titanium Components Cover a Broad Array of Innovative Components

- Single-Piece Converging-Diverging Exhaust Nozzle
- Long Rotorcraft Blade Abrasion Strips
- Aft Deck Compound Contour Components
- Circular-Tapered Exhaust String - 10'+ Long
- Structural Belly Panels and Vertical Lift Nozzle Doors
- Long Range UAV Exhaust Nozzle
- Potable Water Tanks
- Airbus A320Neo Floorboard Panels
HPST Titanium Formed Components
HPST Titanium Formed Components

- F-35 Structural Panels
- Potable Water Tanks
- F-22 Titanium Structures
Advanced Simulation of Manufacturing Processes

Minimizes Costly Manufacturing Development Cycles

- HPST Simulation Yields Forming Outcome - Thickness Profile
- Applied Pressure Simulation Shows Stresses and Deflection
- Simulation Chain Can Be Repeated Until Desired Structural Condition is Achieved
HyperForm Technologies' engineering and manufacturing capabilities bridges the gap between engineered products and manufacturing suppliers.