

GENERAL DYNAMICS

Ordnance and Tactical Systems

Weapons Systems Supplier Quality Requirements Site 21-Quality – Williston VT / Saco ME

Quality Clause	Revision	Phase In Date
Q803	1	07/28/2020

Q803–(HIP) Hot Isostatic Pressing

Requirements

This Quality Clause is intended to provide clarification that when processing castings of Carbon and Low Alloy Steel, Stainless Steel, Aluminum Alloys, and Titanium Alloys, Hot Isostatic Pressing (HIP) may be used to minimize in-process weld repair.

If the HIP process is used, the supplier shall:

1. perform HIP in accordance with ASTM 1080;
2. utilize only GD-OTS approved HIP suppliers;
3. ensure HIP is performed prior to all thermal processing that impacts the required mechanical and/or corrosion properties including but not limited to: homogenization, solution treatment, annealing, normalizing, austenitizing, quench, marquench, age, over age, artificial age, maraging, tempering, and stabilization treatment;
4. ensure separately cast test bars from the same master heat or integrally cast test bars are processed concurrently through the HIP process with the castings they represent;
5. process all castings within a lot through the same HIP process; and;
6. include HIP on the Certificate of Conformance (C of C).