



Cryogenic Transition Joints

OVERVIEW

NobelClad manufactures Cryogenic Transition Joints (CTJs) using patented DetaClad™ explosion welding technology. Our CTJs provide a reliable, leak tight welding transition coupling between aluminum and stainless steel.

Connecting heat exchangers, liquified gas storage tanks and transfer lines in cryogenic environments can present significant challenges. Our CTJs allow for the direct welding of stainless and aluminum pipes replacing traditional flange connections. Due to the strength of the explosion welded bond, leak points are eliminated, safety is maintained and equipment lasts longer.

MATERIALS OF CONSTRUCTION

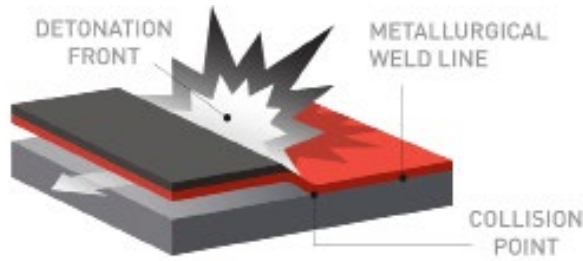
NobelClad CTJs are manufactured to customer specifications up to 72" (1830 mm) diameter under all standard pressure ratings.

FLUIDS	ALUMINUM	INTERLAYER	STAINLESS STEEL (DUAL CERTIFIED)
LNG, Liquid Nitrogen, LPG	Alloy 5083	Unalloyed Al + Titanium + Nickel	304 and 304L
Gas separation, O ₂ and others		Unalloyed Al + Silver	

INSPECTION AND TESTING

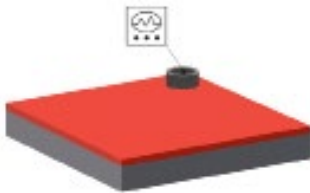
- DetaClad™ plates are mechanically tested per Code Case 2493 & PD110
- 100% Ultrasonic Inspected to ensure weld reliability
- 100% Helium Leak Tested to stringent industry requirements: <math> < 1 \times 10^{-7}</math> atm-cc/sec or better
- NobelClad’s Quality System is ISO 9001–2015 approved and conforms to the requirements of ASME Boiler Pressure Vessel Code

PROCESS

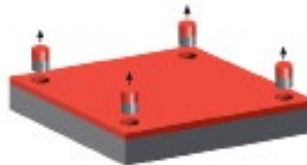


1. EXPLOSION

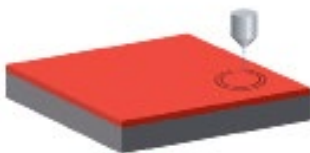
*NobelClad's
Cryogenic
Transition Joint
Process*



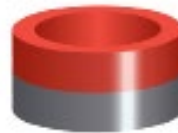
2. TESTING & INSPECTION



3. TENSILE, IMPACT & BENDING TESTS



4. WATER JET CUT RINGS FROM BONDED PLATE



5. MACHINE ID & OD TO FINAL DIMENSIONS



6. HELIUM LEAK TEST 100%



7. MACHINE TJ TO FINAL DIMENSIONS



8. ASSEMBLY INTO PIPING SYSTEM BY CUSTOMER

Trust NobelClad with your cryogenic connections. Contact us today >>>