CERN, SWITZERLAND / FRANCE

MANUFACTURING, TESTING AND TRANSPORTATION OF VACUUM VESSEL 11T DIPOLE FOR LHC collider

JANUARY 2016 - FEBRUARY 2017

SCOPE

- PURCHASING OF RAW MATERIAL
- CUTTING, BENDING AND ROLLING
- WELDING
- NON DESTRUCTIVE TESTS
- FINAL MACHINING
- LASER DIMENSIONAL CONTROL
- SURFACE TREATMENT (CLEANING AND PAINTING)
- HELIUM LEAK TEST
- PRESURE RISE TEST
- FINAL SITE TRANSPORTATION

TECHNICAL SPECIFICATIONS

- MATERIAL: P355NL2 (CARBON STEEL)
- VACUUM TIGHT WELD ACC. ISO 5817 QUALITY "B"
- LEAK TESTING ACC. EN 13185 OF VOLUMNE 170 M^3
  - VACUUM: 10^{-5} mbar
  - GOBLAL LEAK RATE < 1 x 10^{-8} mbar.l/s
- HIGH TOLERANCES FOR FINAL MACHINING (0.05 mm)
- MEDIUM SIZE VESSEL.
  - DIAMETER: Ø 1 METERS
  - LENGTH: 5,5 METERS
  - WEIGHT: 2.1 TONES

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