HELIUM VESSEL

1. For Drawing 317111-JLA-703-001, the code to govern the design and fabrication of the helium vessel should be unambiguously spelled out on the drawing. You may choose ASME Section VIII Division 1 or ASME Section VIII Division 2. You should specify the version of the code: 2007 or 2010. Right now, it says "ASME BPV".
   We will indicate "ASME Division 1 (2010)" on the drawings.

2. There is no weld symbol on the drawings. Please add weld symbols.
   Weld symbols will appear on the details drawings provided by our supplier (Chastagner).

3. On Drawing 317111-JLA-703-001,
   a. Detail B and Detail C are not consistent with ASME 2010 (2011a addenda) Section VIII, Division 2, page 167, Table 4.2.6, Detail 2.
      In accordance with ASME VIII Division 1
   b. There is no detailed design for Detail O, which is also not consistent with ASME 2010 (2011a addenda) Section VIII, Division 2, page 173, Table 4.2.10, Detail 1.
      To be discussed with Chastagner
   c. COUPE D-D is not consistent with ASME 2010 (2011a addenda) Section VIII, Division 2, page 180, Table 4.2.14, Detail 3.
      To be discussed with Chastagner

4. On Drawing 317111-JLA-703-004 and 317111-JLA-703-005, a 15 mm fillet weld is used on COUPE F-F. The force on the suspension link is very high if we consider the cool-down, the weight of the magnet, the pretension and the possible offset of the magnet center. Please provide a detailed stress calculation to justify the choice of 15 mm fillet weld.
   This 15mm weld has been studied in the FEA report of the helium vessel and the maximum Von Mises stress is inferior to the Yield strength (172 MPa). Moreover a detail study of the suspensions (including these welds) will be performed.

5. On Drawing 317111-JLA-703-013, Drawing 31711-JLA-703-021, Drawing 317111-JLA-703-025, the design pressure is 7 atm absolute, which is not consistent with the design parameters in Table 1.1, Page 17, SHMS Dipole Technical Specification.
   This is a mistake. These drawings will be modified with the following indication:
   "6 atm absolute"

6. Piping design and fabrication must follow ASME B31.3-2008, not ASME Section VIII. Please change the Notes on Drawing 317111-JLA-703-018, Drawing 317111-JLA-703-021, Drawing 317111-JLA-703-022, Drawing 317111-JLA-703-023, and Drawing 317111-JLA-703-025. Ok

7. If it is necessary to weld a piping system, detailed weld symbols in accordance with ASME B31.3-2008 should be on the drawing. Any ambiguous design will lead to confusion in fabrication and incompatibility with B31.3-2008. For example, on Drawing 317111-JLA-703-022, the Note says “If welded: shall be in accordance with ASME BPV”. This is confusing.
   Weld symbols will appear on our supplier’s drawings.

OVC

1. Based on the Table 1.1, Page 17, SHMS Dipole Technical Specification of the Dipole, the leak test requirement is 1.0E-9 std-cc/sec, not 1.0E-8 mbar liter per second. Please correct that. Ok

2. The ASME welding requirement must be added to the top assembly drawing (317111-JLA-701-001), and the drawings with weld preps (317111-JLA-701-002, 317111-JLA-701-003). Manufacturing according to ASME Division 1 (2010)

3. The weld symbol must be added to the drawings. See comments of the helium vessel