

NMI 3 FP7 JRA Sample Environment Status Report


Laboratoire Léon Brillouin
(CEA-Saclay)

Spring Meeting-Cosener's House
30th April-2nd May 2012



Projects

► Task 21.2.1

- Task 21.2.1.1: High pressure cells for inert gases 8kbar ✓ 
- Task 21.2.1.3: High pressure cells for inert gases 10kbar
- Task 21.2.1.7: 10kbar automated gas handling system for inert gases

Task 21.2.1.3

High pressure cells for inert gases 10kbar

I. Design features:

- Inner diameter: 5mm
- Outer diameter: 20,5mm
- Beam height: 50mm
- Material: CuBe2, B25 HT

II. Development of cell is achieved

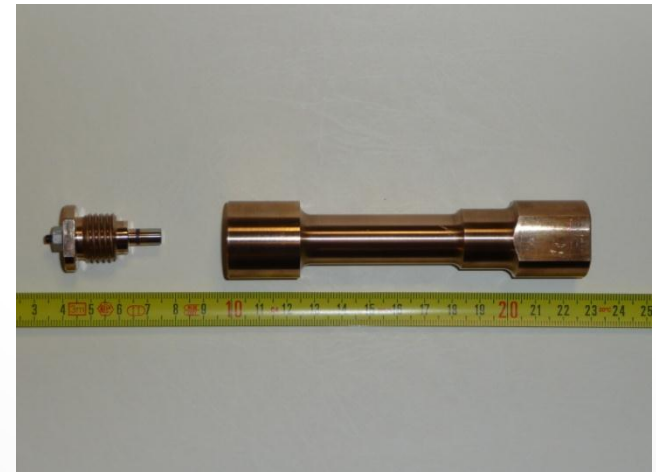
- Calculated burst pressure: 20.2kbar
- Yielding at the internal layer: 6.7kbar

III. Design plans are done

IV. Prototype is built

V. Pressure tests have to be done

We are actually searching a facility able to reach 14kbar



Task 21.2.1.7

10kbar automated gas handling system

- ▶ **Redevelopment and modification of the existing system:**
 - The existing pressure intensifier system will be modified in the way that we will integrate a small regulation volume on the low pressure hydraulic side. This will give us a regulation precision on the high pressure gas side to $\pm 5\text{bar}$ for the nominal value.
- ▶ **Ongoing work**
 - All items are ordered
 - The system will be installed in June

Summary

► Task 21.2.1

- Task 21.2.1.1: High pressure cells for inert gases 8kbar

The pressure cell is ready to be used

- Task 21.2.1.3: High pressure cells for inert gases 10kbar

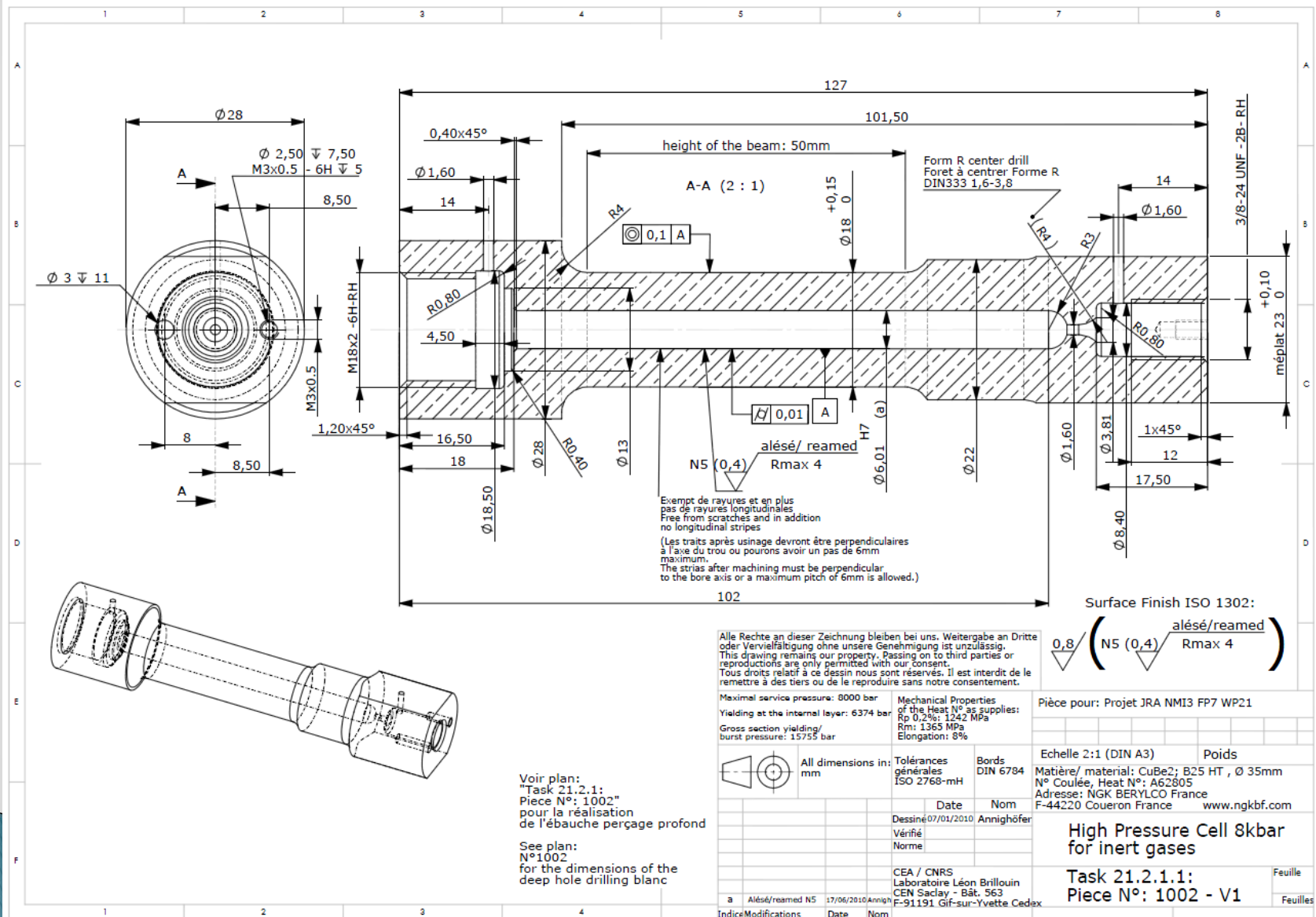
The pressure is realized and must be tested before use

- Task 21.2.1.7: 10kbar automated gas handling system

All items are ordered and will be installed in June

Task 21.2.1.1

High pressure cells for inert gases 8kbar



Task 21.2.1.3

High pressure cells for inert gases 10kbar

