

## MERIT

### Situation on the Cryogenics Part

#### Proximity equipment

##### 1) DVB valve box ("distribution valve box")

###### Situation:

- Process defined and flow scheme (P&I) terminated with MERIT collaboration
- Preliminary Technical Specification made by CERN-ECR and handed over to RAL (Aug. 2005)
- RAL adapts document for tendering according their rules
- Tendering has started (RAL)...
  
- RAL has obtained one preliminary quote (AS Scientific)
- This quote seems to be quite high !!!

**Proposal:** We wait for further quotes as we should not make any decision dependent on one quote. A list of a number of European firms capable to supply the box are given below.

- |                                     |                          |
|-------------------------------------|--------------------------|
| 2) remaining DVB Instrumentation    | <i>no news</i>           |
| 3) vacuum pump for insulation vacua | <i>exists</i>            |
| 4) el. heater system                | <i>to be build (ECR)</i> |

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List of firms for the potential supply of the DVB valve box (as sent to RAL today)  
Added are my comments what I personally know about these companies;

- 1) **AS Scientific**            **UK**    (You have a quote from these guys. Good company for transfer lines. Have built many for us including complex ones)
- 2) **Wessington**            **UK**    (They have built a number of 500 l dewars for our group and other dewars in the past. Usually cheap company, but really o.k. May require some supervision. Good will people.)
- 3) **Demaco**                **NL**    (Good company. Have built many transfer lines for our group. And a valve box with internal liquid argon vessel comprising LN2 cooling pipes. This valve box is quite more complicated than the MERIT one)
- 4) **Messer-Griesheim**    **D**     (Good company. However, may not be interested as our box too small, money-wise. They like large projects. But you may try)
- 5) **Rial Vacuum**            **I**     (I do not know them, but always worth a try. As soon as I get a feedback from colleagues I let you know)
- 6) **Air Liquide Italy**        **I**     (operates largely independent from the French Air Liquide. Italy seems to be o.k. They have built the ATLAS proximity cryo)

- 7) **SNLS** FR (I have good feedback from colleagues. Seems to be o.k.)  
8) **Cryo Diffusion** FR (Is a traditional company in the north of France. I remember good quality dewars in the old times)

End of list  
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### **Intermediate Infrastructure**

- 1) transfer line for cooling and filling *no news*  
2) exhaust for warm nitrogen gas (to TT10) *dimensioned, ECR has similar installation currently for ATLAS*

### **External Infrastructure**

- 1) LN2 reservoir next to vertical shaft (rental)  
2) Concrete Platform to be constructed *CERN site manager informed*

### **Instrumentation of Infrastructure**

*for later*

### **Process Control**

*for later*

We shall provide

- hardware system
- software (engineer for programming/commissioning can be made available)

### **Radiation Hard Instrumentation (or not?)**

We require information on the radiation background in order to estimate if the instrumentation may be upset by ionization or SEE.

### **Safety**

- 1) ODH and warning systems *for later*

### **Installation**

*for later*

Installation manpower will be made available by ECR and work organized.

Friedrich Haug, 27.9.2005