



## Minute – Factory Visit April 05, 2011

Participants:	Eng. Dimitrios Mendrinis	-	Project Coordinator
	Prof. Jose Miguel Corberan	-	University of Valencia
	Prof. Del Col Davide	-	University of Padova
	Doct. Mauro Mantovan	-	General Manager HiRef
	Eng. Poletto Fabio	-	R&D Manager HiRef
	Eng. Boaretto Andrea	-	Software Manager HiRef
	Eng. Benassi Giacomo	-	External Collaborator from UPD
	Quercioli Andrea	-	Technical Manager HiRef

### **Business launch**

For that visit we met all together in the restaurant BBQ where we had a little discussion about the work progress of the project and other technical aspects.

### **Factory tour including Laboratories**

After lunch we met with our General Manager Mauro Mantovan and we did a fast tour through the production lines of Close Control units and Chillers units, during the tour we stayed some minutes in front at the testing position in order to describe the capacities of the testing unit and the system we are using to control the quality of the products. In the same time Eng. Mantovan described our position in the implementation of Brushless DC control for the synchronous motors and the convenient economical aspects in this. We stayed some minutes at the testing room because we saw the entire system in order to understand the work done and the operation of the climatic cameras.

We saw all the plant including the chiller that provides the delta cooling power to balance all the forces. Technical aspects leading to improved energy efficiency and reduced system costs were discussed extensively.

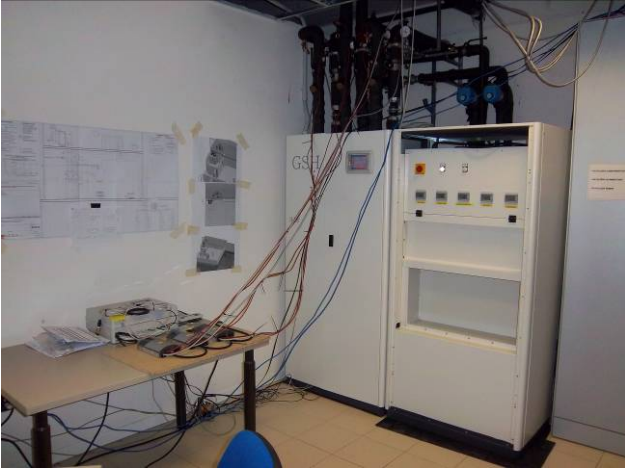
### **Visit of Hiref GSH system**

At the end of the tour I finally presented the GSH system with the working unit and the related box for Ground Med Acquisition Data, we illustrated the operation of the unit, the piping system up to the ground source boreholes and the two kinds of probes under testing and evaluation but also the main technical and energy characteristics of the fan coils system.

Then we discussed with Prof. Corberan and our Eng. Boaretto about the communication problems between our unit (made for Valencia Plant) with Carel control and the acquisition system of UPV but fortunately the solution is using a different configuration of the communication protocol by Carel microprocessor.

Note: All the related instructions to do this were delivered with the unit.

In any case our technician gave at Prof. Corberan a specific software to configure the communication plus some suggestions on how to use it.



**Presentation of Hiref Plant + acquisition data system**

A presentation was illustrated from Quercioli Andrea in order to know the system + the entire data acquisition of Ground Med and Hiref in order to registering different kind of data. Prof. Anibal de Almeida was requested by email to provide assistance to HIREF on system programming.





**Presentation of borehole system and testing**

A presentation was illustrated from Benassi Giacomo in order to describe the two different used probes (single and double U) and to test the different response of the ground. A lot of data's will be usable to analyze but in any case is better to make a ground response test at the change of the season in order to measure the thermal conductivity of the undisturbed soil.