

## **Solar Keymark II Project, WP3**

### **Minutes of “Meeting of Testlabs”**

#### **03. April. 2006, Las Palmas de Gran Canaria**

#### **Invitation:**

The invitation to the meeting was send out via Email by Harald Drück on 30.03.2006 to the following addresses:

'Åsa Wahlström'; 'Bouzid KHEBCHACHE'; 'Carsten Onneken'; 'Dominique Caccavelli'; 'Emmanouil Mathioulakis'; 'Gerhard Rabensteiner'; 'Harald Drueck'; 'Hubert Fechner'; 'Maria João Petronilo Carvalho'; 'Peter Kovacs'; 'Pilar Navarro Rivero'; 'Raffaele Piria'; 'Rob Meesters'; 'Uwe Brechlin'; 'JEN'; 'Stephan Fischer'; 'Antonio.Montilla@arsenal.ac.at'; 'Henner Kerskes'

In this email Harald Drück did ask for written input from participants that were not able to attend the meeting

#### **Agenda:**

##### **1. Collector round robin test**

(Extremely relevant for: CSTB, SP, GoT, Thermomax, arsenal, Demokritos, INETI, ITC, ITW, SolarKey)

- 1.1 Current status of testing at "reference labs"
- 1.2 Time schedule (when is the collector tested where?)
- 1.3 Details of testing procedure

##### **2. System testing - extrapolation procedure**

(Extremely relevant for: INETI, CSTB, ITW, Solahart, SolarKey)

- 2.1 Current status of testing
- 2.2 Details of testing procedure

#### **Participants:**

Maria Carvalho (INETI)  
Jan Erik Nielsen (SolarKey, ESTIF)  
Peter Kovacs (SP)  
John L. Harrison (Guest: Florida Solar Energy Center)  
Dominique Caccavelli (CSTB)  
Pilar Navarro (ITC)  
Harald Drück (ITW)  
Stephan Fischer (ITW)  
Christian Buchbauer (Guest: Gasokol)

Comments via Email from CSTB (Dominique Caccavelli) and Demokritos

No comments and not present: arsenal (“reference lab” for flat plate collector)

In the following the major decisions that resulted from the discussion during the meeting are reported.

## 1. Collector round robin test

### Round robin test of ETC collector:

- Two collectors plus 10 additional tubes will be ordered from Thermomax by CSTB. It is expected that the collectors will be available at CSTB on April 20<sup>th</sup>, 2006
- Testing is scheduled for May 10<sup>th</sup> until May 19<sup>th</sup>, 2006
- In a first step only one ETC collector will be sent around. The collector will be shipped as a complete unit (CSTB will prepare an appropriate box)
- Order of testing at the labs **participating in the SKII project**:  
CSTB, ITW (End of May until middle of July), SP (Mid July until ???), arsenal (in 2007), Demokritos ((in 2007)
- Order of testing at the labs **not participating** in the SKII project:  
IZES Germany (in 2007), FSEC (Florida Solar Energy Research Centre, in 2007)

### Round robin test of FP collector:

- no information from arsenal is available. According to the original planning two collectors from GreenOneTec shall be ordered and tested at arsenal until June 1<sup>st</sup>, 2006
- Christian Buchbauer (Gasokol) offers that Gasokol will supply the collectors if GreenOneTec is not willing to do so.
- Testing will be carried out according to the revised version of the standard
- The performance of the initial stagnation period of 5 hrs is in the responsibility of the reference lab.
- Stephan Fischer will update the reporting format for the test results in such a way, that also the standard uncertainties can be reported (Deadline April 28<sup>th</sup>, 2006).
- Order of testing at the labs **participating in the SKII project**:  
arsenal (two collectors) then, collector 1 to SP and collector 2 to ITW  
further order of shipment will be decided afterwards
- Order of testing at the labs **not participating** in the SKII project:  
INTA (in 2007), ISE Germany (in 2006/7), FSEC (Florida Solar Energy Research Centre, in 2007)

## 2. System testing - extrapolation procedure

- INETI: Equipment not completely available but it will be delivered in the next weeks. Start of testing is scheduled for May.2006
- CSTB: Missing equipment is ordered form Solahart. Tests are planned to start May 18<sup>th</sup> and finish June 5<sup>th</sup>, 2006.
- ITW: Missing collectors will be delivered soon. Testing will start in May 2006
  
- The labs shall ensure, that the connecting of the components will be performed in such a way, that the flow will not be disturbed.
- Testing will be performed with water as heat transfer fluid.
- Performance predictions will be performed according to the Reference conditions in the current version of the standard (and not for the EU-Tapping profiles)
- For the presentation of the results, no common test report format is required. Every lab should use his format
- The test results will be send around by each lab to the other two labs as soon as they are available

Stuttgart, 12/04/2006

Harald Drück, Stephan Fischer

## Distribution

These minutes are distributed to the following email addresses:

'Åsa Wahlström'; 'Bouzid KHEBCHACHE'; 'Carsten Onneken'; 'Dominique Caccavelli'; 'Emmanouil Mathioulakis'; 'Gerhard Rabensteiner'; 'Harald Druock'; 'Hubert Fechner'; 'Maria João Petronilo Carvalho'; 'Peter Kovacs'; 'Pilar Navarro Rivero'; 'Raffaele Piria'; 'Rob Meesters'; 'Uwe Brechlin'; 'Stephan Fischer'; 'Antonio.Montilla@arsenal.ac.at'; 'Henner Kerskes'

### New:

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