Solar Keymark Network meeting

Graz, Austria
7-8 October 2010
Work in Progress

• Update on the status of the WP
• Tasks on the running period
D 2.1 Performance of mid temperature collectors (CENER lead)

D 2.2 Durability of collectors and materials (ISE lead)

Broad consensus revision proposals for the EN12975 standard which is to be revised in two steps:

- **First step** driven by EC request for CE marking. Draft for public inquiry ready in spring 2011, implemented in 2012
  - Contents are e.g. harmonized annex ZA, tracking collectors in the scope, improved exposure and rain penetration tests, “classes approach”

- **Second step** an EN ISO standard? Draft for public inquiry in 2012
  - Contents are e.g. Task X method on selective coatings integrated, focus on ETC:s
D 2.3 Guide to EN 12975 (SP lead, Due June 2011)

- Distribution of work and agreement on contents concluded
- Five main partners working on two deliverables
  - LNEG - Durability
  - ISFH - SS testing of unglazed collectors
  - DEMOKRITOS - SS testing of glazed collectors
  - AIT - Definitions and interpretation of test results
  - SP – Quasi dynamic testing and the rest
- All remaining partners provide additional input and review
WP 2: Solar thermal collectors

T2.3 Performance calculation tool
- Presented (#12) at SKN meeting
- Fine tuning
  - Inclusion of uncertainty remains
- Extension to unglazed and tracking/concentrating
- Foreseen for June 2011
WP 3: Solar thermal systems

Improvement of the standards:

Factory Made Systems / Custom Built Systems
(EN 12976 Part 1 and 2) / (CEN/TS 12977 Part 1,2,4 and 5 and EN 12977 Part 3)

- Clear separation of REQUIREMENTS and TEST METHODS
- Clarification of applicable reliability tests (DIFFERENT TYPES of SYSTEMS); Need of additional reliability tests.
- Clarification of the aspects related to documentation (USER; INSTALLER)

- considering the possibility of future certification of Storage tanks and complete systems according to improved standards
WP 3: Solar thermal systems

Improvement of the standards (cont.):

Factory Made Systems / Custom Built Systems

Outcomes

– First proposals for above aspects on Factory Made Systems were prepared and presented in CEN TC 312 WG2/WG3 Meeting in Munich (June 2010);

– Profiting from the ongoing Round Robin for Systems (QAiST – WP4), some aspects related to clarification of tests and of analyses of documentation are being addressed.
WP 3: Solar thermal systems

Development of an extrapolation procedure
– that proves to be valid for different types of systems allowing for flexibility in the definition of families of systems and reducing test costs for the manufacturers

Outcomes:
– Two different methodologies now available in Solar Keymark Scheme Rules;
– Application of these methodologies by Labs;
– Proposals for future revision expected;
WP 3: Solar thermal systems

Development of a procedure for converting the test result into results valid for the “EU reference tapping cycles”

– necessary for Labeling of systems according to European Directive for Eco-Design

• How to apply this procedure to tests performed with DST/CSTG test methodologies?

Outcomes:

• First application with DST for Factory Made and Custom Built
WP 3: Solar thermal systems

Definition of the concept of **Hot Water Comfort** for Solar Thermal Systems

**Outcomes:**

- First document with the revision of the existing test methods for assessment of Hot Water Comfort was prepared.
- Presentation and discussion at CEN TC 312 WG2/WG3 meeting / some additional methods suggested.
WP 4: Quality assurance of testing

- T 4.1 Solar Keymark Network
- T 4.2 Round Robin performance testing thermal collectors according to EN 12975
- T 4.3 Round Robin testing of factory made systems according to EN 12976
WP 4: Quality assurance of testing

★ T 4.1 Solar Keymark Network

• Support the work of the SKN
  – Rapperswil  March 15th and 16th 2010
  – Graz, Austria October 7th and 8th
  – Brussels (?), March 22nd and 23rd
WP 4: Quality assurance of testing

T 4.2 Round Robin Collector

- Organization, managing and evaluation by independent body (IfEP GmbH)
- 13 flat plate and 13 evacuated tubular collectors with CPC collectors
- Each participant test 2 collectors of both types (4 tests)
- Report to IfEP by 31.12.2010
- Rotation of the test collectors in winter 2010/2011
- Final results expected October 2011
- Participants: CENER, CSTB, DEMOKRITOS, AIT, LNEG, IPIEO, ISE, ISFH, ITC, IZES, SP TÜV, ITW
WP 4: Quality assurance of testing

T 4.2 Round Robin Collector

- Additional participants
  - ASIC
  - Bosch Solarthermie GmbH
  - 6 North american test labs

- Collectors, transport, evaluation and all other expenses caused by the Round Robin will be covered by the additional participants

- In order not to influence the result of the QAiST Round Robin the evaluation will be done in parallel by IfEP
WP 4: Quality assurance of testing

T 4.3 Round Robin System

- Managing and evaluation by independent body (IfEP GmbH)
- 9 thermosyphon and 9 forced circulation systems
-Each participant will test 2 systems (4 tests)
- Report to IfEP by 31.12.2010
- Rotation of the test collectors in winter 2010/2011
- Final results expected October 2011

- Participants: CENER, CSTB, DEMOKRITOS, LNEG, ISE, ISFH, IZES, TÜV, ITW
WP 5: New areas for quality assurance systems

Objectives

– To develop a basic set of requirements and test methods for emerging areas of solar thermal energy

Application is already on the market => need for quality assurance measures not covered by any standards so far e.g. large solar thermal systems, solar cooling

OR

Application is new on the market => no quality assurance measures existent yet e.g. combined solar & heat pump systems
WP 5: New areas for quality assurance systems

Structure of the WP

WP 5: New areas for quality assurance systems
Leader: Ivan Malenkovic, AIT

Task 5.1
Performance references and test methods for HP+ST
Leader: Ivan Malenkovic, AIT

Task 5.2
Function and yield controlling of large solar thermal systems
Leader: Klaus Vanoli, ISFH

Task 5.3
Quality requirements for solar cooling systems
Leader: Pilar Navarro, ITC
WP 5: New areas for quality assurance systems

Planed outcome (1)

Task 5.1: Performance references and test methods for HP+ST

- Market survey on available data about combined systems
- Elaboration of a system overview of combined systems
- Survey on available testing standards
- View and comparison of the existing testing standards

- Classification of different systems
- Development of quality enquiries on combined systems based on the previous research results

D5.1: Technical report on combined ST+HP systems with system overview and quality requirements
WP 5: New areas for quality assurance systems

Status and outlook Task 5.1

– A questionnaire for the unified system description has been developed and distributed to the system manufacturers.
– After collecting and analysing the feedback, the work on the system classification will start. First concepts are expected until the end of the year.
WP 5: New areas for quality assurance systems

Status and outlook Task 5.1

– The collection of relevant standards and other normative documents has started. The documents will be analysed and used as a starting point for the development of test method proposals. A list of all documents will be available on the project web page until the end of the year.

– A workshop on system classification and test methods will be organised early next year
WP 5: New areas for quality assurance systems

Planed outcome (2)

Task 5.2: Function and yield controlling of large solar thermal systems

- Updating the market survey on available data on F&YC based on previous work by contacting major stakeholders in each participating country
- Exchange of technological descriptions and technical discussion on various F&YC systems in a workshop

- Objective redefinition: Strategic FYC planning?

D5.2: Setting up basic requirements for a FYC Roadmap?
WP 5: New areas for quality assurance systems

Status and outlook Task 5.2

– Currently available function and yield control concepts have been collected and reviewed in a document available on the project web page (restricted area).

– The new VDI 2169 guideline is available as a draft version (Gründruck). An internal discussion (workshop) between project partners will be initiated.
WP 5: New areas for quality assurance systems

Status and outlook Task 5.2

– was concluded in the group, that the final goal of this task – harmonized technical approach on F&YC – cannot be reached within the project, also due to the fact that only one product is currently commercially available. A new task objective is currently being defined in an ongoing discussion. One possible objective would be to set the basis for the strategic roadmap for the development and implementation of F&YC.
WP 5: New areas for quality assurance systems

Planed outcome (3)

Task 5.3: Quality requirements for solar cooling systems

- Definition of requirements for durability and performance evaluation for solar cooling systems

D5.3: Technical report on the requirements for durability and performance testing for solar cooling systems
WP 5: New areas for quality assurance systems

Status and outlook Task 5.3

– A standardised questionnaire has been developed and distributed to collect the data on running solar cooling systems in participating countries.
– The collected data including qualitative assessment of the installations in terms of performance and quality will be analysed until the end of the year.
WP 5: New areas for quality assurance systems

Status and outlook Task 5.3

– The collection of relevant standards and other normative documents has started. The documents will be analysed and used as a starting point for the development of test method proposals

– Early next year, a definition of best practice and lessons learned will be published on the project web page (restricted area)
WP 6&7: Communication and Dissemination

T6.1 Distr. dissemination of project results
- Prepare initial info-release for 2010
- Previously: update of national reports from SK II
  • AT, DK, FR, DE, GR, IL, IT, PL, PT, SP, SE

T6.3 Project Website
- New website (ESTIF) & intranet (discussion board): October
## WP 6&7: Communication and Dissemination

### WP 1: Consortium management
- **Forum**: Project Meetings
  - **Stats**: 6 Topics, 0 Replies
  - **Last Post Info**: By —

### WP 2: Solar thermal collectors
- **Forum**: A guideline to the standard EN 12975
  - **Stats**: 6 Topics, 0 Replies
  - **Last Post Info**: By —

### WP 3: Solar thermal systems
- **Forum**: European topping cycles
  - **Stats**: 6 Topics, 0 Replies
  - **Last Post Info**: By —

### WP 4: Quality assurance of testing
- **Forum**: Round Robin Collectors
  - **Stats**: 6 Topics, 0 Replies
  - **Last Post Info**: By —

### WP 5: New areas for quality assurance systems
- **Forum**: Solar Cooling
  - **Stats**: 6 Topics, 0 Replies
  - **Last Post Info**: By —
WP 6&7: Communication and Dissemination

T6.5 WP6/ International harmonization

- Broad European participation in IEA SH&C Task 43 on global standards and certification --> Harmonization in practice!

- Agreed with ISO/TC 180 to have the ISO 9806 revision follow closely that of EN 12975
WP 6&7: Communication and Dissemination

T6.5 SK implementation in CEE NMS Workshop with IPIEO

- Workshop Northern Europe
  - Proposal IPIEO – Spring 2010
  - Implications of current issues in Poland?
- Negotiations for workshop in SEE
  - End November 2010
    - Romania: REECO
WP 6&7: Communication and Dissemination

• T6.5 SK implementation in CEE NMS
  – Information package for CEE new members states produced
    • Flyer draft
    • Leaflet revision
  – Participation at SKN Meetings (T4.2)
  – Set content of Information package
ESTIF Standard & Certification Working Group meeting

Graz, Austria
7-8 October 2010