

Solar Keymark Network

Experience exchange circle of manufacturers, test labs, certifiers and inspectors working according to the Solar Keymark scheme rules



Final Minutes

17. Solar Keymark Network Meeting September 30th – October 1st, 2014; Brussels, Belgium

Item 1: Opening of the meeting

Harald Drück, chairman of the Solar Keymark Network (SKN), opened the meeting and welcomed the participants as well as the numerous guests. He thanked Jan Erik Nielsen as the Secretary of the Solar Keymark Network, for the excellent preparation of the meeting.

Harald Drück gave a short explanation about the Solar Keymark Network. The main task of the SK-Network is to agree on uniform procedures between the different actors (accredited solar thermal test labs, certifiers, inspectors and manufacturers) working according to the Solar Keymark scheme rules as well as the further development of Solar Keymark certification in particular and certification of solar thermal products in general.

The working rules of the Solar Keymark Network (SKN) are described in the “Solar Keymark Network Internal Regulations” (Document SKN_N0102)

Harald Drück mentioned the **concept related to resolutions and decisions**:

Resolutions directly influence the Solar Keymark specific scheme rules (document SKN_N0106) and the Solar Keymark network internal regulations (document SKN_N0102) and hence shall be implemented in the next version of them.

Decisions are other important agreements achieved on the meeting that have to be included in the latest version of the Solar Keymark decision list (document SKN_N0100).

The meeting took place from Tuesday, September 30th, 2014, 13:00 hrs till Wednesday October 1st, 2014, 14:05 hrs at the premises of CEN in Brussels, Belgium.

The first invitation including the first draft agenda (Document SKN_N0243R0) of the meeting was sent out by email from Jan Erik Nielsen dated July 2nd, 2014.

Item 2: Introduction of participants

The participants attending the meeting physically introduced themselves and mentioned their nominating organisation or institution respectively.

As a result of the large number and broad spectrum of participants present the voting preconditions according to clause 4.2 of the Solar Keymark Network internal regulations (Document SKN_N0102R) were fulfilled.

Since this meeting was the first meeting that was also additionally transmitted via internet Harald Drück asked the persons following the meeting via Internet to send an email to Pedro Dias and to confirm their virtual presence and to mention their name and institution.

The list of participants that attended the meeting physically and electronically is attached as Annex A.

Item 3: Approval of the agenda

Following the first draft agenda (Document SKN_N0243R0) send out on July 2nd, 2014, in the last weeks, updated versions of draft agenda as well as documents related to the items mentioned on the agenda were send out and were also available via the Solar Keymark Internet site. The latest version of the agenda was named “17th Solar Keymark Network meeting –final draft (rev 1) – R6” document SKN_N0243R6 dated 29/09/14 and send out on September 29th, 2014.

This version of the agenda was presented and the following additions were proposed

Item 40.1: Acceptance of EN 12977 system test (Proposed by Ulrich Fritzsche)

Related to Item 41: Update on the situation in UK (Proposed by Pedro Dias)

It was agreed that the final agenda resulting from these changes would be the basis for the 17th Solar Keymark Network meeting. This final agenda is, as document SKN_N0243R7, available via www.solarkeymark.org.

Item 4: Comments and final approval of the minutes of the 16. SKN meeting

Harald Drück mentioned that the minutes of the 16th Solar Keymark Network meeting (File: SKN_N0240R0.pdf) were elaborated by him, checked by Jan Erik Nielsen and proof read by Maria João Carvalho. He thanked both of them for their work.

Jen Erik Nielsen informed the participants of the SKN by email dated March 19th, 2014 about the availability of the minutes of the 16th Solar Keymark Network meeting on the Solar Keymark website.

Within the 30 days following this email the following comments were received by Jan Erik Nielsen:

Item 8: Ulrich Fritzsche mentioned that the performance test results **out of steady state method for** unglazed collectors cannot be...

Action: The red text above will be included

Item 39.1 (Ulrich Fritzsche): Furthermore....are now part of the test requirements for Solar Keymark and soon also for SRCC certification.

Action: The red text above will be included

Item 19 from Jaime Fernandez Gonzalez-Granda:

I send comments to point 19 of the minutes of our last SKN meeting since I miss an important point we agreed upon during the meeting.

I propose to add the following text at the end of the point 19:

Some Certification Bodies present ask if it is possible to use the proposed new version of annex A1 during a trial period until the next SKN meeting of October. It is agreed that this is possible and Jaime Fernandez Gonzalez-Granda will send out a revised version to the group. Using this inspection template shows evidence that all the requirements of Annex E are being evaluated since they are reflected on the check list. Using the actual version of Annex A1 it is hard to assure that the inspector is evaluating all aspects of Annex E.

Action: Proposed text will be included

Due to the changes mentioned above the document SKN_N0240R1 results as the revised version of the minutes. Harald Drück asked for approval of this version as the minutes.

The final minutes of the 16th Solar Keymark Network meeting (Document SKN_N0240R1) were unanimously finally approved by the participants present.

Note: The final version of the minutes will be send out by Jan Erik Nielsen in the coming days.

Item 5: Date & place of next Solar Keymark Network (SKN) meetings

The 18th SKN meeting (spring 2015 meeting) is scheduled for

March 10th, 13:00 hrs to March 11th, 14:00 hrs, 2015 (end of day one at 19:00 hrs) and will take place in Rome based on an invitation of Vinod Kumar Sharma from ENEA.

Note: Inspector's bodies working group meeting on the afternoon of March 9th and morning of March 10th, 2015 prior to the SKN meeting.

The 19th SKN meeting (autumn 2015 meeting) is scheduled for

October 6th, 13:00 hrs to October 7th, 14:00 hrs, 2015 (end of day one at 19:00 hrs) and will take place in Paris, France based on an invitation of François-Xavier Ball from Eurovent CERTITA

The 20th SKN meeting (spring 2016 meeting) is scheduled for

March 8th, 13:00 hrs to March 9th, 14:00 hrs, 2016 (end of day one at 19:00 hrs) and will take place in Berlin based on an invitation of Sören Scholz from DIN CERTCO (tbc)

Item 6: Review of decision list

As agreed at the last meeting Jan Erik Nielsen reviewed the decision list in order to identify topics where further action is needed. However, no such topics were identified by him.

Anyway a short discussion related to the decision list took place and in this context Susanne Hansson proposed to mark decisions that are not relevant anymore because they are superseded or included in other decision.

It was agreed that such “old” decisions should be kept in the decision list but crossed out in the following way: ~~old decision~~.-

Item 7: New Absorber coatings to be considered as equivalent

No new absorber coatings to be considered as equivalent were presented for this meeting.

However, related to this aspect the following question was asked by Stephan Fischer:

Dear Jan Erik, we have currently an application for a new absorber coating to be tested according clause 4.7.1.

Requirement 1 in clause 4.7.1 is asking for mean values of the absorptivity and emittance of the equivalent group 1. Two identical collectors (apart from the absorber coating) are compared to verify the equality of the two coatings. The absorbers of the two collectors must be made of the same material and must have the same thickness. One of the collectors is coated with one of the reference coatings fulfilling the following requirements:

$\alpha \geq \text{mean value of } \alpha \text{ values in the group} - 1 \% \text{ point};$

$\epsilon \leq \text{mean value of } \epsilon \text{ values in the group} + 1 \% \text{ point}.$

The mean value shall be given and updated each time a new member is included. The other collector is coated with the new coating.

Where can this mean value or the single values (I will be able to calculate the mean value ;-)) be found? I could not find them in the scheme rules nor the mentioned document SKN_N0137, nor in the mentioned decisions.

Best regards, Stephan

The topic was discussed and it was agreed to include the mean values in the tables of document SKN_N0137. Jan Erik Nielsen presented document SKN_N0137R10 with the values being included. The document was discussed and slightly modified.

Finally the following resolution was made.

Decision M17.D1 – Equivalency of absorber coatings – presentation of mean values

Based on the documents that provided the basis for the specific decisions concerning the equivalency of absorber coatings Jan Erik Nielsen will fill in the tables of the document SKN_N0137R10 and calculate the mean values. The resulting document SKN_N0137R11 will be made available via the Solar Keymark website.

This decision was taken with 0 negative votes and 0 abstentions.

Item 8: New Glazing to be considered as equivalent

No new glazings to be considered as equivalent were presented for this meeting.

Item 9: Proposals for topics for new SCF projects – 6th SCF Call

Jan Erik Nielsen and Harald Drück mentioned that the next call for the projects funded by the Solar Certification Fund (SCF) will be launched on November 25th, 2014 with deadline January 16th, 2015.

As a basis of the 6th SCF call (SCF: Solar Certification Fund) the following activities were proposed:

- Round robin testing and certification of new systems and components (EN 12977-systems, storage and controller)
- Round robin test of collectors related to reliability testing based on ISO 9806:2013
- Round robin test of collectors related to thermal performance testing of solar air collectors based on ISO 9806:2013
- Round robin test of medium temperature (max 250 – 300 °C) collectors related to thermal performance based on ISO 9806:2013
- Prepare SK scheme rules for absorber surfaces (related to EN ISO 22975-3)
- CE-marking of collectors (EN 12975-1) related to CPR (and other relevant EC regulation like PED, ...?)
- Mapping requirements for collectors throughout the world. Based on this - and previous work described in SKN_N0233 - make relevant classes for load, and other climate impact - take into account safety factors. Develop a guideline for manufacturers to evaluate in an easy way for which class to go.
- Support for revising ISO 9488 (Solar Energy - Vocabulary) , e. g for co-financing of ISO WG convenor
- Promotion of Global Solar Certification and ISO 9806:2013
- Further implementation of Global Solar Certification
- Elaboration of harmonised application document and guideline for certification
- Establishment of a link between Solar Keymark certification and Eco Design and Energy Labelling; e.g. preparation of values from Solar Keymark certification in such a way that they can be easily used for Eco Design and Energy Labelling
- Elaboration of standardised methods for life cycle assessment of solar thermal products focusing on environmental and financial aspects
- any other good ideas

The ideas listed above will serve as a basis for the 6th SCF Call to be elaborated by the SCF. Proposers of the topics listed above are encouraged to precise their proposals by sending more detailed information. Preferably this input should be in such a way that it can directly be used as the call text.

Please send this information to Jan Erik Nielsen at latest until Oct. 24th, 2014

Provided the amount required for financing of high quality proposals exceeds the available budget a decision of the funded projects will be made by the Solar Certification Fund Steering Group based on priorities.

Note: The next physical **meeting of the Solar Certification Fund Steering Group** will take place on February 10th, 2015 at Brussels.

Item 10: Changes of Solar Keymark data sheets due to ISO 9806:2013

Harald Drück presented, in his role as chairman of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien), the proposal described in the agenda (document SKN_N0243R6) for a resolution related to the presentation of the collector reference area in the Solar Keymark data sheets.

Since this aspect is closely linked to the content of item 17 and 22 it was not treated here.

Item 11: Proposal for resolution concerning “Name change of manufacturer or product”

Harald Drück presented, in his role as chairman of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien), the proposal described in the agenda (document SKN_N0243R6) for a resolution related to a change of the name of the manufacturer or the product.

The proposal was discussed and modified and hence the following decision was made.

Decision M17.D2 – Name change of manufacturer or product

No new test report is required if only the name (including address and legal status) of the certificate holder is changed (but not the product and its documentation itself).

This decision was taken with 0 negative votes and 1 abstention.

Item 12: Proposal for resolution concerning “Testing of solar collectors with frames in different colours”

Harald Drück presented, in his role as chairman of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien), the proposal described in the agenda (document SKN_N0243R6) for a resolution related to the testing of solar collectors with different frames in different colours.

The proposal was discussed and modified and hence the following resolution was made

Resolution M17.R1 – Testing of solar collectors with frames in different colours

If collectors differ only by the colour of their frame, only one collector needs to be tested. The test results determined by the test of this collector are valid for all collectors differing only by the colour of their frame from the collector tested.

The collector used for testing should be the one that, has according to the manufacturer, the largest market relevance.

This resolution was taken with 0 negative votes and 0 abstentions.

Item 13: Determination of gross area for roof integrated collectors

Harald Drück presented, in his role as chairman of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien), the following proposals described in the agenda (document SKN_N0243R6) for a resolution related to determination of the gross area for roof integrated collectors

Resolution M17.R2 – Determination of gross area for roof integrated collectors

For the determination of the gross area of roof integrated collectors the part of the roof covered by the roof mounting kit surrounding the collector to prevent the ingress of water into the roof (cladding) shall not be taken into account.

This resolution was taken with 0 negative votes and 0 abstentions.

Item 14: SKN Budget for 2015 and other financial issues

Jan Erik Nielsen and Pedro Dias presented document SKN0245R0 (Financial status 2014 - budget 2015), SKN_N0246R0 (Expected fee income 2015 and expense) and SKN_N0247R0 (Services to be provided by ESTIF to the Solar Keymark Network in 2015).

In this context Jan Erik Nielsen also mentioned explicitly that it is not intended to change the fees.

In this context he mentioned, based on a request by Harald Drück also, that no answer from CCB was received related to the request for a reduction of the CEN fees for 2015 based on decision D6.M15 (CEN fees for 2015).

The documents were discussed and the following resolution and decision were made:

Resolution M17.R3 – SKN fees for 2015

For 2015 the Solar Keymark Network fees will not be changed compared to 2014.

Hence, the fees will still be as follows:

maintype fee of 50 €

subtype fee of 230 €

This resolution was taken with 0 negative votes and 0 abstentions.

Decision M17.D3 – SKN Budget for 2015

The budget of the SKN for 2015 as specified in documents SKN_0245R0 (Financial status 2014 - budget 2015), SKN_N0246R0 (Expected fee income 2015 and expense) and SKN_N0247R0 (Services to be provided by ESTIF to the Solar Keymark Network in 2015) is accepted by the Solar Keymark Network.

This decision was taken with 0 negative votes and 0 abstentions.

Item 15: Approval and exclusion of test labs by SKN”

Katharina Meyer presented document SKN_N0250R0 entitled “Proposal for handling complaints related to testing laboratories and inspectors” elaborated by the “Certification Body Group”. She also mentioned that due to time constraints it was not possible to present a final version of the document that could directly serve as a basis for a resolution. Hence, the present version of the document should serve as a basis for discussion.

Harald Drück thanked Katharina Meyer and Sören Scholz as well as the “Certification Body Group” for the elaboration of the document.

The document was discussed and several questions were answered by Katharina Meyer and Sören Scholz.

It was agreed that the “Certification Body Group” should prepare a final version of the document and a proposal for a corresponding resolution for the next SKN meeting.

Item 16: Improvement for organisation and funding of SKN activities

As agreed on at the last Solar Keymark Network meeting Jaime Fernandez Gonzalez-Granda elaborated the two proposals for funding the work of the chairs of working groups described in the agenda (document SKN_N0243R6).

The proposals of Jaime Fernandez Gonzalez-Granda were discussed and the following resolution was made:

Resolution M17.R4 – Funding of SKN working group convenors

A funding of maximum 500 € for working group convenors can be granted after the presentation of the results of the work performed by the working group based on an explicit request of the working group convenor.

The decision related to the funding will be made by the SKN at the meeting where the results of the working group are presented and accepted.

This resolution was taken with 1 negative vote and 5 abstentions.

Item 17: Transition from old EN 12975-1&2 to new EN 12975-1 and new EN ISO 9806:2013

The new standard EN ISO 9806:2013 is describing test methods for solar collectors and will replace the older standard EN 12975-2.

Unfortunately, the revision of EN 12975-1 with requirements for collectors is delayed and the current version still refers only to EN 12975-2 and not ISO 9806:2013.

Hence, if EN ISO 9806 is accepted for Solar Keymark certification parallel to EN 12975-2, the Solar Keymark data sheets will be incompatible because the presentation of the performance indicators are based on different reference areas. It is desirable not to prolong this ambiguous state and to set a time limit when the Solar Keymark data sheets and certificates based on EN 12975-2 must be replaced by new ones based on EN ISO 9806:2013.

Hence, at the last Solar Keymark network meeting it was agreed to establish a working group to elaborate procedures for the transition from the old EN 12975-1&2 to new EN 12975-1 and new EN ISO 9806:2013 until April 1st, 2014. The working group is consisting of the following persons:

Jaime Fernandez Gonzalez-Granda (Chair), Sören Scholz, Stephan Fischer, Korbinian Kramber, Stefan Mehnert, Vinod Kumar Sharma, Ozan Türk., Daniele Bernacchioni, Alberto García de Jalón, Martin Perrson, Susanne Hansson, Pilar Navarro, João Santos, Maria João Carvalho, Ulrich Fritzsche, Franck Cheutin,

On behalf of this working group Jaime Fernandez Gonzalez-Granda presented document N0106_Annex_H_R0 and the proposal for a resolution as described in the agenda (document SKN_N0243R6).

The proposal was intensively discussed on the first day of the meeting, but unfortunately no compromise could be found. Therefore Jaime Fernandez Gonzalez-Granda and some colleagues dealt with the subject again during the evening and presented a modified version of annex H (document SKN_N0106_Annex_H_R0) as well a proposal on how the changes in the scheme rules can be directly implemented (document SKN_N0106R22.doc)

The documents were again discussed on the second day of the meeting and slightly modified. Finally the following resolution was made

Resolution M17.R5 – Transition from EN 12975-1&2 to EN 12975-1 and EN ISO 9806:2013

The document N0106_Annex_H_R1 will become a temporary Annex to the Solar Keymark Scheme Rules.

The Solar Keymark scheme rules will be changed as described in document SKN_N0106R22.doc

This resolution was taken with 0 negative votes and 0 abstentions.

Item 18: Corrections related to ISO 9806:2013

Maria João Carvalho mentioned that the Solar Keymark Network identified that a few editorial corrections are needed in ISO 9806:2003 in order to guarantee that no mistakes in testing occur when using the standard. A list of these editorial corrections is included in document SK_N0244R0. This list will be sent to ISO TC180 Secretariat in order to submit a request for amendment to the standard with the necessary corrections. Testing Laboratories using the standard ISO 9806:2013 shall consider these corrections when testing.”

Decision M17.D4 – Corrections related to EN ISO 9806:2013

The Solar Keymark Network requests Jan Erik Nielsen as the Solar Keymark Network secretary to send document SK_N0244R0 to ISO TC180 secretariat and to TC 312 WG 1 convener and to submit a request for a modification of the standard with the necessary corrections.

Furthermore testing laboratories using the standard EN ISO 9806:2013 shall already now consider these corrections when performing tests.

This decision was taken with 0 negative votes and 0 abstentions.

Item 19: Freeze resistance test of evacuated tube collectors with heat pipes

Danjana Theis mentioned that the last revision (SKN_N0106_AnnexF_R2) seems to be not available and the document list refers to SKN0228R0 instead. Unfortunately SKN0228R0 is still a draft and hence not approved by the Solar Keymark Network.

She proposes to delete SKN0228R0 in the document list, and to prepare an AnnexF_R2(R3) without comments/corrections for approval by the Solar Keymark Network.

Ulrich Fritzsche mentioned that document SKN_N0106_AnnexF_R2 contains comments from Mr. Koch that were so far not discussed within the SKN and are also partly inconsistent.

It was agreed that Ulrich Fritzsche will remove these comments and check the whole document again for consistency and terminology. Together with Jan Erik Nielsen he will elaborate a final version of the document that will be made available to the SKN.

Item 20: Proposal for resolution concerning more specified requirements for changing the certification body

Katharina Meyer presented document SKN_N0249R0 entitled “Proposal for more specific requirements in case of changing the certification body”.

Harald Drück thanked Katharina Meyer and Sören Scholz for the elaboration of the document. The document was shortly discussed and finally the following resolution was made:

Resolution M17.R6 – Procedures for changing the certification body

The experts present agreed to include the following text as new chapter 11 (Changing the certification body) and new chapter 13.4 (OBL certification) as described below in the Solar Keymark Scheme rules (document SKN_N106):

Chapter 11: Changing the certification bodies

- It is possible for a manufacturer to move with an original certificate to another certification body without re-testing and re-inspection
- The certification body that issued the original certificate has to be informed by the certificate holder about the cancellation of the certificate
- A copy of the notification of cancellation by the former certification body has to be provided to the “new” certification body before issuing the new certificate
- The test report(s) and the inspection report(s) have to be provided to the “new” certification body
- The testing laboratory that issued the test reports has to be accepted by the “new” certification body before issuing the new certificate
- At least a new data sheet shall be issued stating the “new” certification body and registration number.
- Change of certification body and issuance of new certificate should be done within 3 months after the request.
- Original certificate shall be withdrawn when new one is issued
- These procedures apply to all OBL certificates linked to the original certificate

13.4 OBL certification

OBL certificates shall be issued by the certification body who issued the original certificate.

If the holder of the original certificate (manufacturer/OEM) wants to change the certification body, paragraph 11 applies.

This resolution replaces SKN decision D1.M3 and SKN decision D3.M5

This resolution was taken with 1 negative vote and 0 abstentions.

Item 21: Classification of collectors

Jan Erik Nielsen presented ideas for the classification of collectors as described in the agenda (document SKN_N0243R6) to be included in the Solar Keymark Scheme rules as a new section “Classification of collectors”

The proposals were discussed and it was agreed that further work is required in order to come to a real classification of collectors. However, as first step the following resolutions were made:

Resolution M17.R7 – Presentation of information related to mechanical resistance in data sheets

In the next revised version of the data sheets the following information shall be given:

The collector was successfully tested up to a positive mechanical load of $p_{ml+} = \mathbf{xxx}$ Pa and a negative load of $p_{ml-} = \mathbf{-yyy}$ Pa.
(xxx and yyy depending on the test conditions)

This resolution was taken with 0 negative votes and 0 abstentions.

Resolution M17.R8 – Presentation of information related to climate classes

For tests performed according EN ISO 9806:2013 in the next revised version of the data sheets the following information shall be given:

The collector was successfully tested according to climate class X according to EN ISO 9806:2013.

(x depending on the test conditions)

This resolution was taken with 0 negative votes and 0 abstentions.

Resolution M17.R9 – Presentation of information related to hail resistance

For tests performed according EN ISO 9806:2013 in the next revised version of the data sheets the following information shall be given:

The collector was successfully tested for hail resistance with ice balls of diameter xx / steel balls dropping height x according to EN ISO 9806:2013.

(x depending on the test conditions)

This resolution was taken with 0 negative votes and 0 abstentions.

Item 22: Example of a completely correct and “nice” Solar Keymark data sheet for solar collectors

Based on an activity already stated at the 12th SKN meeting to improve the quality of the work performed by test laboratories, certification bodies and inspectors, a working group was establish.

In the meanwhile the composition of the originally formed working group was slightly modified and consisted since the 14th SKN meeting of the following persons:

Andreas Bohren (Chair), Stephan Fischer, Uli Fritzsche, Sören Scholz, Danjana Theis, Jef Profke, Vinod Shama, Stefan Mehnert, Henry Rosik, Stamatios Babalis, Julien Heintz, Alberto Garcia, Franz Helmlinger, Jaime Fernandez Gonzalez-Granda, Carsten Lampe, Harald Dehner, Achim Sadenwater, Mark Witt, Malte Kottwitz and from the 15th meeting on also Jan Erik Nielsen

At the 16th SKN meeting it was agreed that the working group should prepare an example of a “nice” data sheet for flat plate collectors and vacuum tube collectors.

Andreas Bohren presented a proposal for a “nice” data sheet. In this context he also mentioned the points listed in the agenda (document SKN_N0243R6).

The proposal, as well as, some questions raised by Andreas Bohen, was discussed and the following decision was made:

Decision M17.D5 – New solar collector data sheet

It was agreed that Andreas Bohren shall revise the data sheet according to the result of the discussions performed at the present meeting.

The resulting version of the data sheet will be circulated by Jan Erik Nielsen to the SKN.

Furthermore the SKN requests SP to update ScEnOCalc according to the latest version of the data sheet.

This decision was taken with 0 negative votes and 0 abstentions.

Item 23: Data sheet for systems, stores and controllers

Jan Erik Nielsen presented the following proposals for data sheets:

System data sheet (EN12976 & EN 12977; only for domestic hot water systems):

Document N0106_AnnexB2_R3.4-system.xlsx

Annex B3: Store data sheet (EN 12977-3 & -4)

Document: SKN_N0106_AnnexB3_R0.4-store.xlsx

Controller data sheet (EN 12977-5)

SKN_N0106_AnnexB4_R0.4-controller.xlsx

Note: Files can be downloaded from:

<http://www.estif.org/solarkeymarknew/the-solar-keymark-scheme-rules>

After the presentation a short discussion took place and finally the following resolution was made

Resolution M17.R10 – Data sheets for systems, stores and controllers

The following templates for data sheets for systems, stores and controllers are added as Annexes to the Solar Keymark scheme rules and shall be used from now on

System data sheet (EN12976 & EN 12977):

Document N0106_AnnexB2_R3.4-system.xlsx

Annex B3: Store data sheet (EN 12977-3 & -4)

Document: SKN_N0106_AnnexB3_R0.4-store.xlsx

Controller data sheet (EN 12977-5)

SKN_N0106_AnnexB4_R0.4-controller.xlsx

This resolution was taken with 0 negative votes and 0 abstentions.

Item 24: Update of Annex G “Solar Keymark certificates and sub licences for other brands, product names and sellers”

At the 16th SKN meeting Pedro Dias presented the subject of “certificates for different brand names” and asked for feedback in order to elaborate a final proposal for a resolution at the next SKN meeting.

The intention was to carry out the work in the working group established already at the 16th SKN meeting consisting of the following persons:

Pedo Dias (Chair), Sören Scholz, Jaime Fernandez Gonzalez-Granda, Ralf Köbbemann-Rengers, Allard Slomp, François-Xavier Ball, Hans Peter Weiss, João Santos, Jan Erik Nielsen and Eileen Prado as new member for the 16. meeting onwards.

Pedro Dias mentioned that not much work was done in the meanwhile related to this topic due to missing time resources.

It was discussed how to proceed with this activity and finally it was agreed that Pedro Dias and his group should restart their activities and elaborate a proposal as a basis for a decision at the next meeting describing how to improve the registration numbers of SKN licenses, so that when subtype licenses are issued, the related main license can be easily tracked.

Item 25: Information on status of new versions of Annex A and Annex E

Jaime Fernandez Gonzalez-Granda presented the current status of the elaboration of the two annexes based on the information given in the agenda (document SKN_N0243R6) and also by means of the presentation attached as Annex B

The work was discussed and in this context it was also agreed to arrange an “Inspector’s bodies working group” meeting on the afternoon of March 9th and morning of March 10th, 2015 in Rome, prior to the SKN meeting.

Item 26: Inclusion of performance test results of unglazed collectors in Solar Keymark data sheets

Susanne Hansson mentioned on behalf of Peter Kovacs, who was not present at the meeting, that there is a SCF project existing related to the implementation of performance calculation procedures for unglazed collectors in ScEnOCalc. Even SP has not started to work on this project yet it is expected that the work will be done ahead of the spring 2015 SKN meeting.

Item 27: Solar Certification Fund Projects – General status report

By means of the presentation attached as Annex C, Pedro Dias gave first a general overview of the number of projects as well as on their status supported by the Solar Certification Fund (SCF) in the different calls as well as the corresponding budget allocated to the different calls.

He also reported about the improvements already performed related to the management of the SCF projects as well as ideas for further improvements.

After and during the presentation some questions were asked by some participants and answered by Pedro Dias.

Harald Drück thanked Fabrizio Dangelo and Pedro Dias for the huge amount of work ESTIF is performing in a highly professional way.

Item 28: Global certification

Jan Erik Nielsen gave a short presentation about the current status and the latest developments related to global certification by means of the presentation attached as Annex D. The overall goal of the activities related to Global Solar Certification is to save testing and certification costs for the industry.

In this context he mentioned that the subject of “global certification” will be dealt in much more detail in the meeting of the Global Solar Certification Network and the IEA Task 43 (Solar rating and certification) scheduled for October 8th and 9th, 2014 at Beijing, China.

Item 29: Fundamental new data base

Jan Erik Nielsen informed about the fact that a new version of the existing database will be online in the next days. Even if the visual appearance does not differ significantly from the existing one, the functionally behind is renewed.

Furthermore Jan Erik Nielsen informed about the ideas of a fundamental new data base by means of document SKN_N0253R0. The work related to this fundamental new data base is financed by a corresponding SCF project.

During the discussion the point was raised, that it will be quite easy with the fundamental new database to compare the products with regard to different criteria since “sorting functions” will be available. Since this point might be critical for industry it was agreed that Christian Stadler will nominate an industry representative being responsible for this aspect and following the development of the fundamental new data base in close co-operation with Jan Erik Nielsen.

Furthermore the wish was expressed, that the database should replace in the future the physical printed datasheet.





Item 30: Update on round robin testing of systems / components

Jan Erik Nielsen asked if there are any plans for round robin testing of systems and / or components. The result was that there are no specific plans except the nearly finished robin test of stores financed by a SCF projects and the ideas for round robin testing activities within the 6th SCF call (see also item 9).

After a short discussion there was a consensus that a periodical round robin test, e.g. all 5 years, is not practicable due to missing financial resources.

Item 31: Update on CE marking of Collectors

Andreas Bohren as convenor of TC 312 WG1 reported about the latest status of the new EN 12975-1 by showing the following slides:

<div data-bbox="199 1480 775 1525"> EN12975-1 </div> <ul style="list-style-type: none"> • Draft submitted for FV was rejected by NA-Consultant Mr. Salazar • TC312 Decision to open new WI • New WI: <ul style="list-style-type: none"> - Include PVT-Air & Eco-Design -> Change of Scope - Amend answer to the mandate M/369 - Approval by the Commission (Consultant) required. • Situation with the NA Consultants seems to be settled (Mr. Salazar). • WI EN12975-1 can be registered & Work start: The amendment to the answer has to be accepted by Consultant / TC312 / commission <u>before</u> submitting Draft Standard for Formal Vote. <div data-bbox="199 1861 775 1912">  2  </div>	<div data-bbox="826 1480 1390 1525"> ISO 9806:2013 </div> <ul style="list-style-type: none"> • ISO Standard, first edition 2013-11-15 • Preliminary WI for new revision, (TC312 Decision 18/2013) • By default: ISO lead for revisions of standards under the VA. • Proposal: <ul style="list-style-type: none"> - CEN TC312 „ahead decision“ to register new WI for the revision of the ISO9806, under the assumption that ISO TC 180 decides to have the revision of the ISO9806 under CEN lead (October Meeting in Beijing). • If positive, the WI is registered and parallel work on ISO9806 and EN12975 is launched. <div data-bbox="826 1861 1390 1912">  3  </div>
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Andreas Bohren also mentioned that the CEN consultant Mr. Salazar will attend the CEN TC 312 meeting tomorrow (Oct 2, 2014).

It is intended to elaborate a new draft of EN 12975-1 until the end of 2015. Hence, the new version of EN 12975-1 can be available until end of 2016. Two years after announcing the publication of the harmonized standard in the Official Journal of the European Union CE marking of the collectors is mandatory.

Finally it was also mentioned that a revision of ISO 9806:2013 is intended. A decision related to this will be made at the next ISO TC 180 meeting taking place in the first week of October 2014 in Beijing

Item 32: Information on Energy Labelling

Gerard van Amerongen showed the presentation attached as Annex E.

After the presentation some questions were raised by some of the participants and answered by Gerard van Amerongen.

Item 33: Report from the Solar Keymark Certification Bodies / Solar Keymark Inspection Working Group

With regard to the **Certification Bodies Working Group** Sören Scholz informed about the fact that since the last SKN meeting 3 meetings took place. The meetings were to a large extent related to the elaboration of documents presented at this meeting.

With regard to the **Inspector's Bodies Working Group** Jaime Fernandez Gonzalez-Granda mentioned that no reportable activities were carried out since the last meeting. Furthermore he mentioned that an "Inspector's bodies working group" meeting is scheduled for the afternoon of March 9th and morning of March 10th, 2015 in Rome, prior to the next SKN meeting.

Item 34: PVT testing

Ulrich Fritzsche proposed to reactivate the working group that worked on PVT testing since there is the need to deal with several important questions related to testing and certification of PVT collectors.

Since a doodle survey performed by him did only result in four interested persons he asked again at the meeting for persons interested in participating.

The working group on PVT testing is at present consisting of the following persons:

Ulrich Fritzsche (Chair), Giovanni Bellenda, Carsten Lampe, Joakim Byström, João Santos, Katharina Meyer, Korbinian Kramer, Mark Witt, Remi Heutte, Soeren Scholz, Stephan Fischer, Andreas Bohren, Alberto Garcia, Jaime Fernandez Gonzalez-Granda, Daniele Bernacchioni

Item 35: Information from CEN TC 312

Vassiliki Drosou being the secretary of TC 312 informed about the current status of the standards in the responsibility of TC 312 by showing the following two slides:

17 th plenary meeting_2014-10-02_Brussels	CEN/TC312 Thermal solar systems and components	17 th plenary meeting_2014-10-02_Brussels	CEN/TC312 Thermal solar systems and components
Published Standards <ul style="list-style-type: none"> • EN ISO 9488:1999 Solar energy – Vocabulary (ISO 9488:1999) • EN12975-1:2006+A1:2010 Thermal solar systems and components – Solar collectors – Part 1: General requirements • EN ISO 9806:2013 Solar energy-Solar thermal collectors –Test methods (VA/CEN Lead) • EN ISO 22975-3:2014 Solar energy – Collector components and materials – Part 3: Absorber surface durability (VA/CEN Lead) • EN12976-1:2006 Thermal solar systems and components – Factory made systems – Part 1: General requirements • EN12976-2:2006 Thermal solar systems and components – Factory made systems – Part 2: Test methods • EN12977-1:2012 Thermal solar systems and components – Custom built systems – Part 1: General requirements for solar water heaters and combisystems • EN12977-2:2012 Thermal solar systems and components – Custom built systems – Part 2: Test methods for solar water heaters and combisystems • EN12977-3:2012 Thermal solar systems and components – Custom built systems – Part 3: Performance test methods for solar water heater stores • EN12977-4:2012 Thermal solar systems and components – Custom built systems – Part 4: Performance test methods for solar combistores • EN12977-5:2012 Thermal solar systems and components – Custom built systems – Part 5: Performance test methods for control equipment 		Standards UNDER DEVELOPMENT <ul style="list-style-type: none"> • WI 00312019 prEN ISO 9488rev Solar energy – Vocabulary • WI 00312033 prEN ISO 22975-1 Solar Energy – Collector components and materials, Part 1: Evacuated tubes – Durability and Performance. (WG1 – ISO lead) • WI 00312034 prEN ISO 22975-2 Solar Energy – Collector components and materials, Part 2: Heat pipes for evacuated tubes – Durability and Performance. (WG1–ISO lead) • WI 00312035 prEN12976-2 rev Thermal solar systems and components – Factory made systems – Part 2: Test methods. (WG2) • WI 00312036 prEN12976-1 rev Thermal solar systems and components – Factory made systems – Part 1: General requirements. (WG2) • WI 00312037 (TR) Thermal solar systems and components – Code of practice – Minimizing the risk of Legionella in solar assisted hot water systems. (WG4) 	

Furthermore she mentioned that ESTIF signed an agreement with CEN as Liaison Organization related to CEN/TC 312.

Item 36: Information from CEN CCB

According to the agenda it was planned that under this item Hoang Liauw will speak, but unfortunately he was not present. Harald Drück as the chairman of the Solar Keymark Network expressed his disappointment about the absence of him. This fact is especially sad since Hoang Liauw has his office in the same building where the meeting took place and furthermore the Solar Keymark is the Keymark certification scheme delivering the largest revenue to CEN.

Sören Scholz mentioned that as a result of the call for tender concerning an outsourcing of the Keymark activities 6 offers were handed in. Originally it was planned to make a final decision after the summer holidays and sign the contract during autumn so that the winning organisation could start their activities at the beginning of 2015. According to Sören Scholz it is unrealistic to reach this goal.

Item 37: Presentation of selected SCF project results

The results and status of the following SCF projects were presented:

5C5.1-TC312WG_SPF (Andreas Borhen)

Presentation of short summary reports of the WG1 meetings

No treated here, since content was already presented in the frame of item 31

5C8.1-EPBD_vAConsult (Gerard van Amerongen)

Presentation of Excel tool revised Fchart method and Excel tool new hourly method.

See presentation attached as Annex F

5C4.1-LiasTC117-ITW (Stephan Fischer)

Presentation the work of the liaison officer who will follow the work going on in the IEC/TC117

See presentation attached as Annex G

4C08-RR12977_IfEP (Christian Weissmueller / Stefan Kunze)

Presentation of the final results of a Round Robin Test of a solar water heater store according to EN 12977-3 and performance predictions of a complete solar water heating system according to EN 12977-2.

See presentation attached as Annex H

Related to this topic Stephan Fischer also mentioned the fact that one of the test labs originally intended to participate in the Round Robin test and that was also partner of the SCF project financing the activity stepped out and one other lab that was not part of the original consortium stepped in. In this context he asked the question if it is accepted by the SKN to reallocate the budget of the test lab that stepped out of the project to the one that stepped in. This was accepted by the SKN.

4C06-SK-12976 (Danjana Theis, Maria João Carvalho)

Presentation of the harmonized conditions, corrected QAiST RR results, final data sheet generator, manual, round robin results with data sheet generator.

See presentation attached as Annex I

At the end of the presentation Maria João Carvalho encouraged the participants to apply the developed software tools and to report about their experience to Danjana Theis and Maria João Carvalho to provide the basis for a further improvement.

2C06-SysIndoor-ITW (Stephan Fischer)

Presentation of the results of an indoor test procedure for factory made systems according to EN12976

See presentation attached as Annex J

Item 38: Experience with the misuse of the Solar Keymark

Due to the fact that no extreme severe cases of misuse were detected and since the available time got quite short this topic was not dealt with.

Item 39: Validation of ScEnOCalc

Since Peter Kovacs was not present at the meeting and since the remaining meeting time was quite short this topic was not dealt with.

Item 40: Any other business

Item 40.1: Acceptance of EN 12977 system test with regard to domestic hot water systems

Ulrich Fritzsche asked the participants about the relevance of system tests according to EN 12977 in their country.

For **The Netherlands** Gerard van Amerongen mentioned that usually tests according to EN 12976 are required.

In France regulatory texts mentioning solar domestic hot water systems are not specifically based on an approach using EN 12976. For instance the French Thermal regulation is referring to EN 12975, EN 12977 but not to EN 12976. Regarding incentives, e.g. provisions related to tax decreases, some of the current texts are referring to certification, but without tying it to a specific set of standards. There are at the moment some uncertainties regarding these last texts which are expected to be modified in the near future. (Source: François-Xavier Ball)

Item 41: Important national developments

Concerning the Microgeneration Certification Scheme (MCS) in the UK Harald Drück presented on behalf of Pedro Dias the presentation attached as Annex K.

The main two messages are that the MCS012 is at present suspended and that it is still not notified by the EU. Hence the MCS012 is at present inactive.

Copy of Item 5: Date and place of next meetings – since next meetings are usually stated at the end of the minutes

The **18th SKN meeting** (spring 2015 meeting) is scheduled for

March 10th, 13:00 hrs to March 11th, 14:00 hrs, 2015 (end of day one at 19:00 hrs) and will take place in Rome based on an invitation of Vinod Kumar Sharma from ENEA.

Note: Inspector's bodies working group meeting on the afternoon of March 9th and morning of March 10th, 2015 prior to the SKN meeting.

The **19th SKN meeting** (autumn 2015 meeting) is scheduled for

October 6th, 13:00 hrs to October 7th, 14:00 hrs, 2015 (end of day one at 19:00 hrs) and will take place in Paris, France based on an invitation of François-Xavier Ball from Eurovent CERTITA

The **20th SKN meeting** (spring 2016 meeting) is scheduled for

March 8th, 13:00 hrs to March 9th, 14:00 hrs, 2016 (end of day one at 19:00 hrs) and will take place in Berlin based on an invitation of Sören Scholz from DIN CERTCO (tbc)

Item 42: End of meeting

Harald Drück thanked the participants for attending the meeting and for their constructive discussions. He also thanked Jan Erik Nielsen for the excellent preparation of the meeting and the work he is doing as Solar Keymark Network Secretary in a highly professional way.

The participants thanked Harald Drück for his very effective and constructive conduction of the meeting.

The meeting ended at 14:05 hrs.

The minutes were prepared by Harald Drück (Chairman of the Solar Keymark Network) in assistance with Jan Erik Nielsen (SKN Secretariat) and Maria João Carvalho (proof reading)

Stuttgart, October 3rd, 2014

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Annex A: List of participants

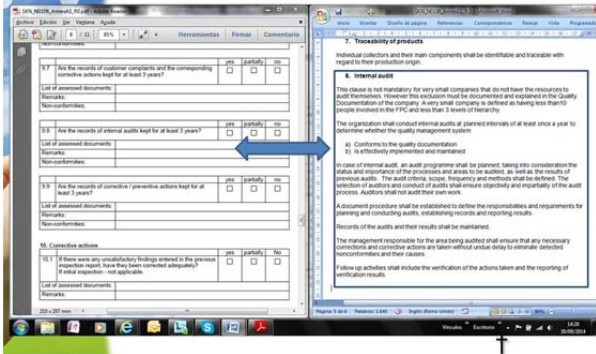
17th Meeting, Brussels, September 29th – October 1st, 2014

NAME	ORGANISATION
Participants physically present	
Alberto García de Jalón	CENER
Andreas Bohren	SPF Solartechnik
Daniele Bernacchioni	ICIM S.p.A.
Franck Cheutin	CSTB
Harald Drück	ITW/TZS
Jaime Fernandez Gonzalez-Granda	AENOR
João Santos	CERTIF
Korbinian Kramer	Fraunhofer ISE
Maria João Carvalho	LNEG
Pedro Dias	ESTIF
Stefan Mehnert	Fraunhofer ISE
Stephan Fischer	ITW/TZS
Ulrich Fritzsche	TÜV Rheinland Energie und Umwelt GmbH
Vinod Kumar Sharma	ENEA
Christian Stadler	ARCON Solarwärme GmbH
Emmanuel Leger	Laboratoire BELENOS
Sophie Bocquillon	EUROVENT CERTITA
Matteo Sartori	Kiwa Italia SpA
Luis González-Monroy	Termicol Energía Solar, S.L.
Richard Unwin	ANTL
Richard Horton	Rheem Australia Pty LTD
Paul Lampersberger	AIT Austrian Institute of Technology GmbH
Fabrizio D'Angelo	ESTIF
Malte Kottwitz	TUV
Paraskevas Kyriakou	Applied Energy Laboratory
George Nikolaides	TUV CYPRUS LTD
Henry Rosik	ITC (CZ)
Jan Erik Nielsen	SolarKey Int.
Francois Ball	EUROVENT CERTITA
Katharina Meyer	DIN CERTCO GmbH
Sören Scholz	DIN CERTCO GmbH
Danjana Theis	IZES gGmbH

Vassiliki Drosou	CRES/ELOT
Ioannis Alexiou	DQS HELLAS
Nikos Kanatsoulis	MIRTEC SA
Marcella Discacciati	ALBARUBENS SRL
Antonio Dias	CTCV
Pedro Cardoso	CTCV
Peter Cervenansky	TSU Piestany
Susanne Hansson	SP Technical Research Institute of Sweden
Gerard van Amerongen	vAConsult
Participants electronically present	
Achim Sadenwater	DIN CERTCO (Germany)
George Roditis	Applied Energy Laboratory (AEIab) (Cyprus)
Giovanni Bellenda	Eurofins (Italy)
Ken Guthrie	Sustainable Energy Transformation (Australia)

Annex B

Information on status of new Annexes A and E

<h4>Annex E and Inspection Report</h4> <p>Background:</p> <p>2011-2012 Working Group for creation of Annex E</p> <ul style="list-style-type: none"> • ISO 9001 Requirements to production line • Preparation for FPC requirements on new version of EN 12975-1 • Tables for control on incoming goods and production process • Annex E non-mandatory in 2013 and mandatory 2014 <p>2012 SCF Project for new inspection reports</p> <ul style="list-style-type: none"> • New versions of inspection reports in Annex A1 • New version of physical inspection report in Annex A2 <p>2012-2014 SCF Project to follow up on Annex E</p> <ul style="list-style-type: none"> • Get input from inspectors on difficulties in plants with Annex E • Consolidate Annex E requirements with inspection report • Add requirements to new certified products in Annex E <p>2013-2014 Global Mark development</p> <ul style="list-style-type: none"> • Common use of Annex E and Inspection Report † 	<h4>Annex E and Inspection Report</h4> <p>Searching for solutions on these pieces of the puzzle:</p> <ul style="list-style-type: none"> • Sometimes the FPC and Physical Inspection are done separate, and sometimes they are done together • Checking out all of the specific ISO 9001 requirements of Annex E has made inspections too long for some • The tables in the draft inspection report make the inspections complicated • Different working methods for inspectors with laboratory background and ISO 9001 background †
<h4>Annex E and Inspection Report</h4> <p>• The inspection report has to show evidence of requirements in Annex E are checked, somehow must be its mirror</p> 	<h4>Annex E and Inspection Report</h4> <p>Solution for Annex E: Divide into Annex E1 and Annex E2</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="927 1014 1145 1238"> <p>Annex E1:</p> <ol style="list-style-type: none"> 1. Common FPC requirements to all products 2. A table indicating what must be inspected in all inspections and what may not be inspected if the company is ISO 9001 certified 3. The tables for control over incoming goods and control over production process for collectors are eliminated </div> <div data-bbox="1161 1014 1380 1238"> <p>Annex E2:</p> <ol style="list-style-type: none"> 1. Tables for control over incoming goods and control over production process are incorporated for each product that falls under the scope of certification. </div> </div>
<h4>Annex E and Inspection Report</h4> <p>Solutions for inspection report:</p> <p>Create Lego -Type Inspection Report that can be used jointly or separately:</p> <ul style="list-style-type: none"> A1 - Front page A2 - Back page A3 - Sample sheet A4 - Factory Production Control Inspection A5 - Physical Inspection/Surveillance Test A6 - Guidance for surveillance test A7 - Document requirements according to EN 12975(The actual A3) A8 - Document requirements according to EN 12976 (the actual A4) 	<h4>Annex E and Inspection Report</h4> <p>To do:</p> <ol style="list-style-type: none"> 1. Study the proposal of UF for Annex E1 and Annex E2 2. Study proposal of JF for FPC part, showing the comparison of actual inspection report towards Annex E 3. Introduce new product requirements on Annex E2 †

Annex C

Solar Certification Fund – General Status Report

Solar Keymark Network meeting

17th meeting
30 September- 1 October 2014
CEN, Brussels

Solar Certification Fund

- 68 projects approved so far:
 - Closed: 32 - 1st call: 9
 - Reporting: 7 - 2nd call: 7
 - On-going: 26 - 3rd call: 18
 - Deferred: 1 - 4th call: 16
 - Cancelled: 2 - 5th call: 18

Solar Certification Fund

- 579 845 EUR (approx.) allocated to projects
 - 1st call: 145 950 EUR
 - 2nd call: 79 910 EUR
 - 3rd call: 170 565 EUR
 - 4th call: 183 420 EUR
 - 5th call: 179 900 EUR

Solar Certification Fund

- Closed projects
 - Report and deliverables approved by the SCF Steering Group
 - Balance payment done or being prepared
 - invoice requested or payment on pipeline
- Deferred projects
 - Projects that are on-hold
 - Waiting for one of the conditions for the project to occur (external)
- Cancelled projects
 - One case insofar - request from contractor
 - Possible also by SG decision in extreme cases

Solar Certification Fund

- On-going projects
 - Projects that are being executed
 - Periodic reports available (for the majority) at the Disc. Board
 - Deliverables (or drafts) may be also available at the Disc. Board
- Reporting projects
 - Projects that have concluded their work
 - Pending approval, because:
 - Reports (or deliverables) are to be provided (uploaded at DB)
 - Secretariat is preparing evaluation files
 - Evaluators are assessing report and deliverables
 - Evaluators requested additional clarification or work

Closed projects (since March 2014)

Reference	Project Name	Responsible	Start Date	End Date	Budget
2C07	CEN/TC312 Secretariat 2012	Vassiliki Drosou	01-12-11	06-09-14	€14.000,00
	Operating the CEN/TC312 Secretariat from 1st December 2011 till 31st December 2013				
3C01	SA-Trade-ESTIF	Pedro Dias	02-05-12	09-06-14	€9.990,00
	Promotion of Solar Keymark				
4C02b	DHW-Store-indicator	Stephan Fischer	02-04-13	10-07-14	€9.800,00
	Annual output indicator for solar water heater stores				
4C19e	Classmate	Peter Kovacs	01-05-13	31-07-14	€10.000,00
	Definition of classes and drafting info material to manufacturers related to EN ISO 9806				
4C12a	ListTC 164-13	Gerard van Amerongen	01-04-13	10-07-14	€5.000,00
	Lesson officers of TC 164				

Deferred or Cancelled

Reference	Project Name	Responsible	Budget
2C04	PoQAS-SPF	Andreas Bohren	€5 000,00
	Solar Keymark Policing for Quality Assurance		
	PROJECT CANCELLED !!!		
	Request from the contractor. Allocated budget was EUR 5000.		
3C16	Harmiteq_DINCERTCO Sören Scholz		€7 000,00
	Measures to harmonise the qualification requirements for inspectors and test labs		
	PROJECT CANCELLED !!!		
	Request from the contractor. Allocated budget was EUR 7000.		
3C14	CE-Bro-ESTIF	Pedro Dias	€3 250,00
	Information about CE-marking of solar collectors - target group manufacturers		
	Project shall not start before there is approval (or at least final version sent for enquiry) of part 1 - EN12975. This is expected to happen only mid 2014.		
	It to be followed up by then.		



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Reporting

Reference	Project Name	Responsible	Start	End (foreseen)	SCF funding
2C06	SysIndoor-ITW	Stephan Fischer	01-05-12		€ 19.910,00
	Development of an indoor test procedure for factory made systems according to EN12976				
	Waiting for final evaluation				
4C11	Uncert	Martin Persson	29-03-13		€ 5.000,00
	Calculation of the uncertainty of the performance figures of solar collectors and factory made systems based on the results obtained by the QAS7 round robin test				
	Waiting for final evaluation				
4C12b	LiastC 371-13	Gerard van Amerongen	01-04-13		€5.000,00
	LiastC 371-13 (Project Committee - Energy Performance of Building project group)				
	Waiting for final evaluation				
4C12c	LiastC 371-13	Gerard van Amerongen	01-04-13		€ 5.000,00
	LiastC 371-13 (Project Committee - Energy Performance of Building project group)				
	Waiting for final evaluation				
4C17	CENmandate-12	Gerard van Amerongen	29-03-13		€ 8.900,00
	Preliminary work program reflecting the mandates M480 (EPD) and M495 (ecodesign) for discussion within TC312.				
	Waiting for final evaluation				
4C18	SCF-SC13.1	Pedro Dias	29-03-13		€ 8.985,00
	Administration of SCF - administrative secretariat/technical secretary				
	Waiting for final report				
SC13.1	ANNIVERSARY_ESTIF	Theresa Doetsch	01-04-14		€5.000,00
	Celebration of the 10 years of Solar Keymark				
	Waiting for final report				



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On-going (contracting)

Reference	Project Name	Responsible	Start	End (foreseen)	SCF funding
SC13.4	SOLARKEYMARK_DE(südsteirer)	Stephan Menherst	30/05/2014		€10 000,00
	With the publication of the new substantially revised EN 12975 and EN ISO 9806 the guide and the brochure will be obsolete and need to be updated.				
	Waiting for evaluators response on new consortium				
SC4.3	LiastC117_ITW	Stephan Fischer	30/05/2014		€5 000,00
	Support the work of the liaison officer who will follow the work going on in the LiastC117				
	Agreement sent for signature				
SC7.1	STANDARD_IIE	Kerhian Kramer	30/05/2014		€10 000,00
	The goal of the project is to close a gap in standardisation, testing and reporting for certification regarding the Incident Angle Modifier (IAM) of Linear Fresnel Collectors (LFC).				
	Waiting for approval of revised proposal				
SC7.2	STANDARD_SWT	Harald Drück	30/05/2014		€13 000,00
	In order to perform the annual system simulation for solar combisystems, among others, space heating load profiles are required.				
	Waiting for contract draft, second reminder sent on 06/08				
SC7.3	STANDARD_ITW	Stephan Fischer	30/05/2014		€5 000,00
	Test procedures and classifications for thermal insulation used in ST collectors and thermal energy stores developed and pre normative documents drafted (ISO EN 12975).				
	Agreement sent for signature				
SC7.4	STANDARD_IMHuter	Jean-Marc Suter	30/05/2014		€5 000,00
	Revision of EN ISO 9488 Solar energy - Vocabulary - German and French terminology. Translation and cross-border harmonisation.				
	Delay to be accepted by SCF SC (e-mail sent to evaluators on 23/07/2014)				



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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
1C04a	EN13203-3 solar-SWT	Dominik Bestenlehner	20/07/2011	31/03/2014	€14 950,00
	"Solar friendly" alternative to "EN 13203-3"				
	Waiting for interim report, new reminder sent on 04/08/2014				
4C01	Task43Ext	Jan Erik Nielsen	02/04/2013	31/12/2014	€20 000,00
	Operating Agent for extension of IEA-SHC Task 43 "Solar Rating and Certification"				
	Interim report received.				
4C03	GlobCert II	Jaime Fernandez	TRUE		€24 700,00
	Follow-up project on global certification conc. elaborating and implementing a Global Certification scheme for solar collectors				
	Interim report requested on 22/08/2014				
4C05	SK-Annex E	Jaime Fernandez	01/06/2013		€3 225,00
	Harmonised Solar Keymark factory production control procedure for EN 12975, -76 and -77 products.				
	Improving Annex E to the scheme rules				
	Interim report requested on 22/08/2014				
4C06	SK-12976	Danajana Theis	01/04/2013	31/12/2014	€15 310,00
	Quality assurance procedures to ensure harmonised of boundary conditions for the long performance prediction for factory made systems				
	Interim report received				



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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
4C07	DataSheet 12977	Jan Erik Nielsen	01/05/2013		€7 000,00
	Elaboration of data sheet templates for custom built systems and components acc. to EN 12977 series				
	Interim report received				
4C08	RR-12977	Christian Weilmüller	01/05/2013	30/09/2014	€29 500,00
	management of a Round Robin Test of a solar water heater store (EN 12977-3) and performance predictions of a complete solar water heating system (EN 12977-2)				
	Presentation at SKNM, final report requested.				
4C16a	EcoDes-12	Gerard van Amerongen	30/05/2014		€35 000,00
	Preparing to meet the requirements of EcoDesign Energy labelling with respect to testing.				
	Request deliverable D1 (including D3) interim report				
4C19b	Industry_Interaction	Xavier Noyon	29-03-13		€10.000,00
	Ensure a better involvement of industry resources in standardisation work				
	Request interim report				
SC1.2	SOLARKEYMARK_SKI	Jan Erik Nielsen	30-05-14		€10.900,00
	The Solar Keymark brochure will be updated - taking also into account the increasing interest in Solar Keymark in overseas countries. Standard presentations for use of Solar Keymark network members to promote Solar Keymark will be updated and developed.				
	Interim report received				



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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
SC1.5	SOLARKEYMARK_SP	Peter Kriess	30-05-14		€7.100,00
	This project will develop the ScenarioCalc tool further by including a calculation model that is still missing: unglazed solar collectors under steady-state conditions.				
	Interim report requested				
SC2.1	ECOLAB_v4Consult	Gerard van Amerongen	30-05-14		€24.000,00
	As a consequence of the publication of the regulations on Ecodesign and the energy labelling in September 2013, the involved standards need to be harmonized (EN 12975, 12976 and 12977) according to the CEN mandate 495.				
	Interim report requested				
SC3.1	CE-COM_ESTIF	Pedro Dias	30-05-14		€9.000,00
	An adequate overview of the CE marking requirements in the different markets will facilitate the work of the solar thermal industry in preparing for the implementation after the expected publication (Sept/Oct. 2014).				
	Interim report requested				
SC4.2	LiastC164_v4Consult	Gerard van Amerongen	30-05-14		€5.000,00
	The main issue during the contractual period will be the proposed revisions of the EN 806-11 and EN 806-22. Requirements of these standards are referred to in the solar thermal standards.				
	Interim report requested				
SC13.1	GOODIDEA_v4Consult(Legis)	Gerard van Amerongen	30-05-14		€24.800,00
	Drafting a CEN Technical Report on Legionella prevention in amongst others solar water heaters.				
	Interim report requested				



THE Quality Label for Solar Thermal Products in Europe

12

Annex D


Global Solar Certification

 <h3>Global Solar Certification</h3> <p>An introduction to “Global Solar Certification”</p> <p><i>Jan Erik Nielsen</i> Global Solar Certification Network Manager, IEA-SHC Task 43 Operating Agent</p> <p>SHC Task 43</p> 	 <h3>Global Solar Certification</h3> <p>Aim</p> <ul style="list-style-type: none"> Facilitate worldwide cross-border trading for manufacturers of solar thermal products Minimize the need for re-testing and re-inspection for new markets <p>SHC Task 43</p> 
 <h3>Global Solar Certification</h3> <p>Scope</p> <ul style="list-style-type: none"> First: Solar thermal collectors (test procedures given ISO 9086) Next: Other solar thermal components as well as complete solar water heaters and solar heating/cooling systems to be included a later stage <p>SHC Task 43</p> 	 <h3>Global Solar Certification</h3> <p>Concept</p> <p>Cooperation between certification bodies and schemes around the world recognizing each others certification and the testing and inspection behind:</p> <ul style="list-style-type: none"> When a product has been certified by one of the participating certification bodies/schemes, the product can obtain certification from all other participating certification bodies/schemes without re-testing of the product and without re-inspection of production facilities. Supplementary testing may be required in some cases due to specific requirements in national regulation. Basis for testing: ISO 9806 <p>SHC Task 43</p> 
 <h3>Global Solar Certification</h3> <p>Organisation</p> <p>The Global Solar Certification Network (GSCN) is made up by:</p> <ul style="list-style-type: none"> Industry representatives representatives from participating certification bodies, test labs and inspectors <p>The GSCN is governed by a board of directors:</p> <ul style="list-style-type: none"> Asia: Xiaowen Zhou (Ind), He Tao (TL) Europe: Peter Markart (Ind), Sören Scholz (CB), Jaime Fernandez (CB), Harald Drück (TL), Korbinian Kramer (TL) North America: Les Nelson (CB), Eileen Prado (CB), Alfred Brunger (TL) <p>Chairman: Harald Drück, Vice Chair: Les Nelson, Treasurer: Eileen Prado, Secretary: Peter Markart Daily management: The manager (Jan Erik Nielsen)</p> <p>SHC Task 43</p> 	 <h3>Global Solar Certification</h3> <p>How does it work for manufacturers</p> <ul style="list-style-type: none"> A manufacturer having already a certificate accepted within the GSCN, simply apply directly to a certification body issuing the wanted certificate (also accepted within the GSCN), showing his existing certificate and related documentation. The “new” certification body will then tell the manufacturer if any additional testing will be needed. If no additional testing is required - or when such additional testing has completed - the manufacturer is granted the license to mark his product with the “new” certificate too. Some fees for the “new” certification will apply. <p>SHC Task 43</p> 
 <h3>Global Solar Certification</h3> <p>How does it work - for manufacturers</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p>First certification (participating scheme):</p> <ul style="list-style-type: none"> Initial inspection and sampling Testing Annual inspection Certification  </div> <div style="border: 1px solid black; padding: 5px;"> <p>Next certification (other participating scheme):</p> <ul style="list-style-type: none"> No further inspections No re-testing (supplementary tests may apply) New certificate (Yes)  </div> </div>  <p>SHC Task 43</p> 	 <h3>Global Solar Certification</h3> <p>How does it work for certification bodies</p> <ul style="list-style-type: none"> Certification body sign agreement with the “Global Solar Certification Network” (GSCN) to participate (or directly with other participating certification bodies ?). Signing this agreement means that the certification body will recognize certification done by the other participating certification bodies and follow the rules and procedures for the GSCN. Certification body shall accept peer assessment. <p>SHC Task 43</p> 

<p> Global Solar Certification</p>  <p>SHC Task 43 SHC 2014</p>	<p> Global Solar Certification</p>  <p>SHC Task 43 SHC 2014</p>
<p> Global Solar Certification</p> <p>How does it work for test labs</p> <ul style="list-style-type: none"> <input type="checkbox"/> Test lab shall be accredited for testing according to EN ISO 9806 <input type="checkbox"/> Test lab signs agreement with certification body/bodies to test according to the certification scheme(s) offered by the certification body/bodies. <input type="checkbox"/> Test lab accepts peer assessment and other checking procedures (Round Robin) <p>SHC Task 43 SHC 2014</p>	<p> Global Solar Certification</p>  <p>SHC Task 43 SHC 2014</p>
<p> Global Solar Certification</p> <p>Acknowledgements</p> <p>Global Solar Certification is has been developed with support from</p> <ul style="list-style-type: none"> <input type="checkbox"/> The International Energy Agency - Solar Heating and Cooling programme (IEA-SHC), http://task43.iea-shc.org/ <input type="checkbox"/> The Solar Certification Fund (SCF), http://www.estif.org/solarkeymarknew/projects/scf <p>SHC Task 43 SHC 2014</p>	<p> Global Solar Certification</p> <p>More information</p> <p>More information is available from:</p> <ul style="list-style-type: none"> <input type="checkbox"/> www.gsc-nw.org <input type="checkbox"/> www.gsc-mark.org <input type="checkbox"/> http://task43.iea-shc.org/ <input type="checkbox"/> manager@gsc-nw.org <p>Thank you for your attention Jan Erik Nielsen</p> <p>SHC Task 43 SHC 2014</p>






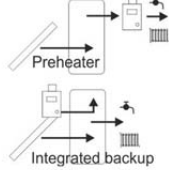


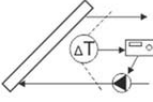
Annex E

Ecodesign & Energy Labelling

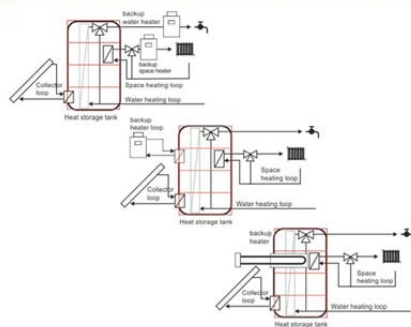
<p>Consultancy for renewable energy in the built environment</p>  <h3>Update on Ecodesign</h3> <p>Gerard van Amerongen SKNG meeting Brussels (1/10/2014)</p> <p>1</p>	<p>vA Censull</p> <h3>Current status</h3> <ul style="list-style-type: none"> All relevant documents have been published now <ul style="list-style-type: none"> The regulation The transitional documents The annex B of CEN mandate 495 Enforcement date: ½ September 2015 What needs to be done: <ul style="list-style-type: none"> Revise the standards (12975, 12976, 12977, 15316-4-3) Suppliers and dealers needs to prepare <ul style="list-style-type: none"> Testing storage Procedures and calculations <p>2</p>
<p>vA Censull</p> <h3>EN 12976-2 system tests</h3> <ul style="list-style-type: none"> Things will become clear after harmonization of EN 12976 <ul style="list-style-type: none"> Ref to EN 12976 and not ISO and all issues solved (e.g. datafile, load profile) Ultimately: no new testing, but new calculations Proposal: <ul style="list-style-type: none"> Assume that we will be successful and act now as if <ul style="list-style-type: none"> No new testing required Start work on EN 12976 fast <ul style="list-style-type: none"> Make it possible to do the calculations Start negotiations <p>3</p>	<p>vA Censull</p> <h3>To conclude</h3> <ul style="list-style-type: none"> Available within a few weeks: <ul style="list-style-type: none"> a comprehensive document (draft) on Ecodesign and energy labeling <ul style="list-style-type: none"> ESTIF and SCF website Comments are very welcome up to ½ November The state of art in interpreting the regulations Part 1: general description, including <ul style="list-style-type: none"> Who needs to do what Tips and tricks to get an optimal label class Part 2: details on procedures, including <ul style="list-style-type: none"> formats of Technical Documents and fiches (Excel) Known issues and proposals to handle these A workshop to discuss the document, issues and solutions <ul style="list-style-type: none"> End of the year (connected to ESTIF general assembly) <p>4</p>

Annex F

Excel tool & prEN 15316-4-3

 <p style="text-align: center;"> prEN 15316-4-3 - status - Gerard van Amerongen SKNG meeting Brussels (1/10/2014) </p>  <p style="text-align: right;">1</p>	 <h3 style="text-align: center;">Introduction</h3> <ul style="list-style-type: none"> • CEN Mandate 480 on EPBD (recast) <ul style="list-style-type: none"> – Revision of all involved standards <ul style="list-style-type: none"> • Also EN 15316-4-3 on solar thermal (hot water and space heating) – Coordinated by TC 371 <i>Liaison: GvA</i> – Systems for buildings: TC 228 WG 04 <i>Liaison: GvA</i> – All revised standards are now being prepared for public enquiry <ul style="list-style-type: none"> • Starting in the coming weeks. Ending at the end of January • Offered to the national mirror committees for EPBD <p style="text-align: right;">2</p>
 <h3 style="text-align: center;">prEN 15316-4-3</h3> <ul style="list-style-type: none"> • Three solar thermal methods: <ol style="list-style-type: none"> 1. Monthly / annual method, using system test data <ul style="list-style-type: none"> • Input data according EN 12976-2 (e.g. DST) • Editorial changes + common output → heat needed from backup 2. Monthly method, using component test data ("Fchart") <ul style="list-style-type: none"> • Input data according to EN 12975-2 and EN 12977-3/4 • Editorial changes + some major changes 3. Hourly method, using component test data <ul style="list-style-type: none"> • Input data according to EN 12975-2 • Collector loop only! • New method • Three solar PV methods added <p style="text-align: right;">3</p>	 <h3 style="text-align: center;">Method 2, monthly - using component data -</h3> <ul style="list-style-type: none"> • Main changes: <ul style="list-style-type: none"> – Full support for integrated backup heating <ul style="list-style-type: none"> • Main output from $Q_{collector}$ to Q_{backup} – Storage heat losses are taken into account – Correction factor introduced (f_{app}) <ul style="list-style-type: none"> • Compensation storage heat losses. • Can be uses otherwise also – Added: temperature level space heating <ul style="list-style-type: none"> – (almost) in compliance with Ecodesign/energy labelling (SOLCAL) • Output should be the same (on average), but <ul style="list-style-type: none"> – effect of heat losses and temperature space heating  <p style="text-align: right;">4</p>
 <h3 style="text-align: center;">Excel application - for evaluation -</h3> <ul style="list-style-type: none"> • Simple Excel sheet available through CEN <ul style="list-style-type: none"> – All revised standards will have an example Excel sheet <ul style="list-style-type: none"> • To illustrate the methods ("as an intelligent example") • Complex sheet, detailed knowledge of the standard is required • Detailed Excel sheet available through SCF website <ul style="list-style-type: none"> – One sheet method with all inputs and outputs – Intermediate results and references to formula numbers – VBA macros are applied: simple insight on details method – Quality: for evaluation of the standard only! <p style="text-align: right;">5</p>	 <h3 style="text-align: center;">Method 3: hourly method - using component data -</h3> <ul style="list-style-type: none"> • prEN 15316-4-3: collector & loop <ul style="list-style-type: none"> – Comments are welcome! • prEN 15316-5: storage model (no solar) <ul style="list-style-type: none"> – Multi layer model – Heat inputs foreseen: (Backup) heater & solar heater – Heat outputs foreseen: Space heating & water heating – Complex (from nature) method  <p style="text-align: right;">6</p>

Putting it together prEN 15316-4-3 & prEN15316-5



7

prEN 15316-5



- Sound scientific approach
 - Less practical for its purpose
- Currently major limitations, faults and more:
 - No support for preheaters
 - Description not very detailed ("descriptive")
 - Too much room for different interpretation
 - Faults and missing procedures
 - Related to heat output
 - Thermostat action with more than one heat source
 -
- The method should be commented and improved!

8

SCF project Excel sheet - Hourly method -



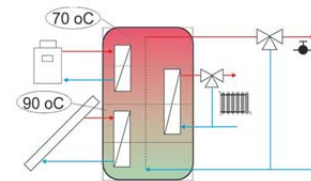
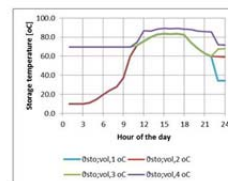
- SCF project: Excel application combi both standards
 - Result: hourly method of solar thermal systems buildings
 - Not possible with current version of prEN15316-5
 - Too many things missing, ambiguous issues and fault
 - Needs to be improved!
- Alternative: Excel application showing its potential
 - Evaluation for defining comments for improvement
 - Demonstration of what can be achieved
 - During development: list of comments for improvements
 - Will be available within 1 month from SCF
- Combi of both standards: should be good base for development of software

9

4 layer storage Solar & backup & hot water



- Current status of the Excel model
 - Demonstration of what can be achieved



10

And next?











- Comment on both prEN 15316-4-3 and prEN 15316-5
 - Make it better and applicable for solar thermal
- A standardized hourly solar thermal method is of value for us!
 - More accurate EPBD input for solar thermal, better than method 2 (monthly, Fchart)
 - Hourly model that can be based on a CEN standard
- Suggestion:
 - After improvements, validate the methods
 - Built a standard system model based on both standards
 - for use in the EN 12977-series?
 - A solar keymark?

11

Annex G

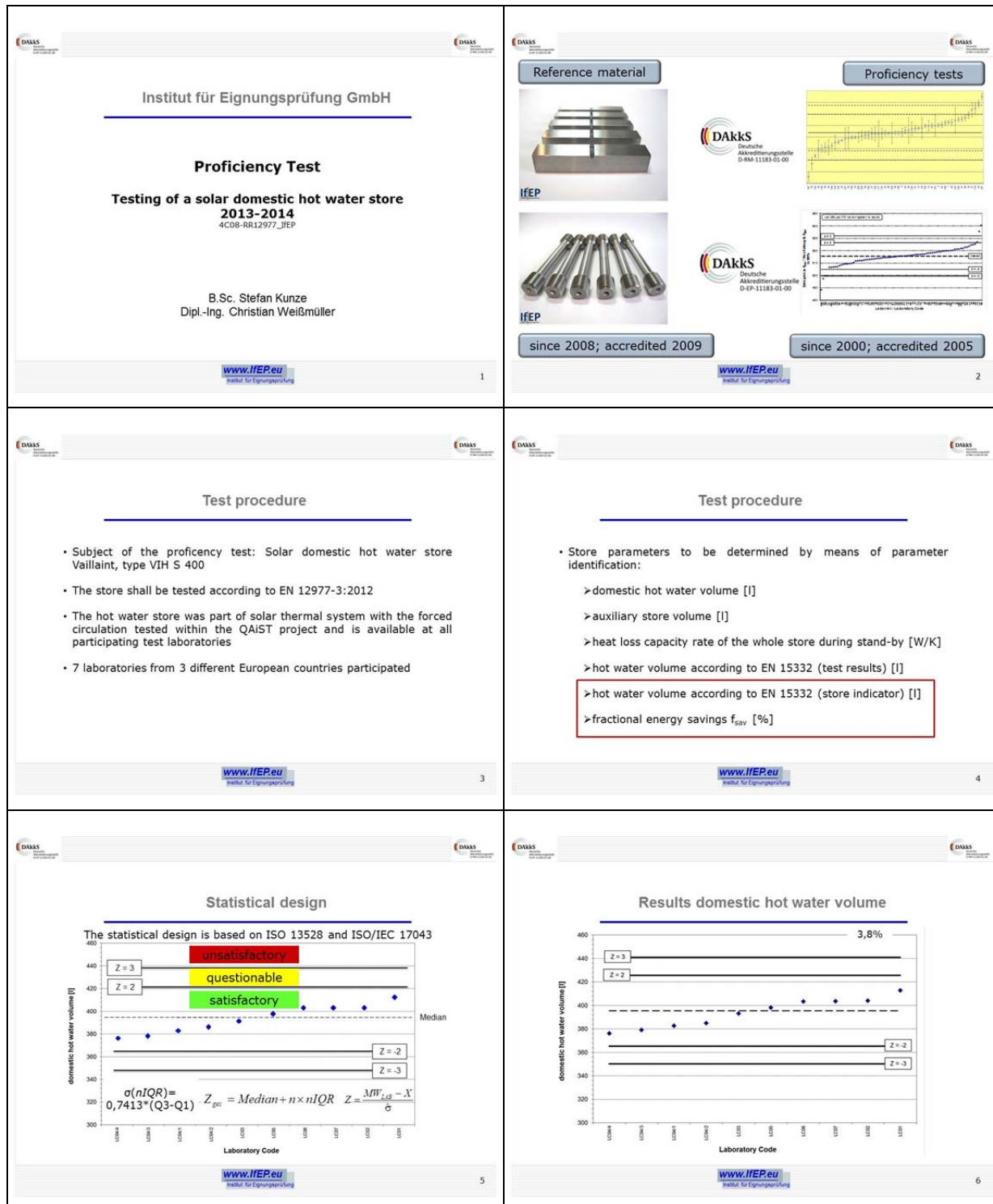
Liaison to IEC TC 117

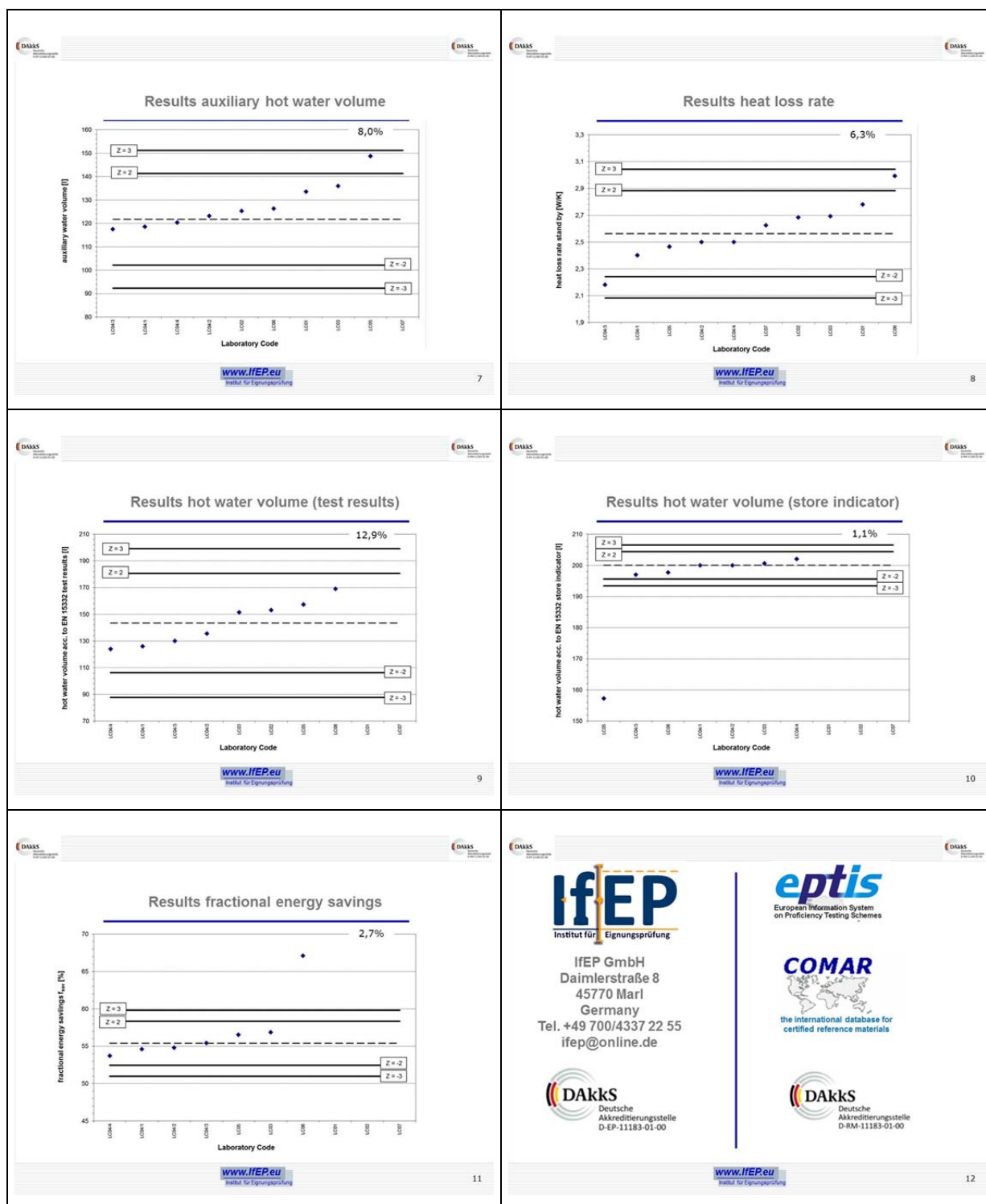
<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">ISO/TC 180 Liaison Report from IEC/TC 117</h3> <h3 style="margin: 0;">Solar thermal electric plants</h3> </div> <div style="text-align: center; margin-top: 10px;"> Stephan Fischer <small>Institute for Thermodynamics and Thermal Engineering (ITW) Research and Testing Centre for Thermal Solar Systems (TZS) University of Stuttgart Pfaffenwaldring 6, 70550 Stuttgart, Germany Email: fischer@itw.uni-stuttgart.de Internet: www.itw.uni-stuttgart.de</small> </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">SCOPE 1/2</h3> </div> <p style="margin-top: 10px;">To prepare international standards for systems of Solar Thermal Electric (STE) plants for the conversion of solar thermal energy into electrical energy and for all the elements (including all sub-systems and components) in the entire STE energy system.</p> <p>The standards would cover all of the current different types of systems in the STE field, as follows:</p> <ul style="list-style-type: none"> - Parabolic trough - Solar tower - Linear Fresnel - Dish - Thermal storage <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>															
<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">SCOPE 2/2</h3> </div> <p style="margin-top: 10px;">The standards would define terminology, design and installation requirements, performance measurement techniques and test methods, safety requirements, "power quality" issues for each of the above systems.</p> <p>The standards would also address issues of connectivity and interoperability with the power grid related to connections, bi-directional communicates and centralized control (Smart Grid) and environmental aspects.</p> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">TC 117 officers</h3> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Position</th> <th style="text-align: left;">Name</th> <th style="text-align: left;">Institution</th> </tr> </thead> <tbody> <tr> <td>Chairman</td> <td>Mr Amnon Mahalalel (IL)</td> <td>Siemens AG Energy Sector</td> </tr> <tr> <td>Secretary</td> <td>Mr Eduardo García Iglesias (ES)</td> <td>PROTERMO SOLAR</td> </tr> <tr> <td>Assistant Secretary</td> <td>Mrs Carmen Martín Marino (ES)</td> <td>AENOR</td> </tr> <tr> <td>Technical Officer</td> <td>Mr Charles Jacquemart</td> <td>IEC Central Office</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>	Position	Name	Institution	Chairman	Mr Amnon Mahalalel (IL)	Siemens AG Energy Sector	Secretary	Mr Eduardo García Iglesias (ES)	PROTERMO SOLAR	Assistant Secretary	Mrs Carmen Martín Marino (ES)	AENOR	Technical Officer	Mr Charles Jacquemart	IEC Central Office
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<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">MEMBERSHIP STATUS</h3> </div> <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%;"> Participating countries: 11 Observing counties 12 </td> <td style="width: 50%; vertical-align: top;"> Participating countries: - China - France - Germany - Israel - Italy - Japan - Portugal - Spain - Sweden - Switzerland - USA </td> </tr> <tr> <td></td> <td style="vertical-align: top;"> Observing countries: - Australia - Austria - Brazil - Canada - Czech Republic - Denmark - Iran - Republic of Korea - Mexico - Poland - South Africa - United Kingdom </td> </tr> </table> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>	Participating countries: 11 Observing counties 12	Participating countries: - China - France - Germany - Israel - Italy - Japan - Portugal - Spain - Sweden - Switzerland - USA		Observing countries: - Australia - Austria - Brazil - Canada - Czech Republic - Denmark - Iran - Republic of Korea - Mexico - Poland - South Africa - United Kingdom	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; font-size: small;"> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) </div> <div style="text-align: right; font-size: x-small;"> Universität Stuttgart </div> </div> <div style="text-align: center; margin-top: 10px;"> <h3 style="margin: 0;">STRUCTURE 1/3</h3> </div> <p style="margin-top: 10px;">The TC 117 currently has 2 subcommittees with in total 3 active working groups</p> <p>Project Teams</p> <p>PT 62862-1-1 Terminology: To draft a Technical Specification on Solar Thermal Electric Plants – Terminology Project Leader: Mr. Eduardo Zarza Moya (Spain)</p> <p>PT 62862-1-2 Procedure for generating a representative solar year: To draft a Technical Specification on the Procedure for generating a representative solar year Project Leader: Mr. Lourdes Ramirez Santigosa (Spain)</p> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014 </div>											
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<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>STRUCTURE 2/3</p> <p><u>Ad-Hoc Groups</u></p> <p>AHG 1 General subjects: To develop IEC deliverables regarding common aspects for the different STE technologies such as Terminology, Safety requirements, Typical Meteorological Year (TMY) definition, as well as their relevant schedule Project Leader: Mr. Chris Flueckiger (USA)</p> <p>AHG 2 Systems and components: To develop the necessary IEC deliverables to standardize the requirements to qualify the components of the different technologies as well as the parameters for the operational monitoring of the plants and the relevant acceptance tests Project Leader: Mr. Eduardo García Iglesias (Spain)</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>	<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>STRUCTURE 3/3</p> <p>AHG 3 Energy Storage: To develop the necessary IEC deliverables for characterizing the thermal energy storage focusing on the whole system and on the specific components</p> <p>Project Leader: Mr Matthias Gommel (GER)</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>
<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>LIASIONS</p> <p><u>Internal IEC Liaison:</u></p> <p>TC 120 Electrical Energy Storage (EES) Systems</p> <p><u>Liaison ISO:</u></p> <p>ISO/TC 180 Solar energy ISO/TC 192 Gas turbines</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>	<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>MEETINGS</p> <p><u>Meetings:</u></p> <p>Madrid, Spain, 7th – 8th March 2012 Tel Aviv, Israel, 30th October – 1st November 2012 Northbrook, USA, 19th -20th November 2013</p> <p><u>Next meeting:</u></p> <p>Tokyo, Japan, 14th – 15th November 2014</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>
<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>(New) work items</p> <p>117/27/NP Future IEC 6xxxx TS Ed.1: Solar Thermal Electric Plants – Terminology (approved, CD 2014-10, TS 2015-10)</p> <p>117/28/NP Future IEC 6xxxx TS Ed.1: Procedure for generating a representative solar year (approved, CD 2014-11, TS 2015-11)</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>	<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>(New) work items</p> <p>117/31/NP Solar thermal electric plants - Part 3-2: Systems and components. General requirements and test methods for parabolic-trough collectors (proposed IEC 62862-3-2) (closing date for voting: 2014-11-07, CD 2015-04, IS 2016-12)</p> <p>The document includes a different methodology in performance testing compared to EN ISO 9806:2013</p> <p>Action needed from ISO TC 180?</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>
<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>(New) work items</p> <p>117/32/NP Solar thermal electric plants - Part 3-3: Systems and components - General requirements and test methods for solar receivers (proposed IEC 62862-3-3) (closing date for voting: 2014-11-07, CD 2015-02, IS 2016-12)</p> <p>The document would fit into the EN ISO 22975 series</p> <p>Action needed from ISO TC 180?</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>	<p> Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>(New) work items</p> <p>117/34/NP Thermal energy storage for concentrated solar - General characterization (proposed IEC TS 62862-2-1) (closing date for voting: 2014-12-19, CD 2015-12, IS 2017-07)</p> <p>Scope To develop a Technical Specification for thermal storage systems.</p> <ul style="list-style-type: none"> - Technical Specification should be broad enough to cover all different types of thermal storage for different types of STE systems mentioned above - Technical Specification should address characteristics, components - Technical Specification deals with Storage inside the STE plant and system (storage not connected directly to the Grid) <p>Action needed from ISO TC 180?</p> <p>Stephan Fischer ISO TC 180 Liaison Report from IEC TC 117, September 2014</p>

Annex H

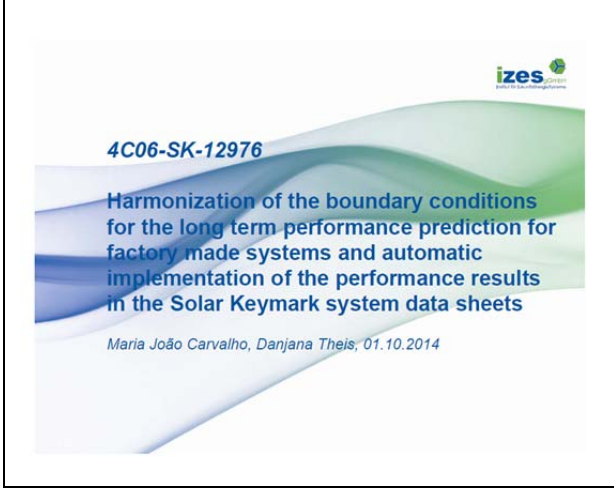
Results of round robin test of hot water stores





Annex I

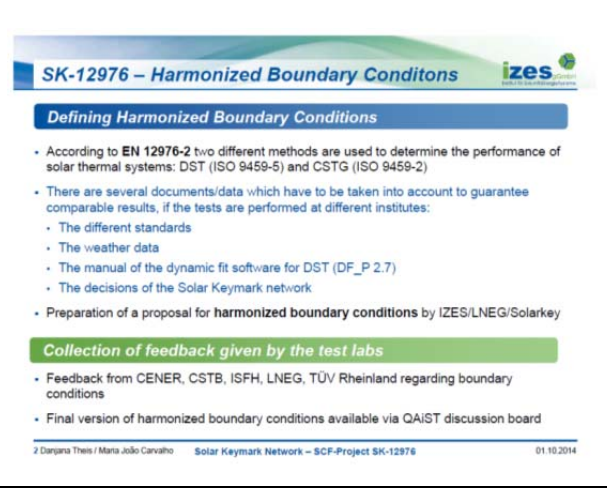
Presentation related to 4C06-SK-12976 Project



4C06-SK-12976

Harmonization of the boundary conditions for the long term performance prediction for factory made systems and automatic implementation of the performance results in the Solar Keymark system data sheets

Maria João Carvalho, Danjana Theis, 01.10.2014



SK-12976 – Harmonized Boundary Conditions

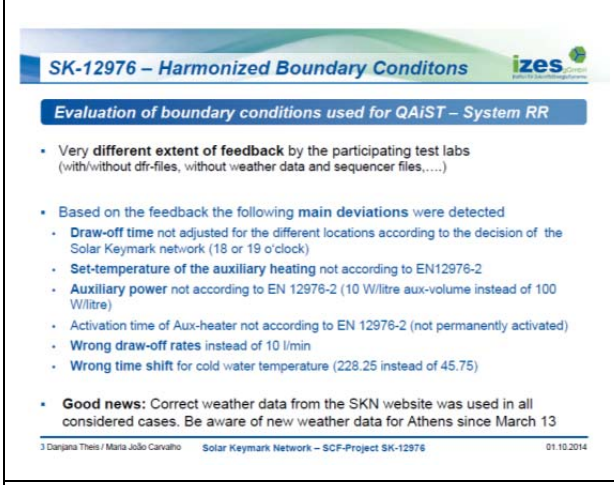
Defining Harmonized Boundary Conditions

- According to **EN 12976-2** two different methods are used to determine the performance of solar thermal systems: DST (ISO 9459-5) and CSTG (ISO 9459-2)
- There are several documents/data which have to be taken into account to guarantee comparable results, if the tests are performed at different institutes:
 - The different standards
 - The weather data
 - The manual of the dynamic fit software for DST (DF_P 2.7)
 - The decisions of the Solar Keymark network
- Preparation of a proposal for **harmonized boundary conditions** by IZES/LNEG/Solarkey

Collection of feedback given by the test labs

- Feedback from CENER, CSTB, ISFH, LNEG, TÜV Rheinland regarding boundary conditions
- Final version of harmonized boundary conditions available via QAIST discussion board

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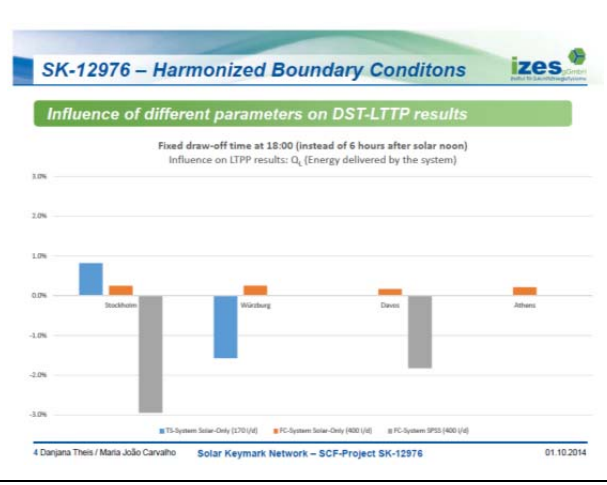


SK-12976 – Harmonized Boundary Conditions

Evaluation of boundary conditions used for QAIST – System RR

- Very different extent of feedback by the participating test labs (with/without dfr-files, without weather data and sequencer files,...)
- Based on the feedback the following **main deviations** were detected
 - Draw-off time not adjusted for the different locations according to the decision of the Solar Keymark network (18 or 19 o'clock)
 - Set-temperature of the auxiliary heating not according to EN12976-2
 - Auxiliary power not according to EN 12976-2 (10 W/litre aux-volume instead of 100 W/litre)
 - Activation time of Aux-heater not according to EN 12976-2 (not permanently activated)
 - Wrong draw-off rates instead of 10 l/min
 - Wrong time shift for cold water temperature (228.25 instead of 45.75)
- Good news:** Correct weather data from the SKN website was used in all considered cases. Be aware of new weather data for Athens since March 13

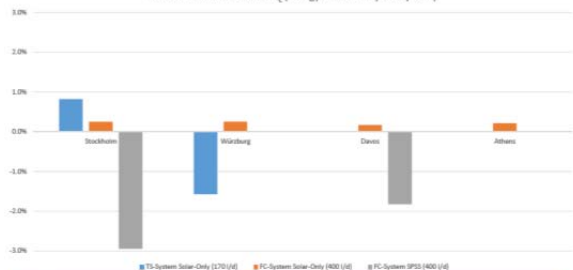
3 Danjana Theis / Maria João Carvalho Solar Keymark Network – SCF-Project SK-12976 01.10.2014



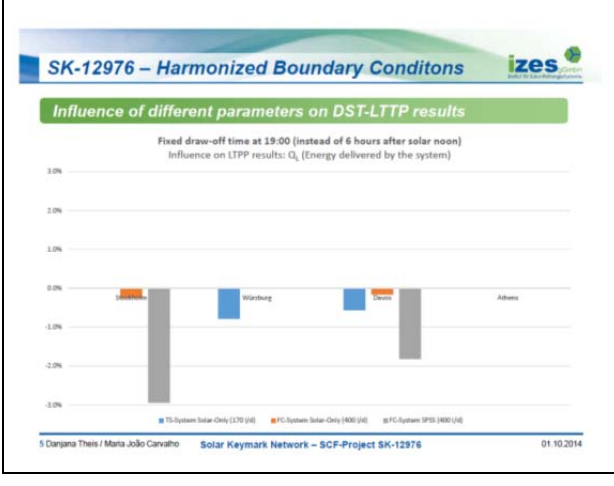
SK-12976 – Harmonized Boundary Conditions

Influence of different parameters on DST-LTTP results

Fixed draw-off time at 18:00 (instead of 6 hours after solar noon)
Influence on LTTP results: Q_d (Energy delivered by the system)



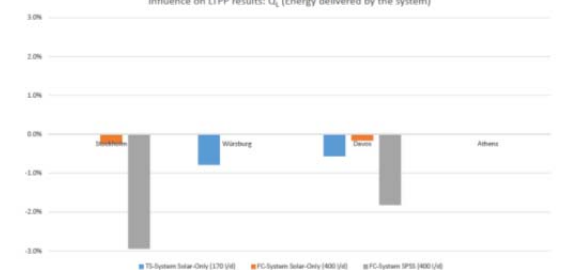
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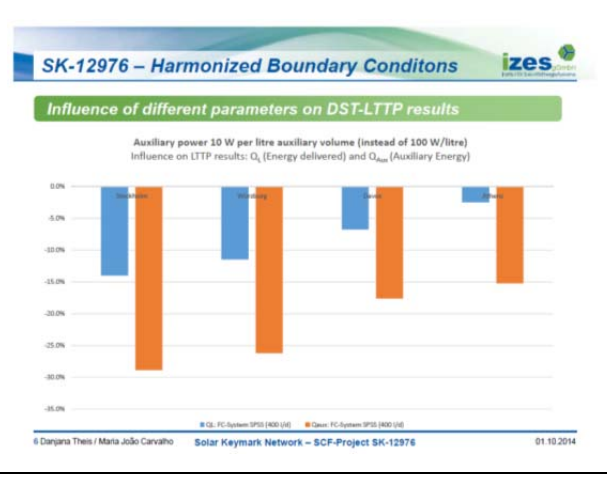
SK-12976 – Harmonized Boundary Conditions

Influence of different parameters on DST-LTTP results

Fixed draw-off time at 19:00 (instead of 6 hours after solar noon)
Influence on LTTP results: Q_d (Energy delivered by the system)




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SK-12976 – Harmonized Boundary Conditions

Influence of different parameters on DST-LTTP results

Auxiliary power 10 W per litre auxiliary volume (instead of 100 W/litre)
Influence on LTTP results: Q_d (Energy delivered) and Q_{aux} (Auxiliary Energy)



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SK-12976 – Harmonized Boundary Conditions

Influence of different parameters on DST-LTTP results

Draw-off rate not according to EN 12976-2 (5.67 or 13.3 instead of 10 l/min)
Influence on LTTP results: Q_k (Energy delivered by the system)

Location	TS System Solar Only (170 l/s)	FC System Solar Only (1800 l/s)
Stockholm	-0.002%	-0.001%
Würzburg	-0.008%	0.003%
Danes	-0.001%	0.001%
Athens	0.008%	-0.002%

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SK-12976 – Harmonized Boundary Conditions

Influence of different parameters on DST-LTTP results

Time shift for cold water temperature $D_1 = 228.5$ (instead of 45.75)
Influence on LTTP results: Q_k (Energy delivered by the system)

Location	TS System Solar Only (170 l/s)	FC System Solar Only (1800 l/s)
Stockholm	8.0%	7.5%
Würzburg	4.0%	3.5%
Danes	0.5%	0.5%
Athens	11.0%	5.0%

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SK-12976 – Excel tool and data sheet generation

Description of the work done by LNEG

Excel tool based on VBA

Objective:

Process testing results according to two testing methods, DST and CSTG

- to evaluate the long term thermal performance
- and
- automatically fill in data sheets.

Version: 0.1.0 (2010-10-01)

Developer: Ricardo Amorim (amr@lNEG.pt)

Supported by SOLAR CERTIFICATION FUND Project 4C/2010-10/01, 005

The Solar Keymark Tool Technical Document: <http://www.sckf.org/solarkeymark-tool/>

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SK-12976 – Excel tool and data sheet generation

Description of the work done by LNEG

Scope:

- automatically creates all the files necessary to use the DST program ¹ and makes it run. Does not include the DST program.
- has a built in subroutine to calculate the long term thermal performance according to ISO 9459-2 (CSTG) and EN 12976-2:2006.
- has built in subroutines for System Family Extrapolation according to Annex D – Solar Keymark System Families – SKN_N0106_AnnexD_R6

System tested according to DST – Extrapolation Method II

System tested according to CSTG – Extrapolation Method I

¹ DST Program, version 2.7, In Situ Software

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SK-12976 – Excel tool and data sheet generation

Description of the work done by LNEG

First version uploaded in QAIST discussion board - comments received from: SolarKey Int., IZES, CENER.

Present version available at LNEG website:

<http://www.lneg.pt/iedt/unidades/25/paginas/186>

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SK-12976 – Excel tool and data sheet generation

Description of the work done by LNEG

Example cases:

- DST
- CSTG
- Extrapolation with Method I
- Extrapolation with Method II

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SK-12976 – Outcome of the project

Main results of the project

- Harmonized boundary conditions for system tests according to EN 12976-1,2
- Excel Tool to reduce the errors of the performance prediction procedure and possible transmission errors to the Solar Keymark Datasheets
- Accelerated and simplified generation of SK Datasheets
- Simplified extrapolation of system results according to ANNEX D “Solar Keymark System Families”

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SCF-project „SK-12976“

Thank you for your attention

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LNEG

SolarKey Int.

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Annex J

SysIndoor

SCF2: SysIndoor -
Development of an indoor test procedure for
factory made systems according to EN 12976

Sebastian Bonk, Stephan Fischer

Institute for Thermodynamics and Thermal Engineering (ITW)
 Research and Testing Centre for Thermal Solar Systems (TZS)
 University of Stuttgart
 Pfaffenwaldring 6, 70550 Stuttgart, Germany
 Email: fischer@itw.uni-stuttgart.de
 Internet: www.itw.uni-stuttgart.de

1 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels

Project status

Deliverable	DST Method	CSTG Method
D1: Draft report	✓ 07/2012	-
D2: Test of forced circulation DHW system	✓ 08/2012	-
D3: Test of thermo siphon DHW system	✓ 12/2012	09/2014
D4: Final report	✓ 02/2012	09/2014
D5: Presentation of the proposal / results to the SKN	✓ 10/2013	NOW

2 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels

Extension of the CSTG method

- Definitions of test conditions regarding irradiation:
 - CSTG method requires 3 irradiation profiles
 - 2 irradiation profiles have already been introduced for the DST method

3 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels

Irradiance profiles for CSTG test days (1)

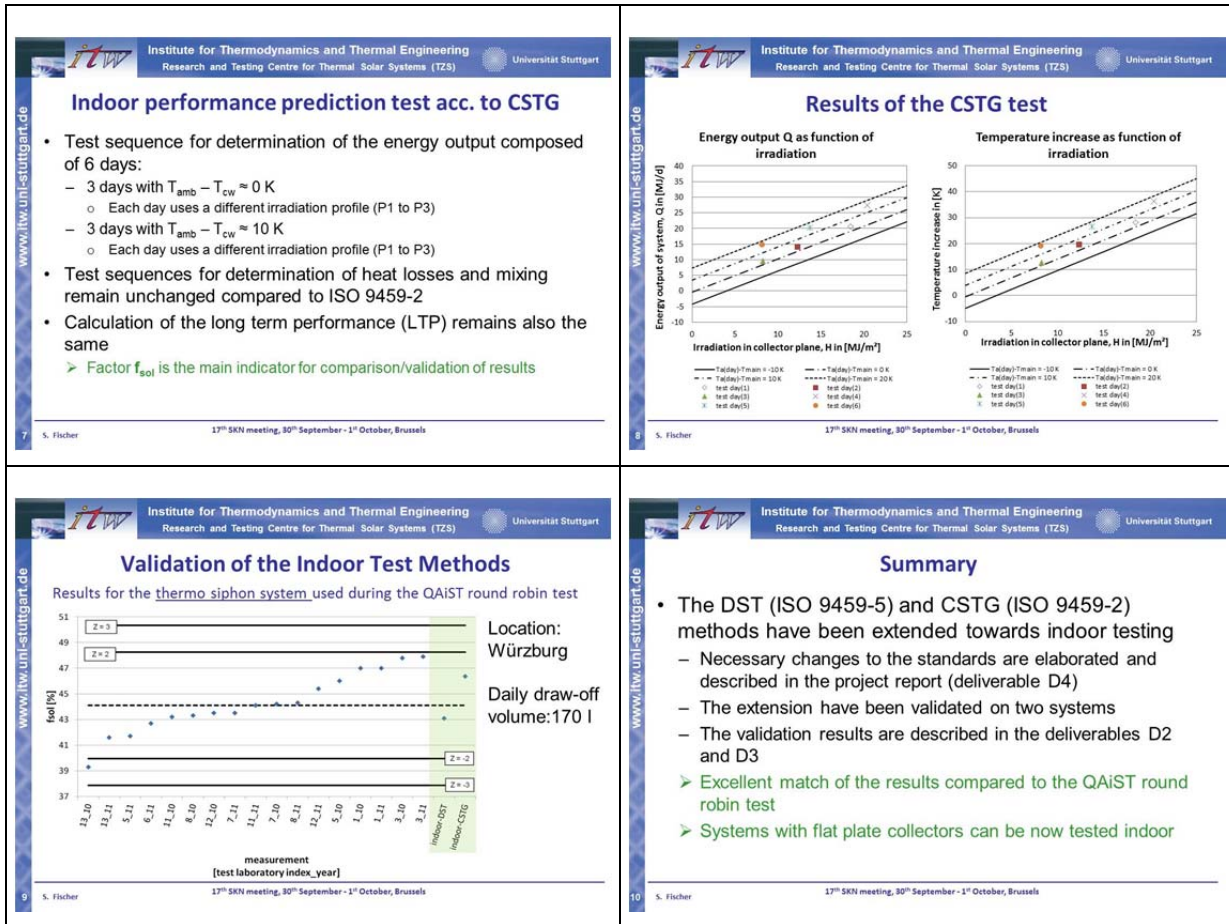
4 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels

Irradiance profiles for CSTG test days (2)

5 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels









Irradiance profiles for CSTG test days (3)

6 S. Fischer 17th SKN meeting, 30th September - 1st October, Brussels



Annex K

Update on MCS012 in UK

 <h3>Solar Keymark Network meeting</h3> <p>17th meeting 30 September- 1 October 2014 CEN, Brussels</p>  <p>THE Quality Label for Solar Thermal Products in Europe</p>	<h3>Requirements MCS012</h3> <ul style="list-style-type: none"> • Roof installation kits must be tested by an independent test laboratory and a certificate issued which declares the resistance to wind uplift and fire rating. In addition, the solar panel installation must not decrease the weathertightness of the roof • Installers must calculate the maximum wind load on the roof and check that the strength of the panel and its fixings are adequate. Depending on the fire rating of the solar panel kit there may be restrictions on where the panels can be placed and the maximum area that can be given over to solar panels.  <p>THE Quality Label for Solar Thermal Products in Europe</p>
<h3>Risks with MCS012</h3> <ul style="list-style-type: none"> • potential conflicts between MCS012 and ongoing CEN Harmonisation work • UK have an obligation not to Impede the Work of CEN nor to introduce 'any' new technical standards in an area in which CEN are developing harmonised standards • Is there an alternative equivalent scheme that can be used, and if not what explanation is there to justify this situation  <p>THE Quality Label for Solar Thermal Products in Europe</p>	<h3>MCS012 Roofing Standard and it's 'mandatory' compliance requirements - developments</h3> <ul style="list-style-type: none"> • MCS have modified the Installer Standard MIS3001 such that products tested under EN12975 Wind Loading Requirements are partly accepted <ul style="list-style-type: none"> – but to be valid for installation in ALL Regions of the UK they need to be tested to well in excess of the 1000 Pa Minimum defined in EN12975.  <p>THE Quality Label for Solar Thermal Products in Europe</p>
  <p>THE Quality Label for Solar Thermal Products in Europe</p>	<h3>Statement from MCS</h3> <p>30 June 2014</p> <p>"... Due to information received through routine regulatory channels last week, MCS is of the opinion that it has to consider the notification to the European Commission of MCS 012 – Product Certification Scheme Requirements: Pitched Roof Installation Kits. As such, the MCS Standards Management Group (SMG) has decided that until it is fully understood whether notification is required, a very regrettable <u>pause is required in the implementation</u> to ensure that MCS continues to meet its obligations. We hope this will be as short as possible.</p>  <p>THE Quality Label for Solar Thermal Products in Europe</p>

Statement from MCS

11 July 2014

“... Further to our last announcement, we now understand that **notification of the MCS012 standard to the European Commission is required**. This is likely to take three months from the date that the document is sent and logged. European member states will have their opportunity to make comments during this time. If there are no comments/issues, or if any issues arise and are resolved within this three month period then the standard will be implemented. However, if any issues are not resolved during this time, then implementation could be delayed further until they are.

...”



THE Quality Label for Solar Thermal Products in Europe

MCS012 notification

- Still no notification received by EU

Country	Reference	Title	Notification Date	End of Standard Date
United Kingdom	2014/001/UK	Renewables Obligation Order 2013	2014-09-29	2015-01-01
United Kingdom	2014/024/UK	The Food Hygiene Rating (Promotion of Food Hygiene Rating) Regulations - Regulation 2 (requirement to promote food hygiene ratings) and Statutory Instruments (requirement to promote food hygiene ratings on food business websites)	2014-09-29	2014-12-09
United Kingdom	2014/027/UK	The Standardised Packaging of Tobacco Product Regulations	2014-09-29	2015-05-02
United Kingdom	2014/073/UK	TS2100 - Protection Surface Coatings for Communications Equipment, Frames and Housings Fabricated from Aluminium or Steel for use on Trunk Roads	2014-09-29	2014-12-02
United Kingdom	2014/074/UK	TS2100 Environmental Tests for Motorway Communications Equipment and Portable and Permanent Road Traffic Control Equipment for use on Trunk Roads	2014-09-29	2014-12-02
United Kingdom	2014/080/UK	W3000 - Introduction to the Traffic, Systems and Signage Registry	2014-09-29	2014-12-02
United Kingdom	2014/021/UK	T9 2007 Issue A - Generic Roadside Device Requirements for Remote Access	2014-09-29	2014-12-02
United Kingdom	2014/022/UK	S408 1137 Issue A - Equipment Configuration Plug - Type 9000 Hardware Requirements	2014-09-29	2014-12-02
United Kingdom	2014/033/UK	TS1100 - General Technical Requirements for Motorway Communications Equipment	2014-09-29	2014-12-02
United Kingdom	2014/007/UK	STATUTORY RULES OF IRELAND 2014 No. 1016 - FISHERIES The Firth Area and Catfishing Area (Angling) Regulations 2014	2014-09-19	2014-11-19



THE Quality Label for Solar Thermal Products in Europe

MCS012 notification

- Information missing requiring launch and consultation stage
- Important to follow from industry, SKN and CEN/TC312
- Share information:
 - Who has more info?
 - Who is interested in following this topic?



THE Quality Label for Solar Thermal Products in Europe