SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY

2015 HIGHLIGHTS

SHC Task 43
Solar Rating & Certification Procedures
- Towards "Global Solar Certification"

THE ISSUE

Performance test procedures and characterization equations were originally developed for typical solar collector types under well-defined standard test conditions. In addition, short-term tests were developed to predict the long-term durability of standard collectors and systems. Presently, national and international test laboratories in many IEA participant countries use these test procedures and characterization equations in order to determine a solar thermal product's performance and compliance with required safety and reliability standards. While there is a solid common foundation for most test procedures, certification bodies for Europe, North America, Australia, China and Europe and the laboratories that they work with have diverged in how tests are implemented in some areas, and the introduction of new products have introduced new challenges that are not always addressed in the same way.

Partly because of these differences, it is not possible for a manufacturer to have a system certified for one region or country and have the test results that support that certification transfer to another region or country. Testing and certification must be repeated in each region or country, slowing product introduction in new markets and adding to costs.

OUR WORK

While SHC Task 43 cannot ensure that certification bodies will harmonize their testing and certification efforts, the Task experts are working on resolving issues and inconsistencies involved in the standards for testing and the implementation of those standards. This work will create a technical foundation for certification bodies to consider accepting tests and certifications across borders in order to lower barriers to solar heating and cooling products competing in global markets. In addition, the Task is exploring approaches to testing and characterization of systems and collectors that relate to user thermal comfort and environmental impacts, issues that are increasingly important, but lack a uniform assessment methodology.

Participating Countries

Australia
Austria
Canada
China
Denmark
Germany
Italy
Portugal
RCREEE
Spain
United States

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KEY RESULTS OF 2015

Final report on analysis of the ISO 9806 "*Solar Energy - Solar Thermal Collectors - Test Methods*" standard for solar collectors shows that quite a number of countries still have problems adopting the standard as a national standard. This report is an important part of the evaluation background for ISO TC to re-open the standard for revision to improve acceptance. This work is developing successfully and a new revised ISO 9806 is expected to be approved during 2016.

ISO 22975 *"Solar Energy - Collector components and materials" Parts 1 and 2* on evacuated tubes are available as a Draft International Standard (ISO/DIS) – progressing towards Final Draft International Standard (ISO/FDIS).

The Global Solar Certification Network (GSCN) is laying the groundwork for starting operation in 2016. To participate in the Global Solar Certification Network (GSCN) or to be informed of GSCN activities you can visit the website http://www.gscn.solar/ or contact Jan Erik Nielsen, manager@gscn.solar.

A new IEA SHC Task on this topic, *Task 57: Solar Standards and Certification* begins in 2016 to support ISO TC 180 activities and the kick-off of the operation of the GSCN. IEA SHC Task 57 website: http://task57.iea-shc.org/.