

Report of Onsite Training Course

Solar District Heating System

2018.10.31—2018.11.01

Lianyungang, China

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Organized by: China Academy of Building Research (CABR)

Sunrain

Supported by: China Renewable Energy Society

State Key Laboratory of Building Safety and Built Environment

Training Description

By the opportunity of Task 55 expert meeting held in China, Chinese country member of SHC applies for an onsite training course and approved by SHC Solar Academy. In Oct.31th to Nov. 1st, onsite training course *Solar District Heating System* was finished successfully in Lianyungang under the organization of China Academy of Building Research (CABR) and Jiangsu Sunrain Solar Energy Co.,Ltd.



Mr. He Tao gives the welcome speech at the beginning and host the training course together with Mr. Qingtai Jiao from Sunrain.



4 experts are invited for giving presentation on solar district heating system during 1 and half day training.

- **Jan Erik Nielsen**, Operating Agent of the IEA Solar Heating and Cooling Program for the Task 45 and Task 57, ESTIF Technical Consultant, shares the system design and performance guarantee of solar district

heating system

- **Jianhua Fan**, Tenured professor of civil engineering, Technical University of Denmark(DTU), shares the system analysis and key component selection on solar district heating system.
- **Ruicheng Zheng**, Professor of China Academy of Building Research (CABR), Chief engineer of National Center for Quality Supervision and Testing of Solar Heating System(Beijing), shares the heat consumption calculation and HVAC (heating ventilation, air-conditioning) System Design on Local Buildings in China
- **Christian Holter**, CEO of SOLID GmbH, shares the case study of large-scale solar heating and cooling system.



The training course covering building energy consumption, key component, system analysis and design, performance guarantee and case study, highlighted the technical and economic requirements for the commercial solar district heating and cooling market. All presentations were presented in both English and Chinese.

Experts and participants have a warm and fruitful discussion during training, and every participant get a certification by the end of training course. Sunrain sponsored the small gifts to the lecturers, Solid gave a wonderful hat to the vice chair of SHC for his support to the Task meeting and training course.



Conclusion and Prospect

Solar district heating system has been used in European countries since the early 1980s. In recent years, as Chinese solar thermal market towards from product retail to project, Solar district heating system becomes a new developing trend in china. Worldwide, Denmark is the most successful country on the renewable energy application, especially the solar district heating system in commercial market. Austria is constructing the biggest solar district heating system now.

Solar Academy inviting experts from IEA SHC coming to China to give lectures makes a good connection to the biggest SDH market and most potential market. Meanwhile, it also lays a good foundation of international cooperation between China and world. Hope there will be more communication activities between China and Solar Academy.

Annex: Training Agenda

IEA SHC Solar Academy Onsite Training Course Agenda

Date	Time	Schedule
Oct.31 th	8:30-8:45	Welcome speech
	8:45-10:15	“System Design and performance guarantee on Solar District Heating System” —Jan Erik Nielson
	10:15-10:30	Discussion
	10:30-10:45	Coffee break
	10:45-11:45	“system analysis and key component selection on solar district heat-ing system” —Jianhua Fan
	11:45-12:00	Discussion
	12:00-13:00	Lunch
	13:00-14:00	“System Design and performance guarantee on Solar District Heating System” —Jan Erik Nielson
	14:00-14:15	Discussion
	14:15-14:30	Coffee break
	14:30-15:30	“Heating design specifications” —Ruicheng Zheng
	15:30-15:45	Coffee break
	15:45-16:45	“heat consumption calculation and HVAC system design on local buildings in China” —Ruicheng Zheng
	16:45-17:00	Discussion
Nov.1 st	9:00-10:00	“Big Solar-Adding seasonal storage to solar district heating” —Christian Holter
	10:00-10:15	Coffee break
	10:15-11:15	“solar air conditioning, integration heating and cooling on large scale” —Christian Holter
	11:15-11:30	Discussion
	11:30-11:40	summary —He Tao
	11:40-12:00	issues certificate