

IEA
SHC TASK 44 + HPP ANNEX 38
SOLAR AND HEAT PUMP SYSTEMS

Meeting 7 - Mechelen April 8 + April 9-10, 2013

If you have more questions, contact

Jan.Verheyen@thomasmore.be

Dr. Ing Jan Verheyen
Onderzoeksmedewerker
Thomas More | Industriële Wetenschappen
Campus De Nayer
Jan De Nayerlaan 5 | 2860 Sint-Katelijne Waver | België
Tel. [+ 32 \(0\)15 31 69 44](tel:+322015316944) | Tel. 291 (intern)
Gsm [+ 32 \(0\)494 91 13 52](tel:+3220494911352) | www.thomasmore.be

or Jean-Christophe Hadorn, jchadorn@baseconsultants.com.

AGENDA Workshop

April 8, 2013, 1330 - 1800

Belgium industry workshop

THOMAS
MORE

K.H.Kempen and Lessius are joining up to become more.

SYMPOSIUM | APRIL 8TH 2013 | BELGIUM

COMBINED SOLAR THERMAL AND HEAT PUMP SYSTEMS FOR RESIDENTIAL APPLICATIONS

Both heat pumps and solar thermal collectors have gained high popularity in the European and Belgian market. The similarity of these trends is striking, though unfortunately, it remains unknown to what extent the components were installed in combined systems.

Combinations of heat pump and solar thermal systems applied for residential heating and domestic hot water production are considered potentially interesting to contribute to the targets as set by the EPBD (energy performance of buildings directive) and RESD (directive on the promotion of energy from renewable sources). These systems are able to improve the energy performance of buildings and augment the share of energy from renewable energy sources. Combined solar thermal heat pump systems are currently further improved by research activities on optimizing control and system performance both on an international (IEA-SHC task 44 / Annex 38) as on a national level (IWT-TETRA: Zon-Warm). The potential of these combined systems is gradually confirmed and elimination of pitfalls for long-term successful commercialization is aimed at.

Thomas More Mechelen and THELES research group are happy to host the symposium on combined solar thermal and heat pump systems for residential applications. The speakers from research centers, industry and engineering companies will share their experiences in enhanced design and operation of solar thermal heat pump systems for residential heating and domestic hot water production. This symposium will give insight in recent developments in design and application of solar heat pump systems for residential applications. It will focus both on the design as on practical applications including results from surveys and possibilities for performance improvements. Participation is useful for professionals employed in HVAC engineering, research and development, architects, product developers and suppliers of heat pump, solar thermal and combined systems.

Join this unique event to meet international experts, researchers and leading professionals at the symposium on solar thermal heat pumps for residential applications.

This symposium is organized in cooperation with IEA-SHC task 44 / Annex 38 and IWT (government agency for Innovation by Science and Technology).



Organizers | Contact

Jan Verheyen, tel + 32 (0)15 31 69 44, jan.verheyen@thomasmore.be
Benjamin Verfaillie, tel + 32 (0)15 31 69 44, benjamin.verfaillie@thomasmore.be

www.thomasmore.be

Programme

- **13h00:** Coffee
- **13h20:** Welcome | Jan Ivens, KU Leuven-Thomas More Mechelen
- **13h30:** Solar and heat pumps systems - Task 44 presentation | Jean-Christophe Hadorn, Base Consultants
- **14h00:** Belgian Heat Pump Market | Jan Lhoëst, Warmtepomp Platform
- **14h15:** Solar thermal energy in Belgium: more than only sanitary hot water | Wim Persoons, ATTB-Belsolar
- **14h30:** Lab test results of an actively controlled heat pump for integration of renewable electricity | Dirk Vanhoudt, VITO
- **15h00:** Hydraulic integration of heat pumps with combistores | Michel Haller, Institut für Solartechnik

- **15h30:** Coffee break
- **16h00:** A comparative analysis of market-available solar thermal heat pump systems | Jörn Ruschenburg, Fraunhofer-ISE
- **16h30:** Effects of charging configuration of a hot water storage tank on stratification and storage capacity | Brecht Baeten, Khlim
- **17h00:** Workshop | Team Zon-Warm, Thomas More Mechelen
- **18h00:** Closing reception at the vicinity of the industry fair (industry fair: to be acknowledged).

Practical

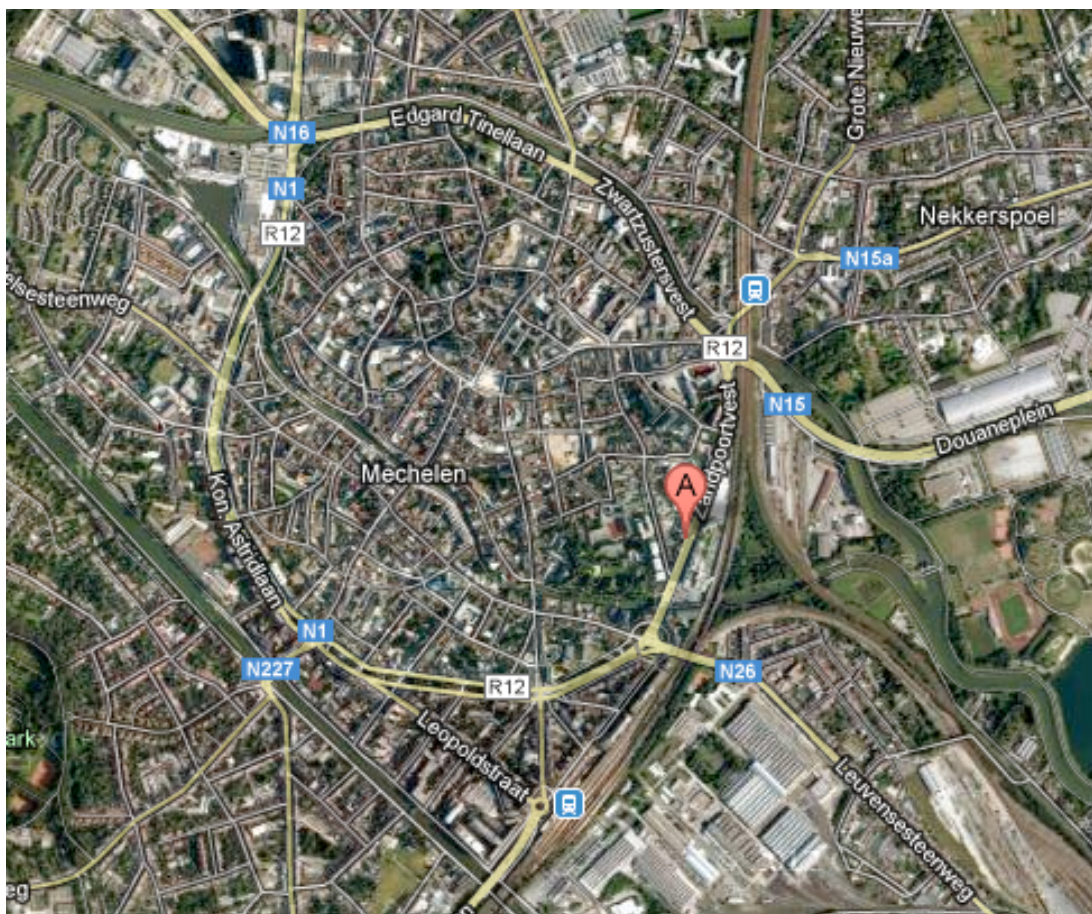
- **Date:** April 8th 2013, 13h00 - 18h00
- **Location:**
Thomas More, Zandvoortvest 60, 2800 Mechelen, Belgium
Campus De Vest (aula 2)
- **Registration:**
 - deadline: march 25th 2013
 - www.thomasmore.be/symposiumSHP
- **Registration Fee** (Incl. VAT):
per person: 75 € - per student: 25 €
- **Industry Fair:**
Industry and companies are given the opportunity to present their products and or services at a poster session in the vicinity of the main symposium aula. (The fee for non-members of the IWT-TETRA Zon-Warm project consortium is 500€ (605 € incl. VAT)).

Companies (both members and non-members of the IWT-TETRA Zon-Warm project consortium) can get in contact with the symposium organization at the address stated below to obtain further information.

- **Symposium language:** English

Meeting T44A38 :

Thomas More Mechelen,
campus De Vest,
Zandpoortvest 60,
2800 Mechelen



Tuesday April 9, 2013

09.00 IEA SHC Task 44 plenary session 1 chair: J.C. Hadorn, OA

09.00 Welcome and Arrangements

1. Hotel, meeting rooms
2. Breaks, lunch, evening, meeting fees paid ?, invoices needed ?
3. Trains and planes: back flight times ?
4. List for dinner this evening
5. Industry workshop feedback

09.15 General matters

1. Our 6th meeting !
2. List of participants in this meeting - email list OK ?
3. Presentation of each new participant and status of participation (national participation letters received and due, financing)
4. Table of participation in Task 44 (to be checked by participants)
5. Feedback from conferences ?
6. Future conferences ? SCH 2013
7. Papers to conferences: please send OA to post them on the website
8. EU projects related to our work ?

IEA SHC Exco 2/2012, news and feedback

- Feedback and news from EXCO 2 2012
 - On Task 44
 - On future Tasks
- next meeting EXCO June 2013, Italy: special messages to Exco ?
- New documents and web site from IEA and SHC

IEA HPP Exco 14.11.2012 and May2013

- other annexes and new ones: OA and participants in those Annexes

to do list review 1

Next meetings

- Meeting 8 LAST !: October 2013, Switzerland, plan your travel time !
- Handbook planning in Subtask D

PLENARY SESSION A

10.00 Subtask A : solutions and generic systems chair: S. Herkel

- A1
- A2
- A3
- A4
- Handbook: Contributions

12.30 lunch

13.30 Subtask A, cont'd

- **List of presentations**

Please register by Subtask leader by mail before the meeting indicating your presentation title + authors

- To do list

15.00 break

PLENARY SESSION B

15.15 Subtask B: Performance assessment
chair: M. Hartl

- B1: Performance Figures
- B2: Laboratory Testing
- B3: Standardisation and Test Definition
- B4: Dissemination and Information
- Handbook: Contributions

- **List of presentations**

Please register by Subtask leader by mail before the meeting indicating your presentation title + authors

- To do list

18.00 end

Evening together

20.00: diner downtown

Wednesday April 10, 2013

PLENARY SESSION C, D

**08.30 Subtask C: Modelling and simulation
chair: Michel Haller**

- C1
- C2
- C3
- C4
- C5
- C6
- Handbook: Contributions

- **List of presentations**

Please register by Subtask leader by mail before the meeting indicating your presentation title + authors

- To do list

12.30 end of Subtask C

Lunch

14.00 Subtask D: dissemination and market support
chair: W. Sparber

- Handbook status
- Task 44 website: iea-shc.org/task44
- Subtasks A,B,C output: dissemination ?
- Workplan check
- Deliverables
- To do list

16.00 IEA SHC Task 44 plenary session 2
chair: J.C. Hadorn, OA

- Summary
- Work plan check
- To do lists
- Future exhibitions and conferences
- Next meeting location
- Minutes: will be sent out within 20 days
- Conclusion: work ahead, important matters

16.30 End of T44A38 meeting