

IEA ECES IA
Annex 18
“Energy Transportation”
Kick-off meeting

Thursday 10th of June; 9:00
Venue: Hotel Oscar Statt, Torggatan 9
Arvika, Sweden

Pro Memoria

Participants:

OA Olof Andersson, Sweden
LC Luisa F. Cabeza, Spain
CD Christian Doetsch, Germany
KF Klaus Fieback, Germany
AH Andreas Hauer, Germany
BH Bo He, Sweden
GH Göran Hed, Sweden
YK Yukitaka Kato, Japan
HK Harald Kuhlei, Germany
VL Volkmar Lottner, Germany
HM Harald Mehling, Germany
ÅM Åke Melinder, Sweden
HP Halime Paksoy, Turkey
FS Fredrik Setterwall, Sweden
PS Peter Schossig, Germany
SDS Someshwer Dutt Sharma, Japan
RT Rainer Tamme, Germany
KV Klaas Visscher, The Netherlands

Agenda:

1. Welcome and open the meeting.-. Bo He
2. Presentation of Annex 18 concepts – Andreas Hauer
3. Determining interested countries and goals in participations
4. Presentations of projects
 - PCM slurries for energy transportation and storage – Peter Schossig, Germany
 - Utilization of heat by mobile sorption TES – Andreas Hauer, Germany
 - Producing ice slurry for freezer applications - Åke Melinder, Sweden
5. Next steps

1. Welcome and open the kick-off meeting

BH replaced Viktoria Martin, who is on maternity leave, to open the meeting and welcomed the participants. Address list for the participants is given in Appendix 1.

2. Presentation of Annex 18 concepts

AH presented Annex 18 concepts according to “minutes from meeting on new “Energy Transportation Annex”, Futurestock 2003, Warsaw”, which wrote by Viktoria Martin. The presentation is given in Appendix 2.

3. Determining interested countries and goals in participations

YK: What kind of industries is interested in Energy Transportation?

FS: Using waste heat and transport it to domestic sector. Heat and cold industries is interested in this new Annex.

OA: Classification of the waste heat sources could be part of the Annex work.

ÅM: Very big cost comes in the district heating system. Cost should be less, if you can lower price for PCM-slurry, then pipeline cost could be lower. Experience with ice slurries, but for other PCM could be possible; an experimental set-up is available; collaboration with our department is possible, we are working on a handbook on ice-slurries; the chairman is Michael Kaufheld. Peter Hill from KTH also works with goods transport in PCM container. Collaboration with the “slurry group” of the IIR.

VL: Peter Egolf wants to join the annex 18.

HP: Geothermal through pipeline is interesting for Turkey.

OA: Transport by ships maybe for Iceland. In district heating systems a big part of the cost is caused by transportation, reduction potential by PCM slurries.

PS: Cooling is more interesting. Storage is possible in the piping itself; partners could be PCM producers, heat pump industry and heating and cooling sector. Cristopia from France and Rubitherm would be interested. District cooling systems in Germany is few now, but it will be changed.

HK: Rubitherm has interest with Fraunhofer using paraffin as PCM slurries.

LC: Barcelona harbour looking for a cold distribution for “degassing plant”; huge amount of cold is available (starting from $-50\text{ }^{\circ}\text{C}$).

KV: Pieter Bach from ECN is working on waste heat utilization; he is interested for this annex and would like to contribute.

FS: Can ECN join? No. There are two ways: ECN can become a sponsor within the ECES or ECN will convince NOVEM (representing the Netherlands) to go back to the ECES.

SDS: Professor Sagara (from Japan) has asked industries to join the Annex 18. He received the positive sign from the Takenaka Corporation (a famous construction company in Japan). Another company has already accepted the technology of TransHeat by Truck from EURECAAG and has a plan of feasibility study. Prof. Sagara is waiting for the reply from the other industries to conduct some feasible studies on Energy Transportation, but he is not sure that if enough companies can join this Annex because of the present economical situation in Japan.

SDS: Some companies in India are interested in the TransHeat concepts; problem is that companies do not want to share information.

VL: Maybe some can join for one year as an observer, not officially and see how it is. The topic of the Annex 18 is very interesting, but participation is necessary, minimum is three

countries. For next ExCo meeting it should be clear: a) what countries want to participate, b) who will be the operating agent.

4. Presentations of projects

- PCM slurries for energy transportation and storage – Peter Schossig, Germany (Appendix 3)
- Utilization of heat by mobile sorption TES – Andreas Hauer, Germany (Appendix 4)
- Producing ice slurry for freezer applications - Åke Melinder, Sweden (Appendix 5)
- Transport of pharmaceuticals with PCM package – Peter Hill, Sweden (Appendix 6)

6. Next steps

- Determine participate countries
 - IEA ECES ExCo meeting in December, 2004
- Determine the operating agent
 - IEA ECES ExCo meeting in December, 2004
- First Workshop and expert meeting
 - (Spring or Fall 2005 ??)

Abbreviations:

ECES IA	Energy Conservation Through Energy Storage Implementing Agreement
ExCo	Executive Committee
IEA	International Energy Agency
PCM	Phase Change Material

Appendix 1: Mailing List

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