

Master-Arbeit

Roadmap for Industrial heat supply in combination with emerging process technologies



AEE INTEC

AEE – Institute for Sustainable Technologies (AEE INTEC) is an independent research association which was founded in 1988. Currently over 60 employees from 8 different nations are working at AEE INTEC. The institute constantly contracts out dissertations, master theses and internships. The activities of AEE INTEC include:

- fundamental as well as applied research
- national and international R&D projects
- cooperation with universities, technical colleges, other research facilities and industry

The three major departments of AEE INTEC are “Thermal Energy Technologies and Hybrid Systems”, “Buildings and Renovation” as well as “Industrial Processes and Energy Systems”.

Forschungsprojekt

Emerging technologies – chemical and process engineering research is dedicated towards new technologies with highest process efficiency, ideally at low costs and at lowest possible material input. “Produce much more with much less” has been set as paradigm by the researchers active in process intensification.

Next to waste heat recovery, the change in process technologies can be a key to realization of Solar Process Heat projects. While basic activities to estimate the potential of emerging process technologies for solar process heat have been taken up by IEA Task 49/IV on solar process heat, it is necessary to commonly work on a roadmap showing the potential of new process technologies that can be driven by solar. These technologies embrace use of light directly for chemical and other conversion processes (development of point-focus technologies in the design of innovative technology for production processes) as well as new process designs leading to reduced energy intensity of processes, e.g. reduction of process temperature by means of enhanced heat exchangers or water separation technologies, reducing heat losses and increasing mass and heat transfer and enhancing the integration of waste heat and renewable sources. Further new separation technologies like membrane distillation applied for industrial processes in e.g. galvanic industry or electroplating industry.

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Based on literature research the Master Thesis “**Roadmap for Industrial heat supply in combination with emerging process technologies**” will be developed. The master student will be involved in a European Research Project “INSHIP” and will be imbedded in a network of more than 30 research institutes in the field of renewable energy for industry.

We expect

- a motivated, independent, solution-oriented and creative working attitude
- interest in industrial production

Wir bieten

- Salaried position with a master-thesis embedded in a current international research-project
- Supervision by experienced researchers and highly qualified technical support
- *Period:* Starting now, lasting for 6 months
- *Contact:* Christoph Brunner, Tel 03112 5886-470, c.brunner@aee.at