

Integrating National Research Agendas on Solar Heat for Industrial Processes

Project Deliverable 6.1:

D 6.1 – MAP OF AVAILABLE RTD SHIP INFRASTRUCTURES & RESOURCES

WP	6
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NATURE OF THE DELIVERABLE

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HISTORY

Author	Date	Comments
Josephine Stemmer	10.08.2018	Version 1
Isabel Oller	03.09.2018	Version 2
Josephine Stemmer	07.09.2018	Version 3

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1. Content of deliverable

The Map of available RTD SHIP infrastructures & resources is a Deliverable in the INSHIP project due in Month 20. The map is a vital part on the way to achieve the goals of WP 6 in INSHIP that aims at bridging existing gaps among European RTD organizations. The map offers a mapping of all the significant research facilities in Europe with their core research infrastructures and is the first step in achieving the work of Task 6.1. Thus the map supports a pan-European inclusive approach by defining a joint Research Agenda.

As the map will be updated and expanded whenever necessary it has been created as a google maps and included in the project website of INSHIP (http://inship.eu/research_infrastructures.php). Fraunhofer ISE is responsible for maintaining the map and updating its contents during the project.

2. List of Research Infrastructures on the map

Ben. No	Partner	RI Name	Country of RI
01	Fraunhofer	DSC (Differential Scanning Calorimetry)	Germany
01	Fraunhofer	Test Facility for Small Expansion Machines	Germany
01	Fraunhofer	High power heat source with dynamic control	Germany
01	Fraunhofer	Liquid Entry Pressure Characterization	Germany
01	Fraunhofer	MD field operation testing plant	Germany
01	Fraunhofer	MD module test facility	Germany
01	Fraunhofer	MD pilot plant for direct contact operation	Germany
01	Fraunhofer	MD test facility for flat bed membrane test cells - aggressive media	Germany
01	Fraunhofer	MD test facility for flat bed membrane test cell	Germany
01	Fraunhofer	Membrane module winding machine	Germany
01	Fraunhofer	PV-Pumping test facility	Germany
01	Fraunhofer	RO test facility for dynamic operation and ERD	Germany
01	Fraunhofer	Scaling test facility	Germany
02	CIEMAT	Solar Multi-Effect Distillation Facility	Spain
02	CIEMAT	Test-Bed for Solar Membrane Distillation Applications at Pilot-Scale	Spain
02	CIEMAT	Polygeneration facility based on a 125 kW PolyTrough 1200 NEP Solar Collector	Spain
02	CIEMAT	Test-Bed for Solar Thermal Desalination Applications	Spain
02	CIEMAT	PSA vertical axis Solar Furnace SF5	Spain
02	CIEMAT	PSA Solar Furnace SF60	Spain
02	CIEMAT	DISS Test facility (DISS)	Spain
02	CIEMAT	Parabolic Trough Test Loop (PTTL)	Spain
02	CIEMAT	Test Facility for Photochemical production of H ₂ and other photofuels in water phase	Spain
03	AEE INTEC	Laboratory Test Facility for Membrane Distillation Applications	Austria
03	AEE INTEC	Test Facility for performance tests of sensible storage tanks	Austria
03	AEE INTEC	Test facility for testing kinetics of solid sorption materials	Austria
03	AEE INTEC	Test facility for evaporator under vacuum conditions	Austria
03	AEE INTEC	Collector Test Rig	Austria
03	AEE INTEC	High-temperature collector test rig	Austria
04	FBK	Facility Digespo	Italy
04	FBK	Micro-scratch test/Nanoindentation	Italy
04	FBK	CONTEST solar dish	Italy
04	FBK	Physical Vapor Deposition	Italy
04	FBK	Auger electron spectroscopy analysis (AES)	Italy

05	UEVORA	Évora Molten Salts Platform (EMSP)	Portugal
05	UEVORA	Renewable Energies Chair – Solar Energy and Soiling Group	Portugal
05	UEVORA	DNI Network	Portugal
05	UEVORA	Solar Concentrators Testing Platform (PECS)	Portugal
06	CYI	Linear Fresnel collector integrated on roof	Cyprus
07	CRES	Solar simulations software	Greece
07	CRES	Monitor(ing) equipment	Greece
07	CRES	Laboratory equipment for thermal and optical properties	Greece
07	CRES	Energy bus with portable equipment for energy audits in industries	Greece
08	ETHZ	Thermochemical process characterization	Switzerland
09	CEA	Outdoor thermal test bench	France
09	CEA	Indoor solar simulator	France
09	CEA	Climate chambers	France
09	CEA	Optical characterization equipments	France
09	CEA	Micro district heating INES 2	France
09	CEA	Fresnel prototype	France
10	METU	Computational facilities (installed 2016)	Turkey
10	METU	18 kWe Solar Simulator	Turkey
12	CNRS	laboratory to measure optical properties of solar energy materials	France
12	CNRS	150 kW parabolic trough loop with 2h storage and steam generation	France
12	CNRS	1 MW solar furnace to study high temperature thermal and thermochemical processes	France
12	CNRS	4 MW solar tower to develop hybrid solar concentrating systems	France
12	CNRS	Small-scale solar furnaces to study high temperature thermal and thermochemical processes	France
13	DLR	METAS (Meterological Station for Solar Technologies)	Spain
13	DLR	Experimental solar thermal power plant: Jülich Solar Tower	Germany
13	DLR	DLR Solar Furnace	Germany
13	DLR	SOPRAN	Germany
13	DLR	Solar simulator Sylight	Germany
15	CNR	Laboratory to test solar components	Italy
15	CNR	Spectrophotometers	Italy
16	UNIPA	Reaction system for solar chemistry processes	Italy
21	CENER	Solar component ageing test chambers	Spain
21	CENER	Receiver tube inspection device	Spain
21	CENER	Accredited activities to perform solar thermal collectors test	Spain
21	CENER	Optical characterization of receivers tubes for parabolic-trough collectors	Spain
21	CENER	Accredited activities for calibration	Spain

21	CENER	Optical characterization on small material sample	Spain
21	CENER	Characterization of concentrating reflector samples	Spain
21	CENER	Hail storm testing bench for solar components of collectors	Spain
21	CENER	Heat losses testing bench for receiver tube	Spain
22	IMDEA	Test facility for materials testing under high irradiance	Spain
22	IMDEA	Test facility for (solar) components testing under high irradiance	Spain
27	CIC ENERGIGUNE	Material characterization/Materials Characterization Lab	Spain
27	CIC ENERGIGUNE	Oil Test loop	Spain
27	CIC ENERGIGUNE	Air Test loop	Spain
29	UPC	Test bank for low and medium temperature flat plate solar collectors	Spain
29	UPC	STES and LTES codes for optimization and design of TES systems in medium and high temperature applications	Spain

3. Description and example of the map

Currently 80 research infrastructures are marked on the map. The map will be updated as soon as more data about individual research infrastructures are available to Fraunhofer ISE.




In order to show the list of Research Infrastructures (RIs) please click on  in the top left corner of the map. Click  next to institutions to show all the RIs within the respective country. To access individual RIs please click on the RI's name. You can open the map in a new tab by clicking on  in the upper right corner.

INSHIP Research Infrastructures




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1 - Map of available RTD SHIP infrastructures & resources embedded in the INSHIP website (http://inship.eu/research_infrastructures.php)


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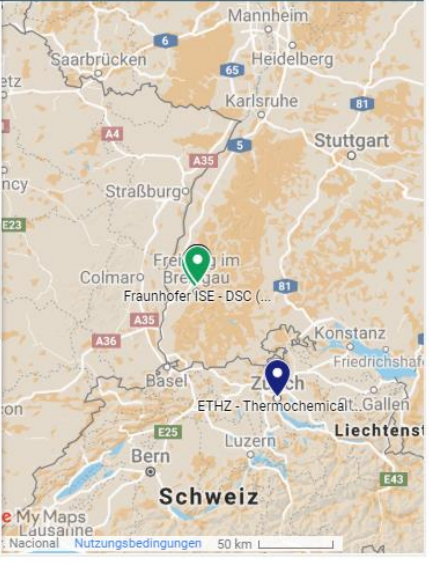
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INSHIP Research Infrastructures
 

Germany

-  **Fraunhofer ISE - Fraunhofer G...**
- Fraunhofer ISE - DSC (Diff...
- Fraunhofer ISE - Test Facil...
- Fraunhofer ISE - High Pow...
- Fraunhofer ISE - Liquid En...
- Fraunhofer ISE - MD Field ...
- Fraunhofer ISE - MD Modu...
- Fraunhofer ISE - MD Pilot ...
- Fraunhofer ISE - MD Test ...
- Fraunhofer ISE - MD Test ...
- Fraunhofer ISE - Membran...
- Fraunhofer ISE - PV-Pump...



FRAUNHOFER - CIEMAT - AEE INTEC - FBK - UEVORA - CYI - CRES - ETHZ - CEA - METU - EERA - CNRS - DLR - ENEA - CNR - UNIPA - UNINA - UNIFI - LNEG - IST-ID - CENER - IMDEA - CTAER - TECNALIA IK4-TEKNIKER - USE - CIC-ENERGIGUNE - CRANFIELD
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2 - Example of showing the list of Research Infrastructures of a specific institution

