





On-site training for industries Molten Salt Systems CSP plants

Location: ENEA – Research Center Casaccia - 301, Via Anguillarese – 00123 Rome, Italy

Date: November 7th − 11th, 2022.

Target group: The course designed for engineers, researchers and representatives from

European CSP industry and companies who want to be trained on real CSP

hardware

Course Language: English

Trainers: Scientists and Specialists from ENEA

Objective: The course focuses on the design and management methodologies for

molten salt CSP systems that use linear solar collectors. The training consists of both theoretical and practical modules. It will include visits, procedures, standards and best practices theoretical and experimental 'hands-on' experiences, Knowledge-Transfer and Networking and cover the following

topics:

Molten salts as heat transfer fluids and heat storage media

· CSP plants with molten salts as heat transfer fluid & heat storage

medium

Molten salt processes

Technologies for CSP molten salt plants

Practical test cases

Application: The registration deadline is OCTOBER 15th, 2022. Class size is limited to 15

participants. Eligible candidates will be informed until OCTOBER 30th, 2022. Standard health and safety measures defined by ENEA for visitors and meetings will apply (details to be given prior to the meeting depending on latest development of the covid-19 pandemic). These will include national ID card or passport, social distance, facemask during the lesson is strongly

recommended as disinfection of hands.

Fees: No course fee is applicable. Accommodation and travel costs shall be covered

by the participant. Lunch is offered by ENEA.

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Participation: To apply, please fill out the application form found on SFERA III website (here)

and send it to: anja.kruschinski@dlr.de

For more information, visit SFERA-3 website.







Agenda of course

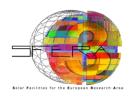
Agenaa of course		
Monday November 7th		
Welcome Welcome at CR ENEA Casaccia Lunch Visit ENEA Facilities (Test Component Lab, Chemical Lab, receiver tube test lab)	11:30 – 12:30 12:30 – 13:30 13:30 – 15:00	
Tuesday November 8th		
Molten salts as heat transfer fluids and heat storage media		
Chemical and physical characteristic of different MS mixtures (Salvatore Sau / Anna Tizzoni)	09:30 – 10:15	
Predictive tools for molten salts mixtures (Salvatore Sau / Anna Tizzoni)	10:15 – 10:45	
Coffee break	10:45 – 11:15	
Corrosion aspect and materials compatibility in molten salt plants (Elisabetta Veca)	11:15 – 12:00	
Lunch	12:00– 13:15	
Instrumentation for molten salt plants (Walter Gaggioli / Giuseppe Petroni)	13:15 - 14:15	
Operation experience with the DLR Test facility for thermal energy storage in molten salts – TESIS – (Stefan Glumm)	14:15 – 15:00	
Design of molten salt TES Systems - Basic concepts for TES sizing and integration in CSP plants (Raffaele Liberatore)	15:00-15:45	
Wednesday <i>November 9th</i>		
CSP plants with molten salts as HTF & HSM		
Electric trace systems for molten salt circuits (Walter Gaggioli / Valeria Russo / Giuseppe Petroni)	09:30 – 10:15	
Lessons learned from operation of MS TES Systems (Giuseppe Canneto / Valeria Russo)	10:15 – 11:00	
Coffee break	11:00 – 11:15	
Lessons learned from the commissioning/management of CSP molten salts plants operations (Walter Gaggioli / Valeria Russo / Giuseppe Petroni)	11:15 – 12:30	
Lunch	12:30 – 13:15	
Characterization of receiver tubes and experimental testing of MS cooling/freezing in receiver (Valeria Russo / Walter Gaggioli)	13:15 – 14:15	
Molten salt ENEA CSP plant: M&O (start up and shut down MS plant visit PCS (ENEA molten salt Parabolic solar collector Facility)	14:15 – 15:45	

Social dinner at Massimo restaurant offered by ENEA

SFERA III: Solar Facilities for the European Research Area

http://sfera3.sollab.eu/

The EU-funded research project - SFERA III - aims to boost scientific collaboration among the leading European research institutions in solar concentrating systems, offering European research and industry access to the best research and test infrastructures and creating a virtual European laboratory. Grant agreement 823802, funded under H2020-INFRAIA-2018-1.







Thursday November 10th		
Molten salt processes		
Molten salts as HTF for chemical reactors (Luca Turchetti)	09:30 – 10:15	
Use of molten salts in biomass gasification processes (Raffaele Liberatore)	10:15 – 10:45	
Coffee break	10:45 – 11:15	
Molten Salt CSP plants and photovoltaic plants: examples of technological hybridization (Valeria Russo)	11:15 – 12:00	
Lunch	12:00 – 13:15	
CSP Plant Simulation & CSP performance model (Valeria Russo)	13:15 - 14:00	
MOSE facility: visit to Facility	14:00 – 15:15	
Friday November 11th		
Technologies for CSP molten salt plants		
Coating for molten salt receiver tube (Salvatore Esposito / Gabriella Rossi)	09:30 – 10:30	
Low maintenance reflective surfaces for CSP plant (Anna Castaldo)	10:30 – 11:30	
Free discussion "suggestions, questions, etc.".	11:30 - 12:00	

For each session will be scheduled 10 minutes for questions, reflections, thoughts and insights on specific topics

Place of the event:
ENEA Casaccia Research Centre
Via Anguillarese 301, 00123, S.Maria di Galeria (Roma)
Location: Scuola delle Energie





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