

MEDISCO

MEDISCO aims to develop, test and optimize solar thermally driven cooling concepts for the food and agro industry in the Mediterranean region, which under local conditions can result economically and socially sustainable.

► **Develop and experimentally test two innovative cost-effective solar cooling concepts.**



Project Website

The project's website is

<http://www.medisco.org>

Where a general view pages about the project are available in five languages, Arabic, English, French, Italian and Spanish. As well as the project leaflet in five languages is downloadable from the publications section in the website.

-The progress and the news/events tabs are regularly updated with the progress of the project for all interested parties.

Project Progress

(1) Medium temperature collectors evaluation

A comprehensive evaluation of medium temperature solar thermal collectors has started. The evaluation aims to select the most appropriate collectors for the two experimental sites. Collector manufacturers are being contacted in order to assess performance, durability, production capacity and cost of their products.

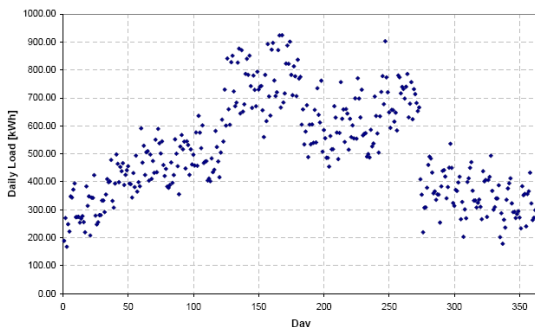


(2) Market potential in Egypt, Morocco and Tunisia

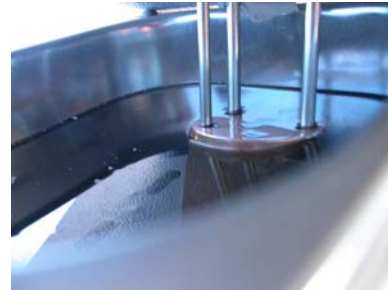
The market potential analysis of the solar cooling technologies in the food & agro industry sector has started. The study aims to identify which industries would most benefit from the application of solar cooling technologies, on the basis of their cooling demand profile. A survey is being conducted among several companies in Egypt, Morocco and Tunisia.

(3) End User requirement definition in Tunisia and Morocco

Since hourly load profiles for a whole year are typically not available, a "bottom-up" approach has been used in order to reconstruct a typical hourly load profile. According to this approach, the facility electricity needs, including chiller electricity consumption, refrigerant circulation and production machineries electricity consumption, have been simulated by assessing the technical features (e.g. nominal power, efficiency) of all electrical appliances and estimating their operating time. The simulated data was finally reconciled with the monthly electricity bill in order to validate the model.



The monitoring system components were calibrated to ensure the reliability of the measured data.



Dissemination and knowledge transfer

Transfer of experiences within the MEDISCO project, at a regional level, will be amplified by cooperation between project partners. And Further dissemination towards the international scientific community will be carried out (IES- SHC Tasks).



(4) Installation, Commissioning of the first pilot plant in Tunisia.

By the beginning of March 2008, MEDISCO started the installation of the solar cooling system in Tunisia. The Partners from Polimi, ANEME, Domain Nefris, PSE "The Fresnel collectors manufacturers" from Germany and Electrosystem from Italy worked together to ensure proper installation and commissioning of the system.



First Installation in Tunisia

Project Coordinator

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