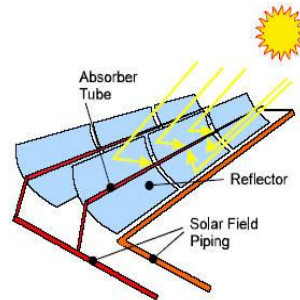




MENAREC 6
6 April 2016



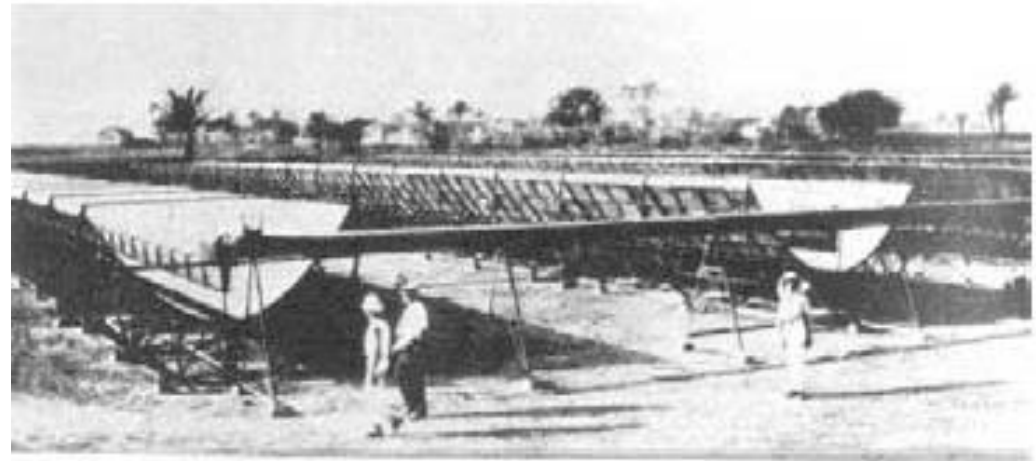
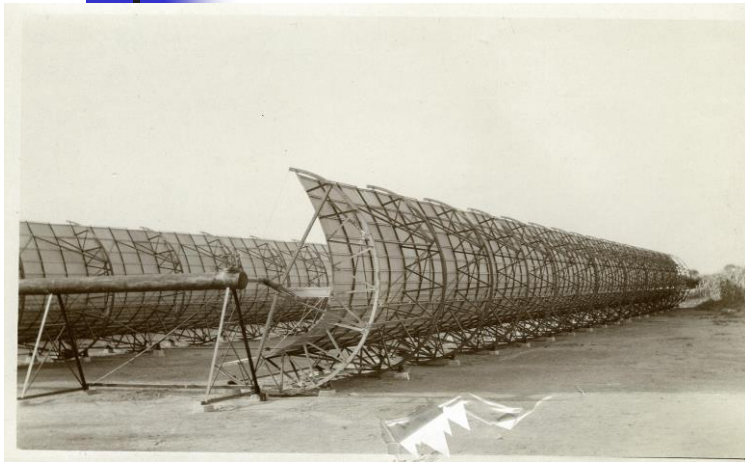
DEVELOPMENT OF AN EGYPTIAN PROTOTYPE CSP THERMAL TEST LOOP



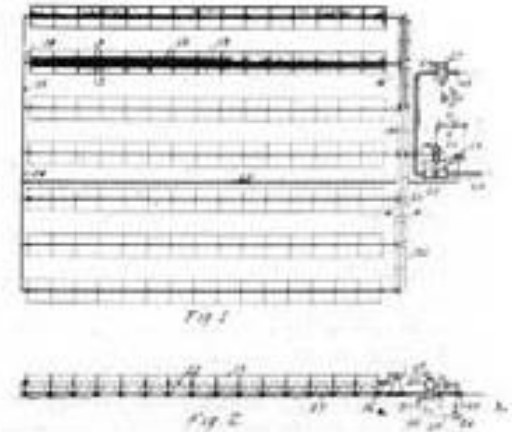
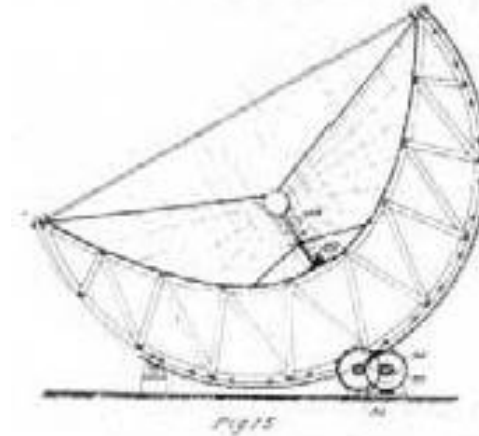
Project ID: STDF-1586 (2010-2013)
Faculty of Engineering- Cairo University

Presented by
Adel Khalil

Concentrated Solar Power in Egypt



Concentrated Solar
Power in Cairo-
Frank Shuman
1913



Concentrated Solar Power

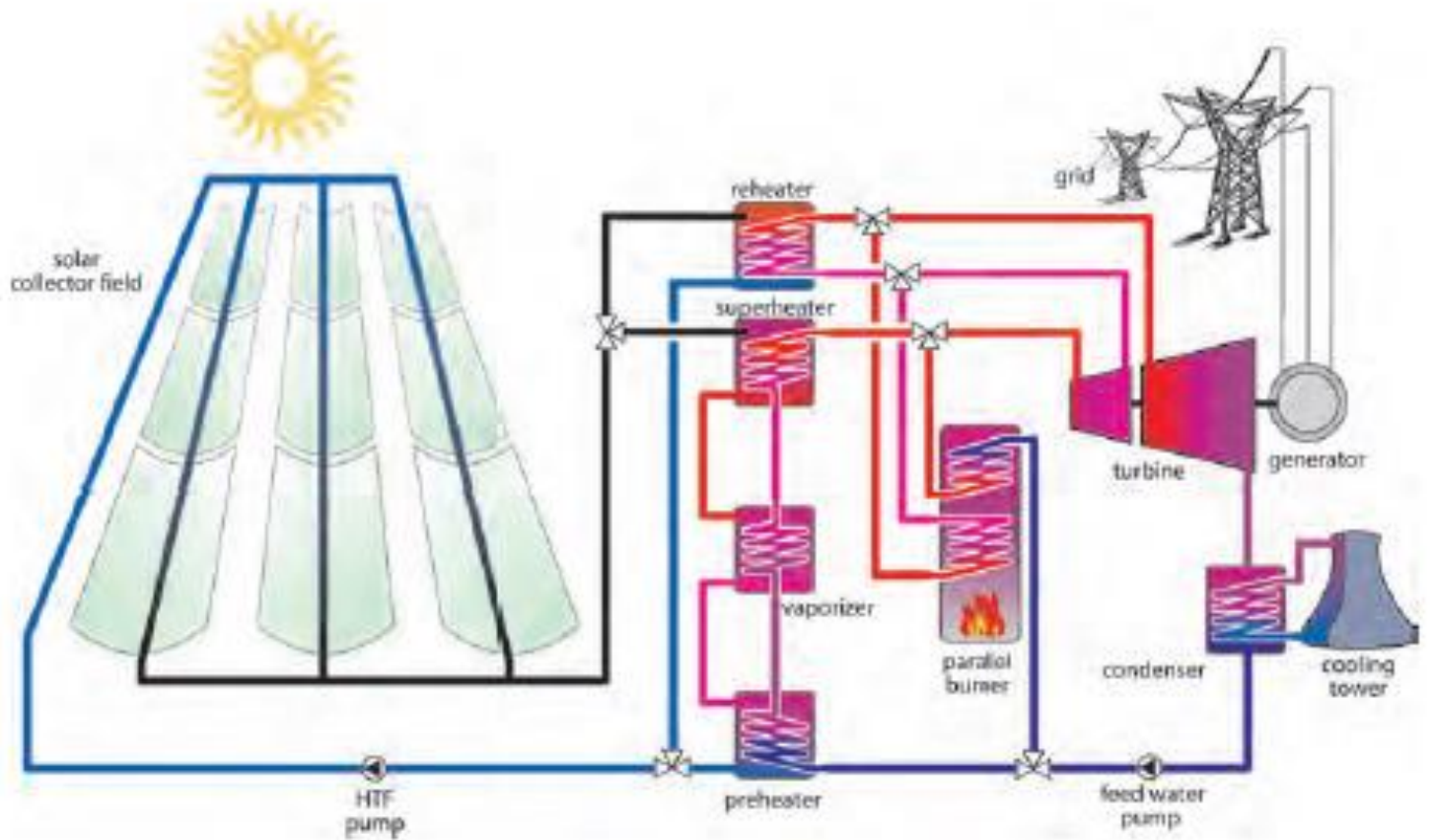
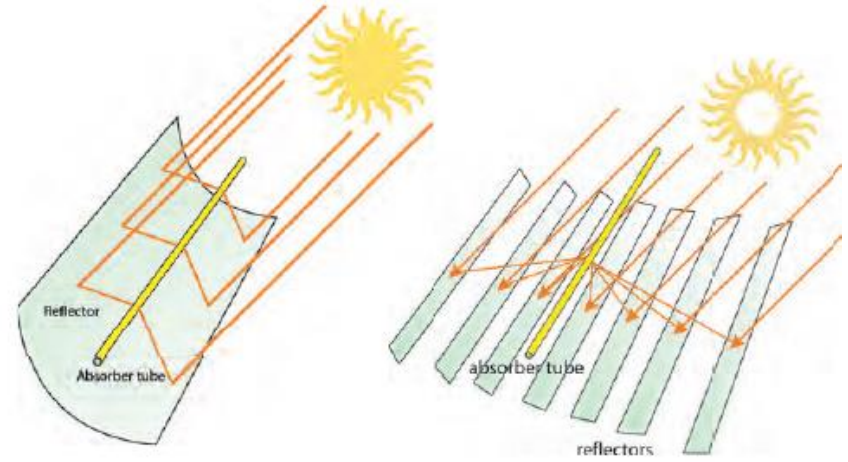
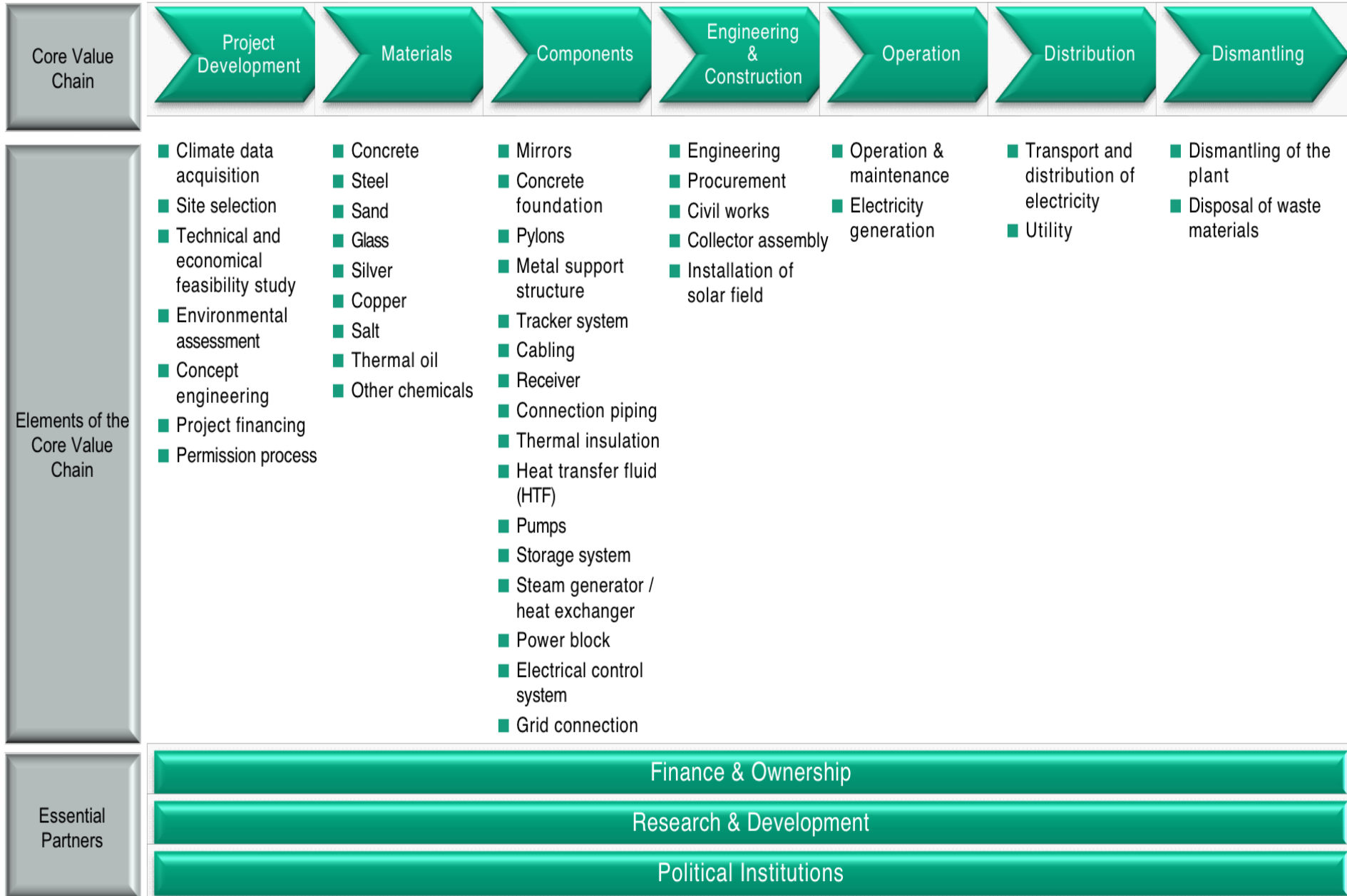


Figure 6.6. Schematic of a SEGS plant

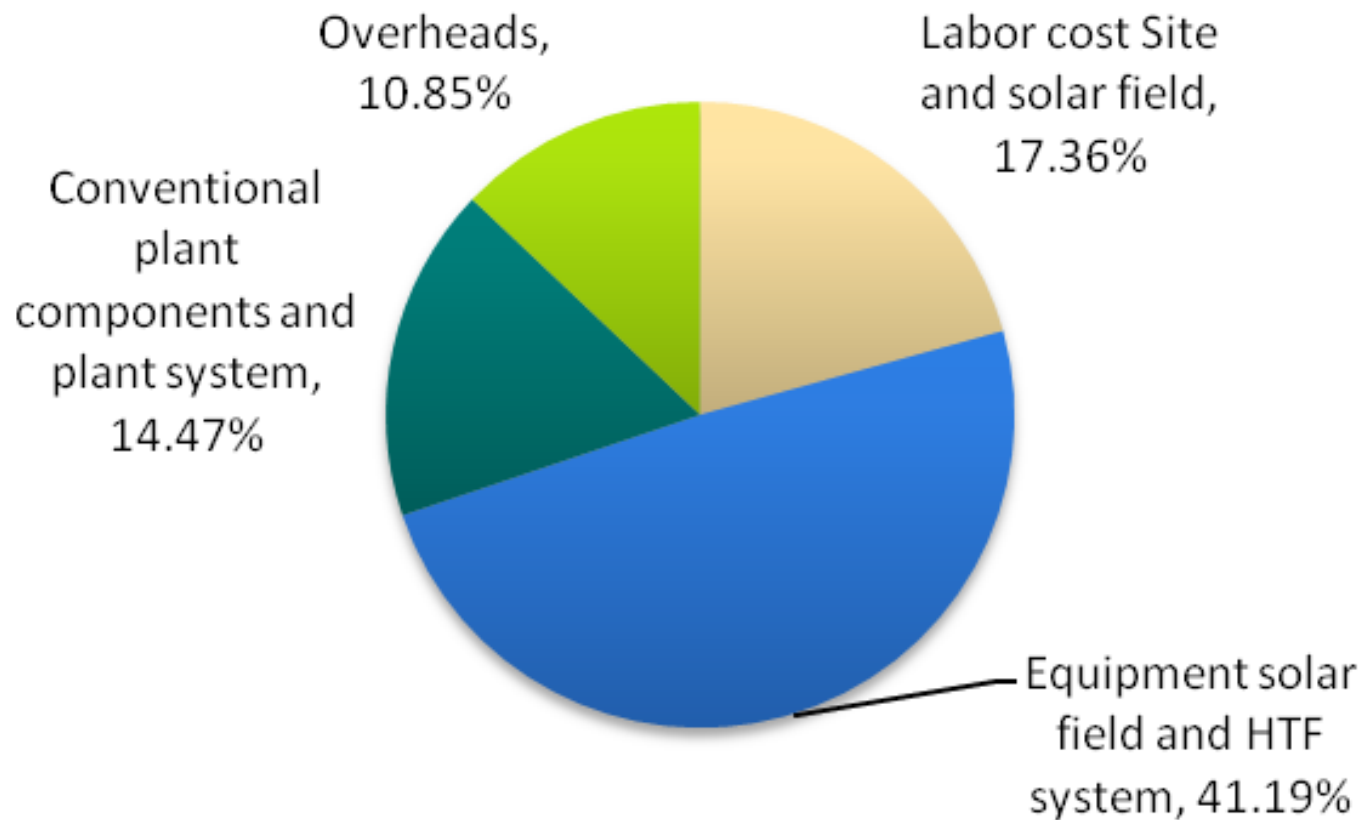
Potential for Local Manufacturing

- **Industrial Modernisation Center study (IMC) /CU Energy Research Center in 2006**
- **World Bank Study on CSP Local Manufacturing in MENA (2011)**
- **Egypt Renewable Energy Master Plan (2014)**

CSP value chain, (Fraunhofer ISE/ISI & E&Y, 2011)



Percentage Breakdown of Cost for CSP Technologies (Fraunhofer ISE)



Example of Academia/Industry cooperation



Installation of Egypt CSP Prototype

Site Erection



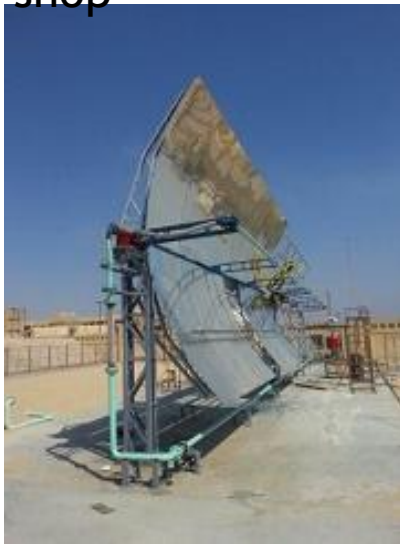
Lifting Trough at shop



Transport & handling



Trough Units at site



Erection completed

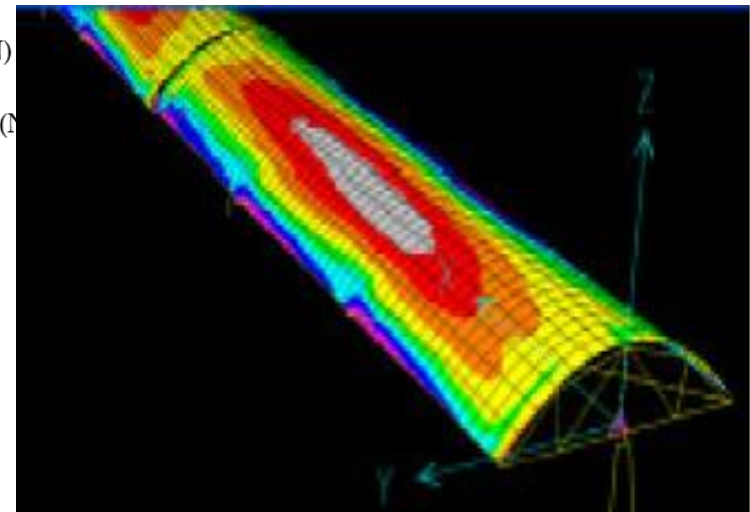
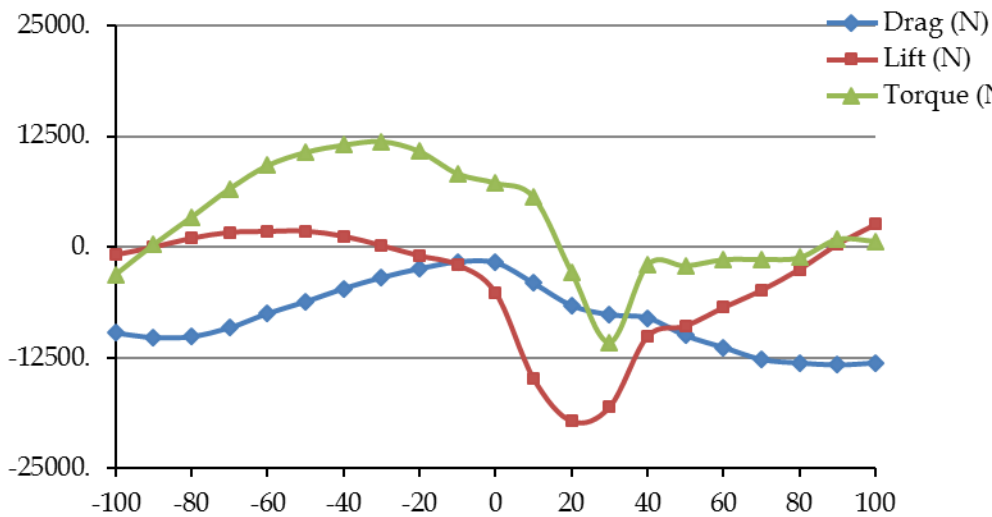
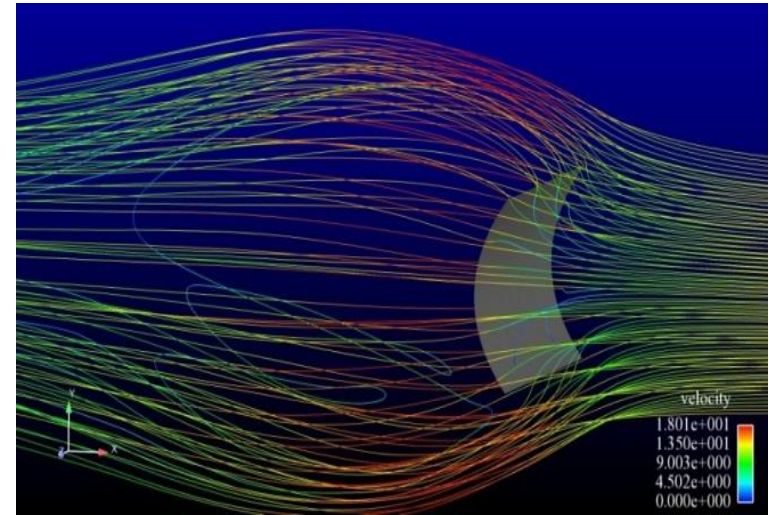
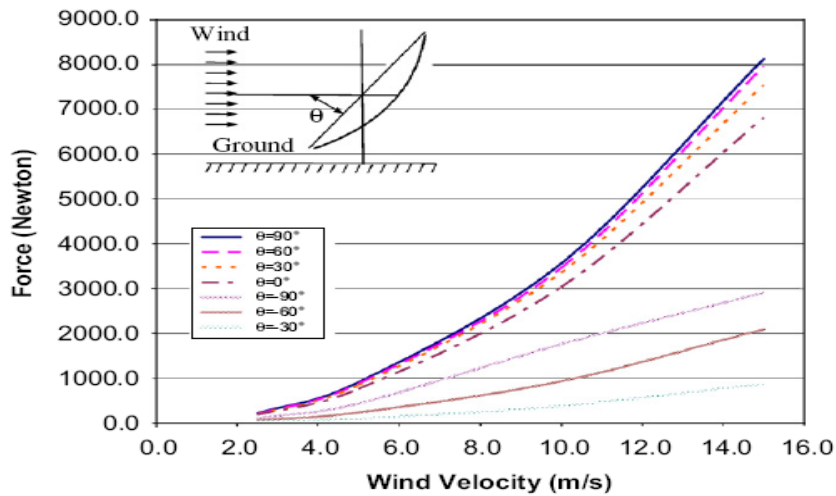


Mirror mounting



Actuator & dummy Tube Assy.

Design Concept Analysis





Reference: EuropeAid/135-159/M/ACT/EG
Contract no. : ENPI/2014/344-312
Project Coordinator: Cairo University

Intercultural M.Sc. Program

Renewable Energy and Energy Efficiency for the Middle East and North Africa (MENA) Region (REMENA)

Presentation MENAREC 2016



CAIRO
UNIVERSITY



DAAD

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German Academic Exchange Service



Uniting against Poverty

A large-scale solar collector field is shown under a clear blue sky. The collectors are large, curved, and highly reflective, mounted on a metal structure. In the foreground, a man wearing a white hard hat, sunglasses, and a light blue shirt is pointing towards the collectors. To the left, two other men are standing near the structure, one looking at a clipboard. The ground is a mix of concrete and grass. The text "Thank you" is overlaid in the center of the image.

Thank you