SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 19EEO305 /Renewable Energy Generation Technology

III YEAR / VI SEMESTER

UNIT 2- SOLAR ENERGY

Topic 6 – Solar thermal power plant

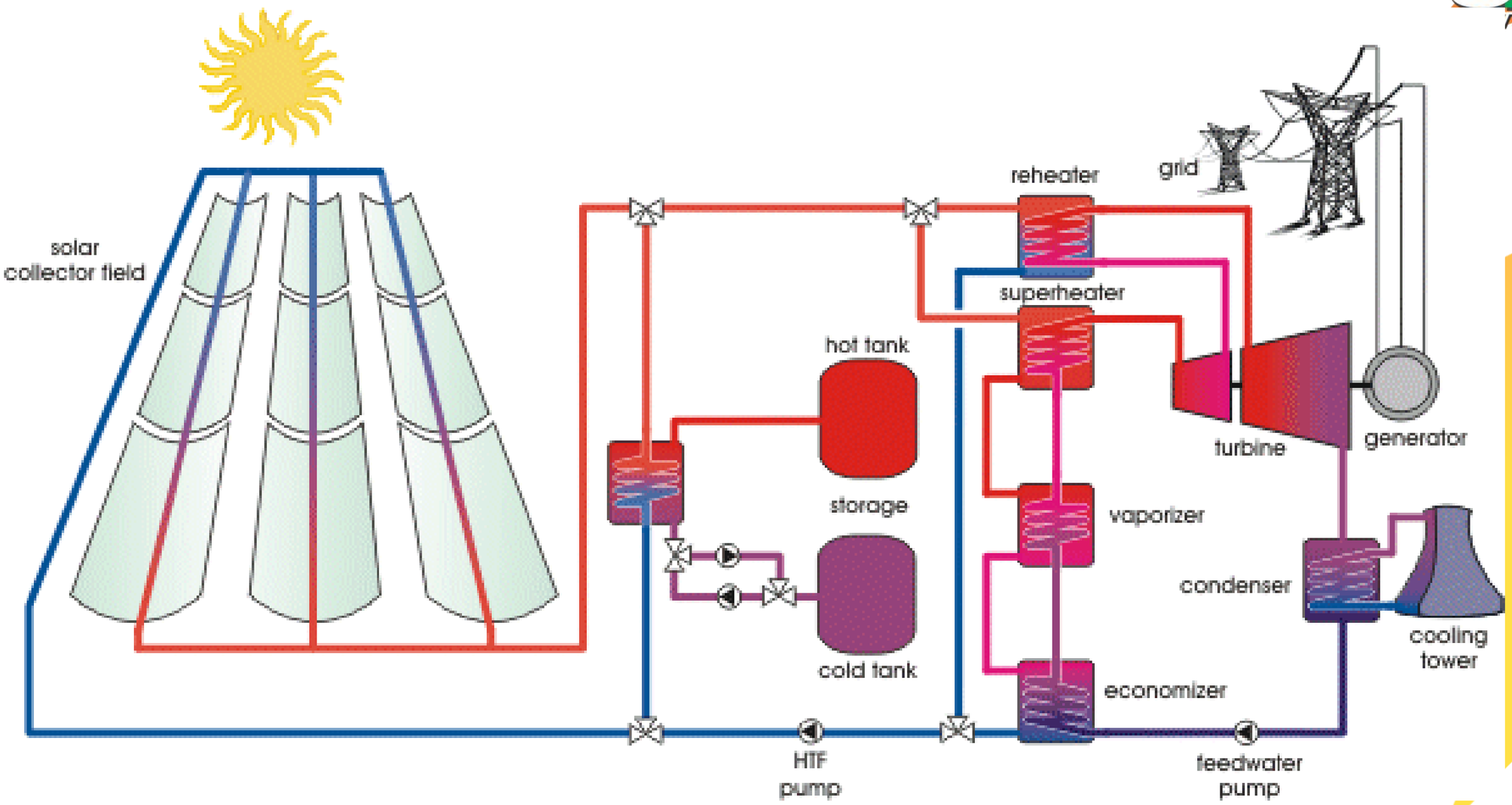
SUCCESSFUL STUDENT

Positive Attitude

Professionally Groomed

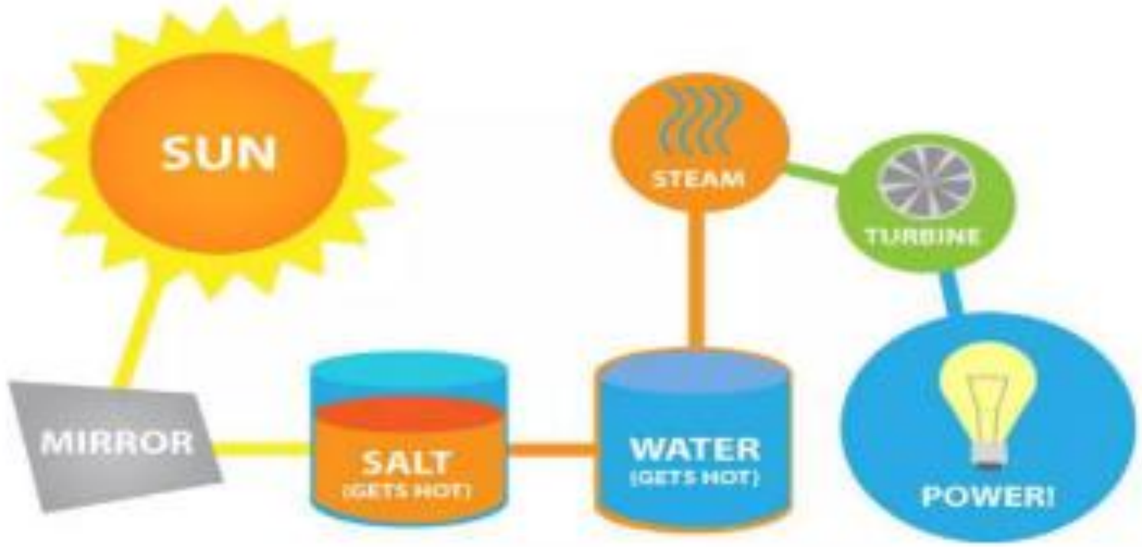
Socially Interactive

Technically Skillful

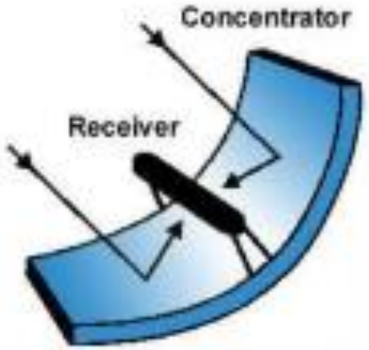

solar
collector field
reheater
grid
superheater
hot tank
turbine
generator
storage
vaporizer
condenser
cold tank
cooling
tower
economizer
HTF
pump
feedwater
pump

Basic Working Principle

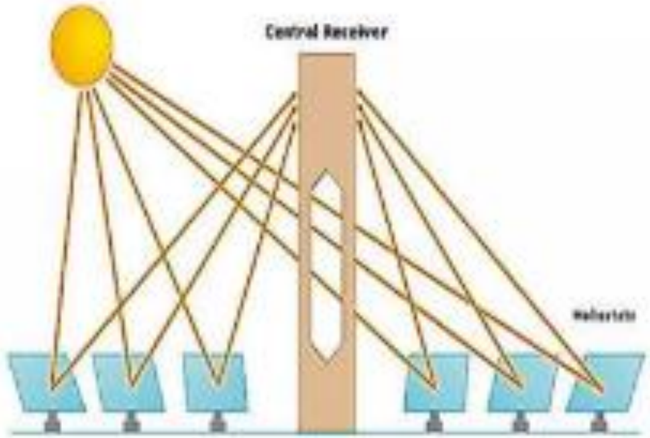
- Mirrors reflect and concentrate sunlight.
- Receivers collect that solar energy and convert it into heat energy.
- A generator can then be used to produce electricity from this heat energy.



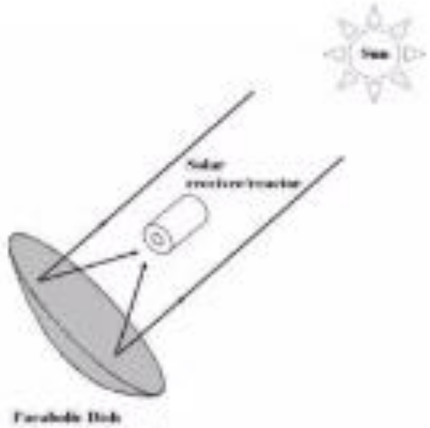
Types of solar thermal power plants



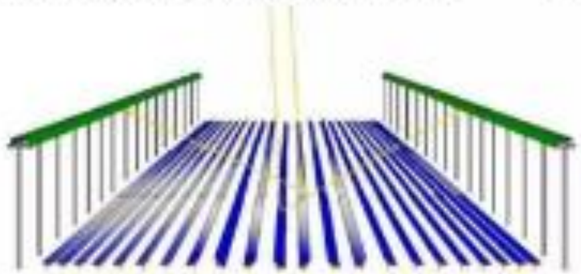
Parabolic trough system



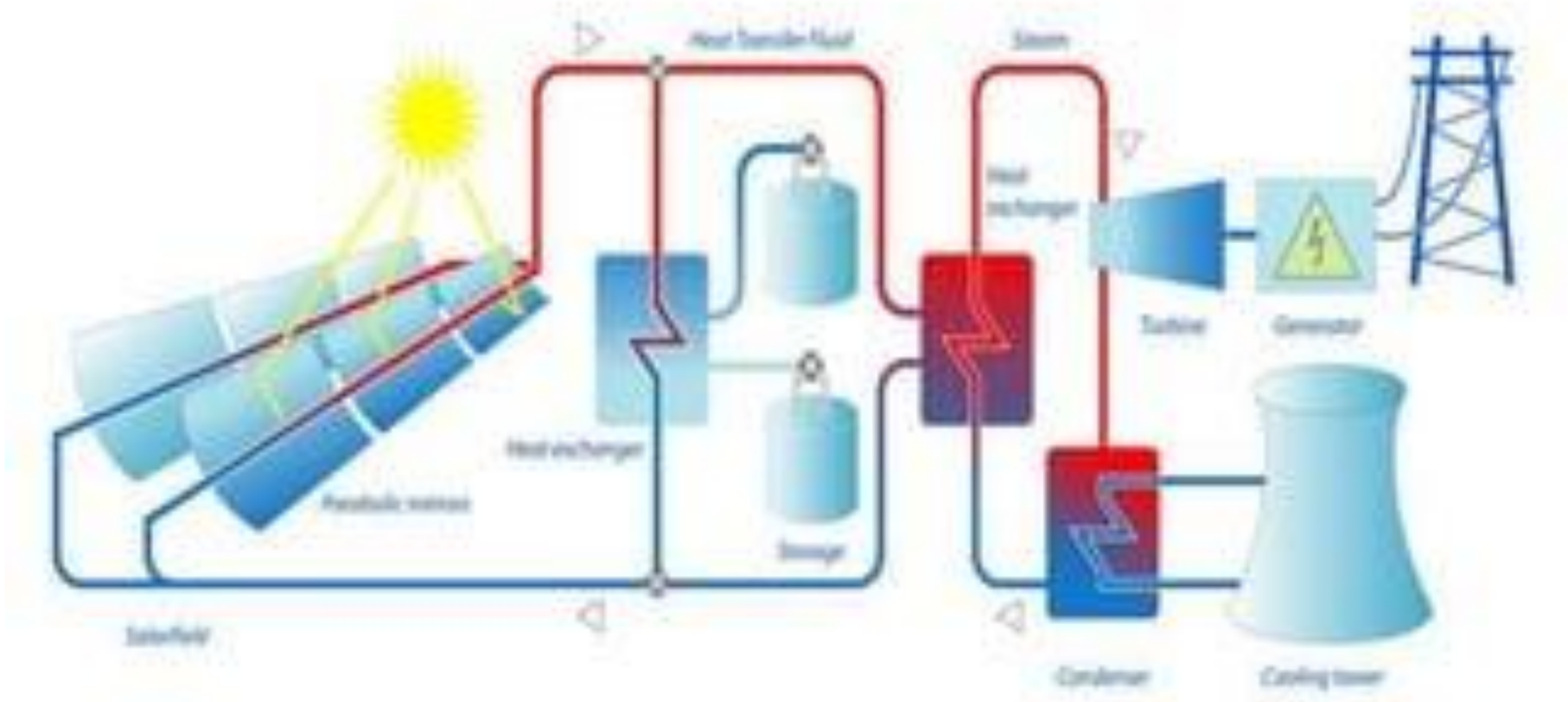
Solar power tower systems



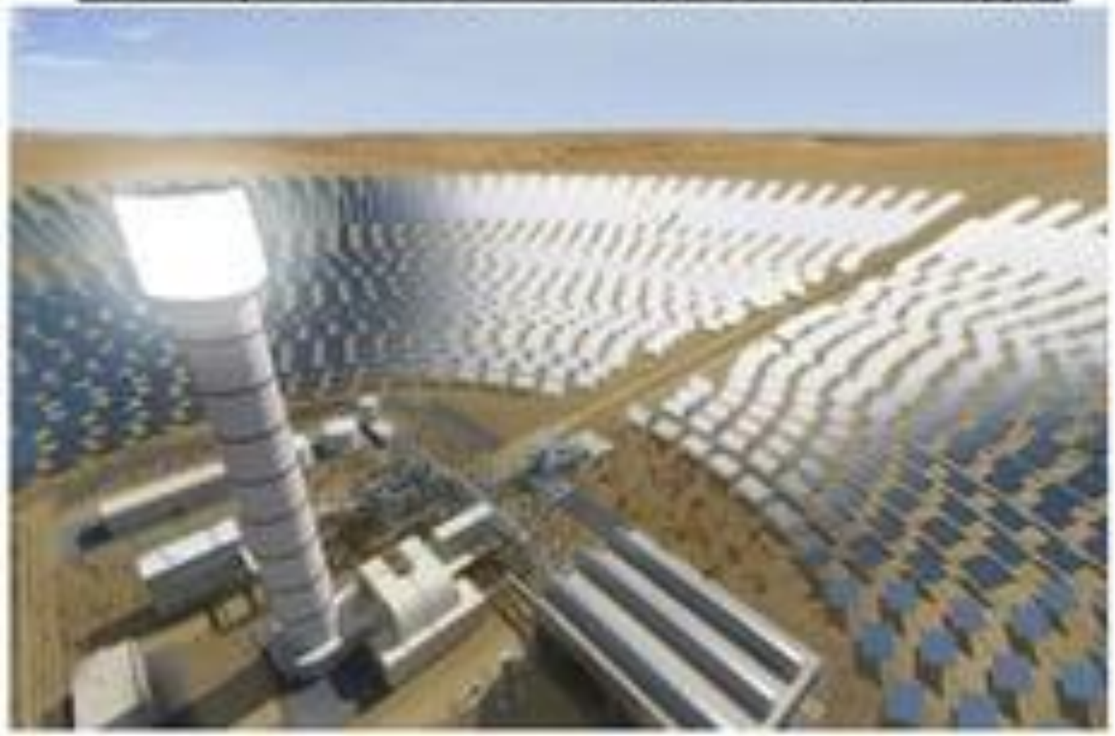
Solar dish/engine system



Compact linear Fresnel reflector



Solar power tower systems (Image)



ASSESSMENT

REFERENCE

Reference Book:

1. S.P. Sukhatme, ‘Solar Energy’, Tata McGraw Hill Publishing Company Ltd., New Delhi, 1997. (UNIT II)

2. G.N. Tiwari, ‘Solar Energy – Fundamentals Design, Modelling and applications’, Narosa Publishing House, New Delhi, 2002. (UNIT II)

3. S.M. Muyeen,” Wind Energy Conversion Systems: Technology and Trends”, Springer 2012. [UNIT III]

Text Book:

1. G.D. Rai, ‘Non Conventional Energy Sources’, Khanna Publishers, New Delhi, 2006. (UNIT I - V)

2. D.P.Kothari, K.C.Singal and Rakesh Ranjan,”Renewable energy sources and Emerging Technologies”, PHI Pvt. Ltd., 2009. (UNIT I-V)

THANK YOU!!