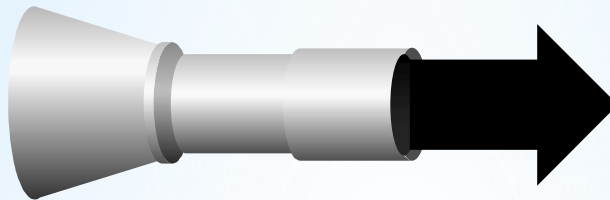




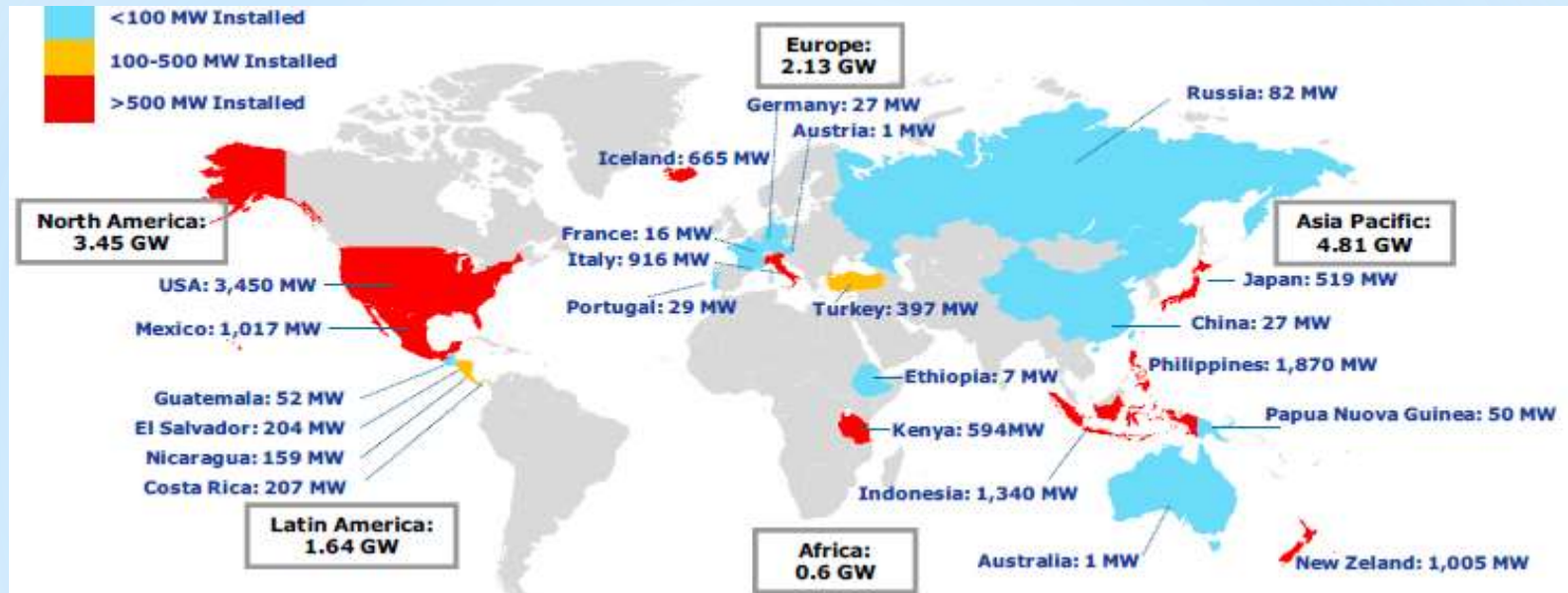
Power Plants

**“Power plant
Technology”
M.M. Elwakil**

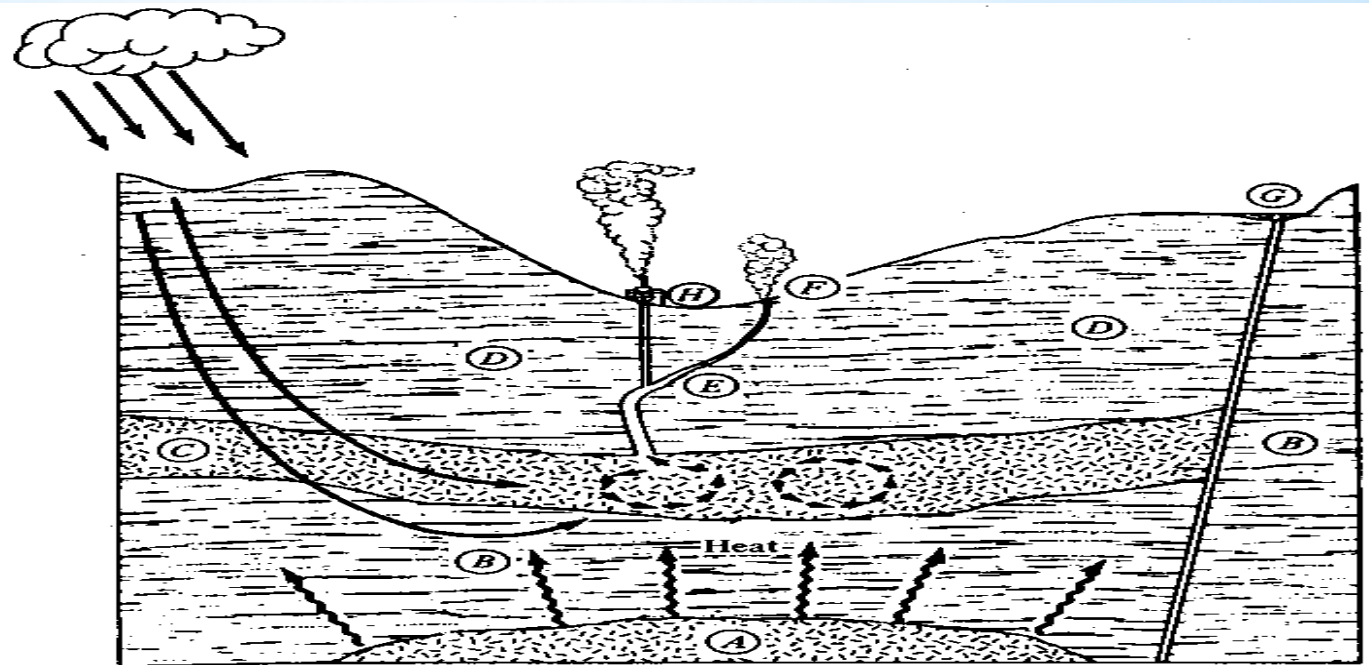


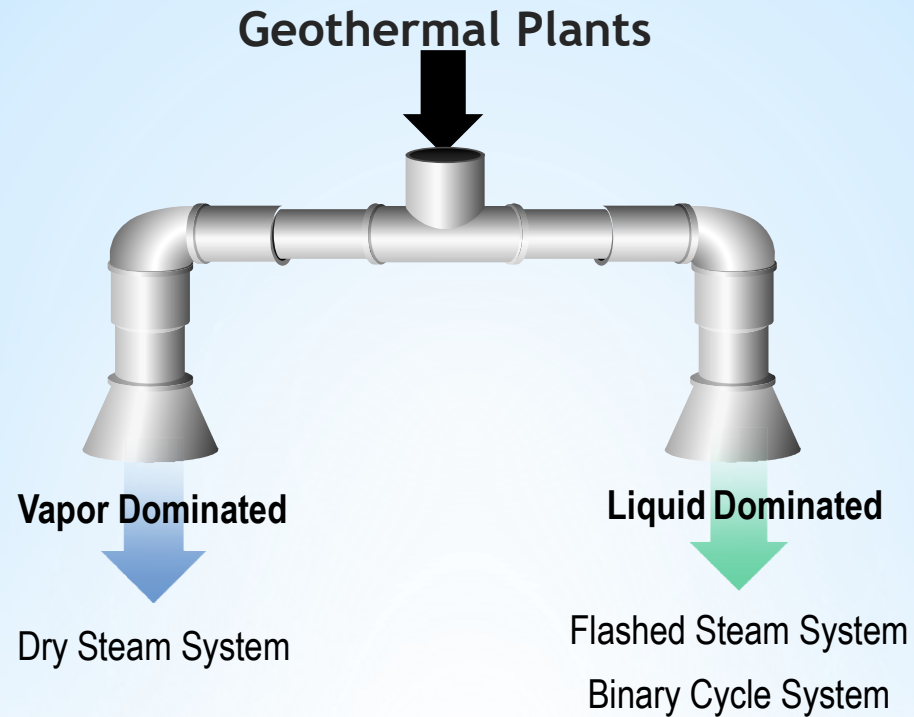
**MAIN REFERENCE
OF THE COURSE**

GEOHERMAL POWER PLANT

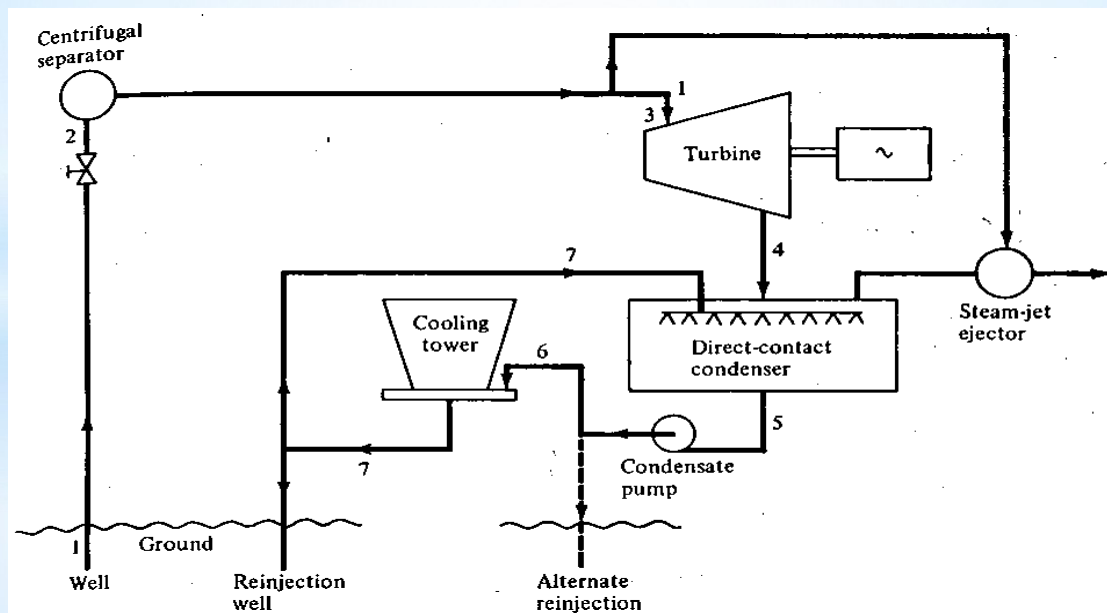
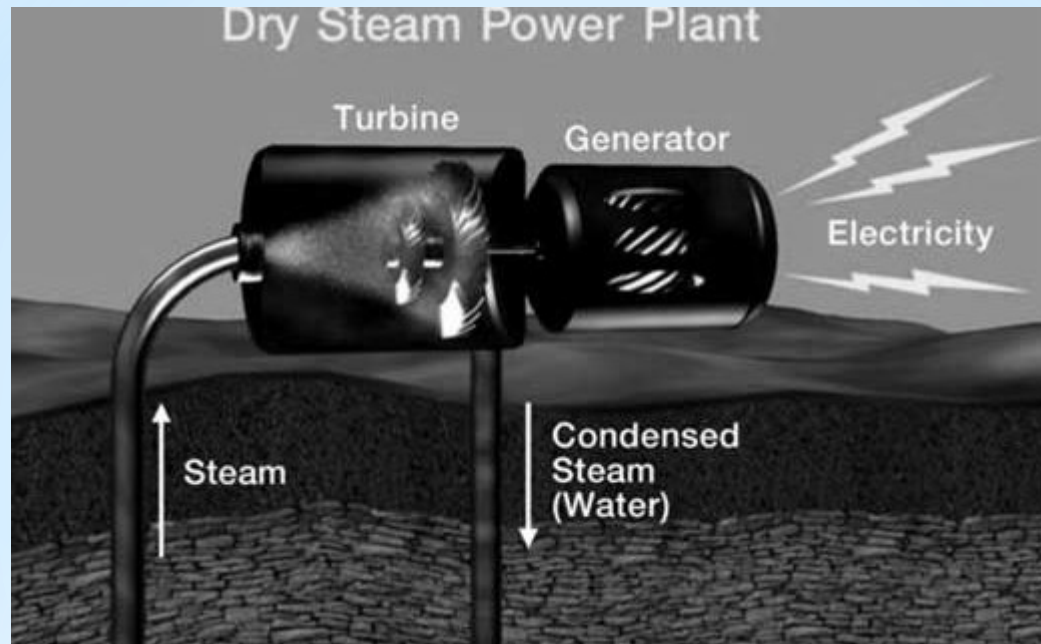


- A) Hot magma
- B) Volcanic rock
- C) Permeable hot water reservoir
- D) Impermeable reservoir
- E) Vents
- F) Geysers
- G) Hot springs
- H) Hot well

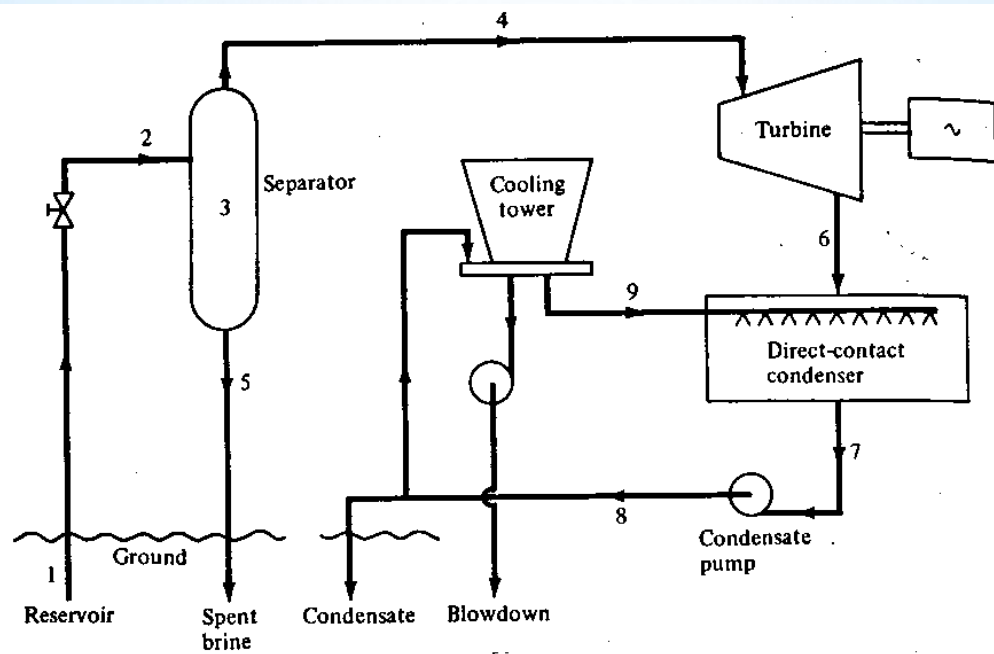
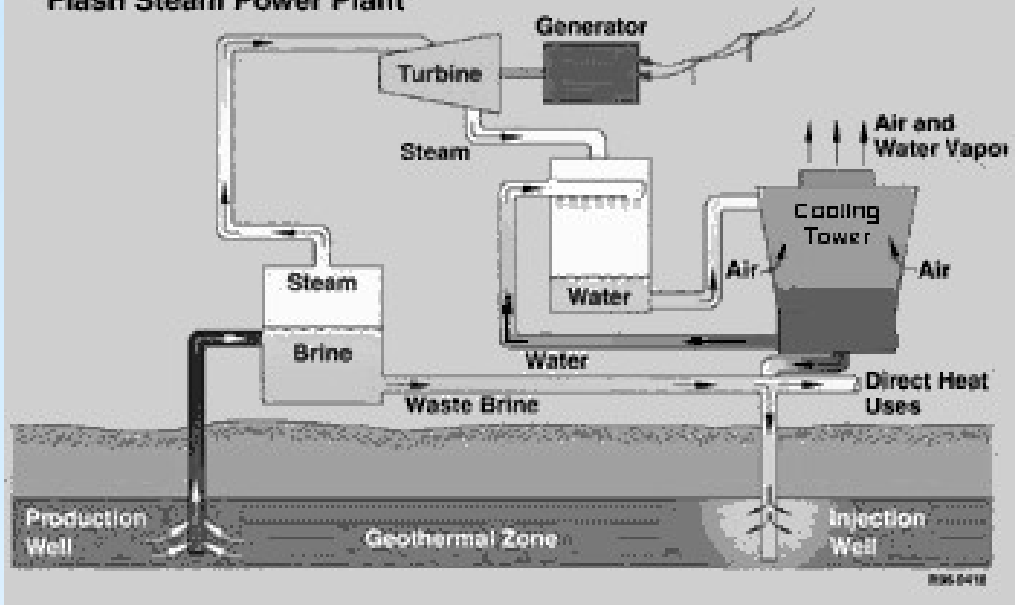


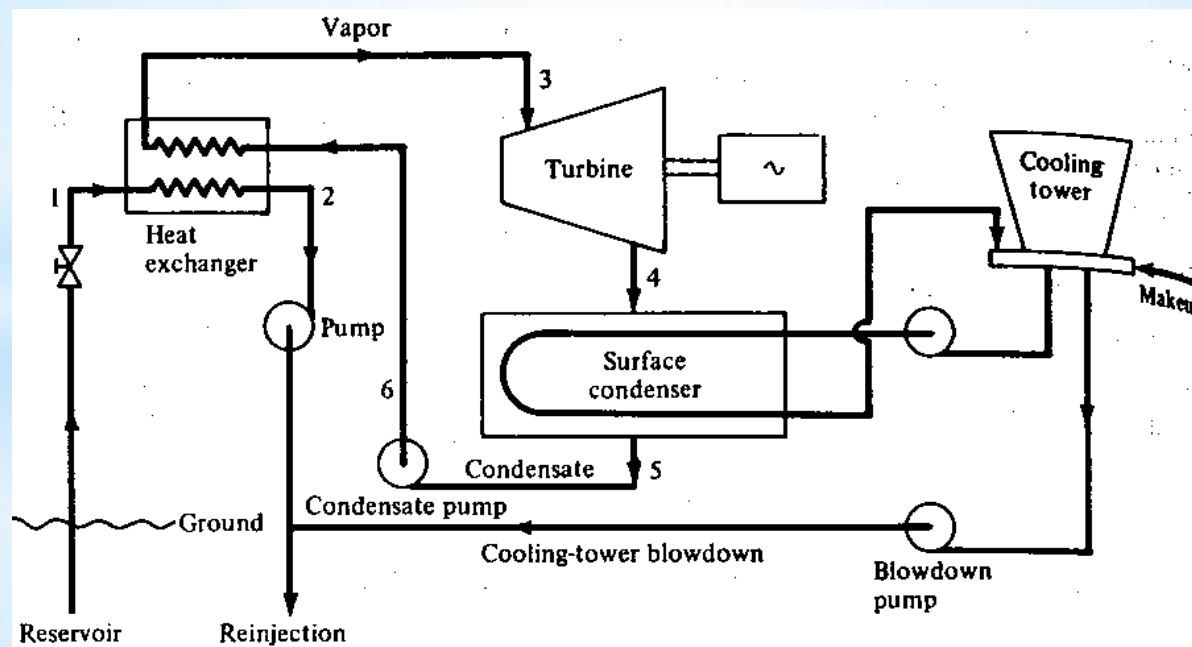
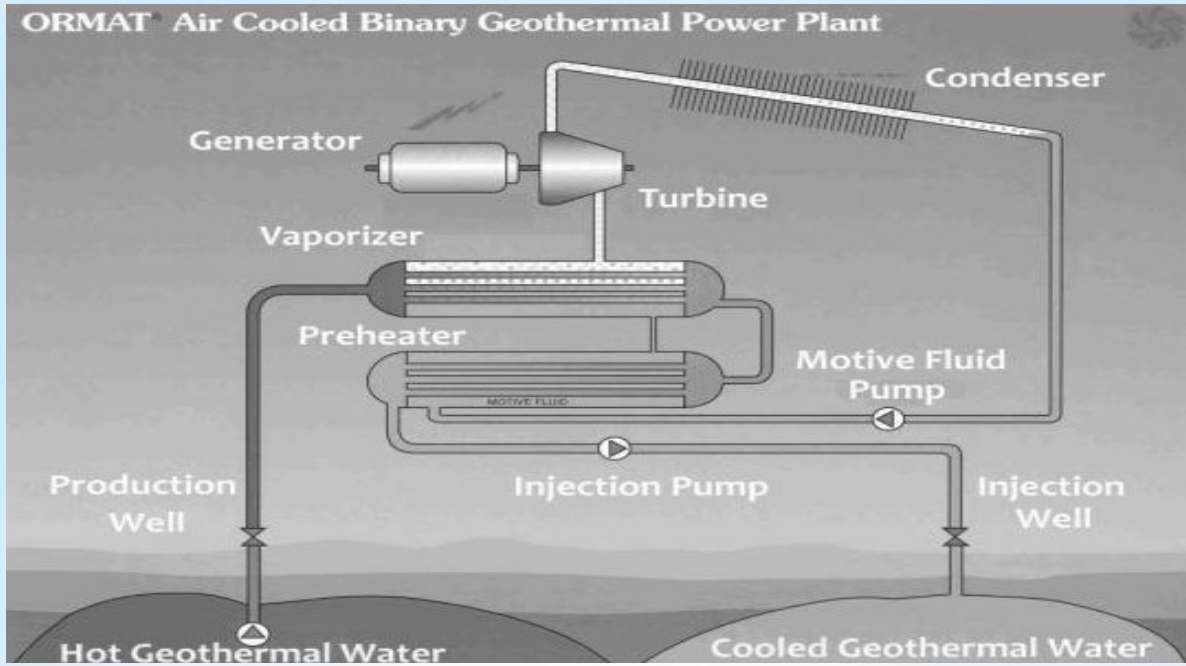


- Dry steam system; resource temperature range from about 230° C to some 320° C.
- Flashed steam system; resource temperature range from about 200° C to some 320° C.
- Binary or twin-fluid system; resource temperature range between 120° C to about 190° C.



Flash Steam Power Plant





Advantages:-

- High degree of availability (7500 operating hr/annum common).
- Low land use.
- Low atmospheric pollution compared to fossil fueled plants.
- Almost zero liquid pollution with re-injection of effluent liquid.
- Insignificant dependence on weather conditions.

Disadvantages:-

- Dissolved solids.
- Non condensable gases (CO_2 , CH_4 , H_2 , N_2 , NH_3 , H_2S).