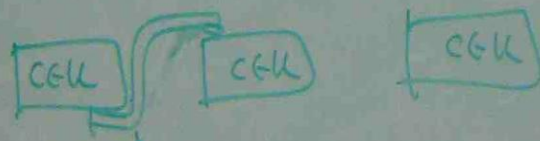
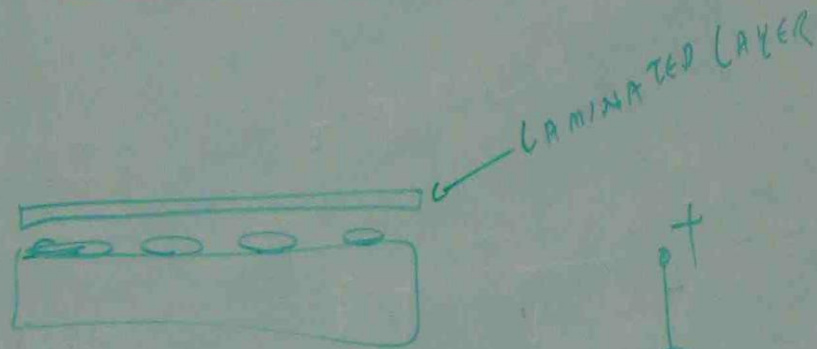


CELLS CAN BE BONDED
TO THIS LAYER

⇒ SOLAR
PANEL



INTERCONNECTION
BETWEEN CELLS.



MODULE DEGRADATION

- BREAKAGE OF CELLS DUE TO EXCESSIVE MECHANICAL STRESS
- CORROSION
- DELAMINATION OF DIFFERENT LAYERS OF ENCAPSULATION
- DISCOLORING
- ACCUMULATION OF DIRT OF MODULES
- BREAKAGE OF INTERCONNECTION DUE TO INADEQUATE STRESS RELIEF

$$\boxed{\text{MJ/m}^2 = \frac{\text{Wh/m}^2}{277}}$$

$$\times \frac{20}{60} = 195 \text{ Wh/m}^2$$

$$\rightarrow \text{MJ/m}^2 = \frac{195}{277} = 0.7039$$

$$\text{APRIL DAILY IRRADIATION} = 18.9 - 0.7039 = 17.69 \text{ MJ/m}^2$$

PM

$$\times \frac{60}{60} = 442 \text{ Wh/m}^2$$

$$\rightarrow \text{MJ/m}^2 = \frac{442}{277} = 1.59$$

$$\text{MAY} = 15.9 - 1.59 = 14.31$$

30

$$+ 687 \times \frac{60}{60} = 455 \text{ Wh/m}^2$$

$$\rightarrow \text{MJ/m}^2 = \frac{455}{277} = 1.64$$

$$\text{JUNE} = 16 - 1.64 = 14.35$$

SHADING ASSESSMENT BY USING POSSUN PROGRAM

BEARING 1 = $\alpha_A(\text{True}) = 39^\circ$

BEARING 2 = $90 - \alpha_A(\text{True}) = 51^\circ = \alpha_B$

POSSUN

DATE ENTER 15 DAY OF MONTH
APRIL / MAY ETC

LATITUDE = 27.3

AZIMUTH = 0 ← True NORTH

BEARING * 1 > 39 ← α_A

BEARING * 2 > 51 ← α_B

OUT PUT

MONTH	H	H collector
JAN	24.3	21.85
FEB	21.8	20.89

→ INPUT INTO POSSUN PROGRAM

SHADING EFFECT CALC → IRRADIATION CAN BE KNOWN

