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Question: I need help answering the question number 3. I hope you can h...

2. A 50 MW steam power plant supplying power to three substation with a daily maximum demand of 10,000 kW, 20,000 kW and 15,000 kW with a diversity factor of 1.1 in a certain day the following information were gathered:
 Net kW-hr generated 78,500 kW-hr
 Fuel consumption 232,740 kg
 For the given data per day, Determine:
 a) Load factor
 b) Plant Capacity factor
 c) Plant utilization factor
 d) Net station heat rate
3. What is the daily average load in a certain power plant if the daily energy produced is 500,000 kW-hrs.

I need help answering the question **number 3**. I hope you can help me. Please. Kindly show the step by step process and solution. Box the final answer. thankyou so much!
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Expert Answer

 Anonymous answered this
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Solution:- ③ Given data:-
 Daily Energy produced = 500,000 Kw-hrs.
 The daily average load in a certain power plant can be given by:-

$$\text{Daily average load} = \frac{\text{Daily Energy produced}}{\text{Number of hours in a day.}}$$

$$\text{Daily average load} = \frac{500,000 \text{ Kw-hrs}}{24 \text{ hrs}}$$

Daily average load = 20,833.33 Kw
Ans

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Up next for you in Mechanical Engineering

kindly please show the steps in arriving to the answer. also please include the formula used and the figure. box th...

1. Steam with $h = 2442.6 \text{ kJ/kg}$ flows at the constant temperature of 48.9 C the condensing water ($C_p = 4.187 \text{ kJ/kg}$) enters at 24.4 C in an adiabatic steady flow system with $\Delta P = 0$.

See answer

kindly please show the steps in arriving to the answer. also please include the formula used and the figure. box fin...

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See answer


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Q: kindly please show the steps in arriving to the answer. also please include the formula used and the figure. box the final answer. thank you!

A: [See answer](#)

Q: 5. A 305 mm x 457 mm four stroke single acting diesel engine is rated at 150KW at 260rpm. Fuel consumption at rated load is 0.26 kg/KW-hr with a heating value of 43,912 kJ/kg. Calculate the brake heat rate.

A: [See answer](#)

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