Energy Balances, Efficiency, and Heat-Integration Models

g12_u06_w22

Interpret original fictional energy-flow cards. No equipment operation, process operation, or design instruction is requested.

1. What is an energy balance?

2. Why must a boundary be stated?

3. What does energy input label represent?

4. What does energy output label represent?

5. What is efficiency in a stated model?

6. Why is efficiency not a complete performance claim?

7. What does heat integration model represent?

8. Why is a transfer arrow not operating instruction?

9. What units must be checked?

10. Name one omitted condition.

11. Card E has input and output labels. What accounting question follows?

12. Why might an energy-flow total be incomplete?

13. What is a loss label in a model?

14. Why can two efficiency values be incomparable?

15. What does uncertainty add?

16. Give one non-color-only flow feature.

17. State one prohibited operating claim.

18. Compare a paper energy model with a real process.

19. Write a cautious efficiency observation.

20. Write a two-sentence bounded conclusion for Card E.