Mass Balances and Process-Flow Models

g12_u06_w21

Interpret original fictional process-flow cards. No equipment operation, chemical handling, process design, or scale-up activity is requested.

1. What is a system boundary?

2. What is a mass balance?

3. Why must streams be labeled?

4. What does an input arrow represent?

5. What does an output arrow represent?

6. Why is a flow diagram not operating instruction?

7. What must be checked before conservation reasoning?

8. Why do units matter?

9. What is an accumulation term in a model?

10. Why might a simplified card omit a stream?

11. Card F has labeled input A and output B. What accounting question follows?

12. What does an unlabeled arrow require?

13. Why can a balanced card still be incomplete?

14. Name one condition a process card may omit.

15. What does steady-state mean in a stated model?

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

17. State one prohibited process claim.

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

19. Write a cautious conservation observation.

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