

Waukesha Foundry

Metal Casting Process Simulation


Process Flow Diagrams

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Simulation Modeling Process Map

1. Project Overview: Project goal and general approach.
2. System Description: Text narrative derived from initial interviews.
3. Context Diagram: Scope and boundaries of model.
4. Data Flow Diagram: Movement of data and materials.
5. State Transition Diagrams: Transitions between system wait states.
6. Entity Relationship Diagram: Interactions between system elements.
- 7. Process Flow Diagrams: Decisions controlling system behavior.**
8. Causal Loop Diagram: System cause and effect relationships.
9. IBIS Analysis: Description of “fuzzy” decisions.
10. Simulation Model: Patient movement and resource utilization.



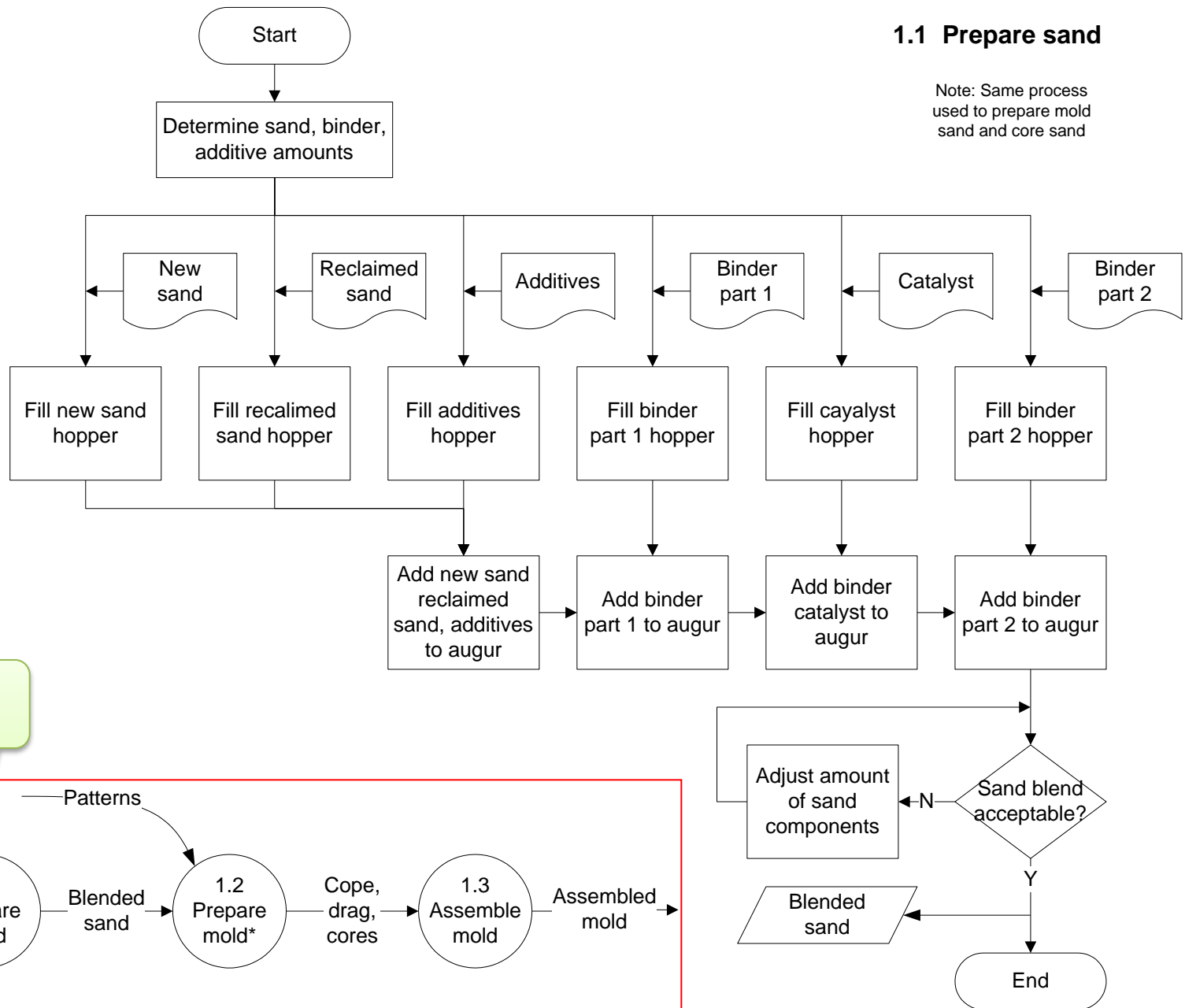
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Process Flow Diagrams

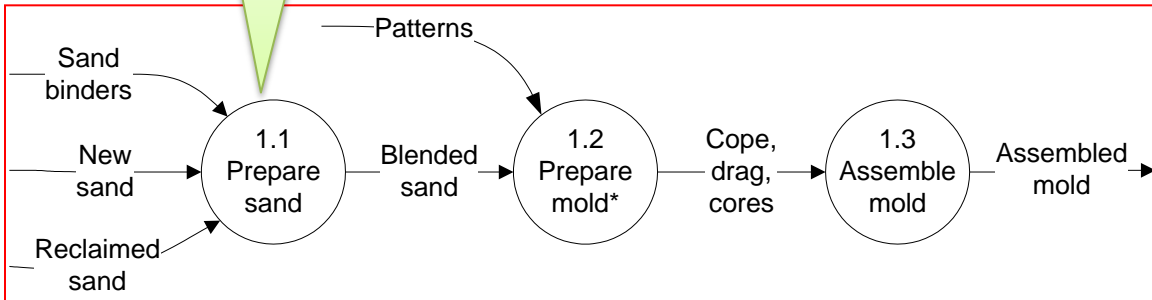
- Process flow diagrams provide detailed descriptions of each process shown in the data flow diagrams for a system.
- This presentation provides the process flow diagrams for the casting process data flow diagrams.
- The data flow diagram associated with each process flow diagram is shown for reference.

1.1 Prepare sand

Note: Same process used to prepare mold sand and core sand

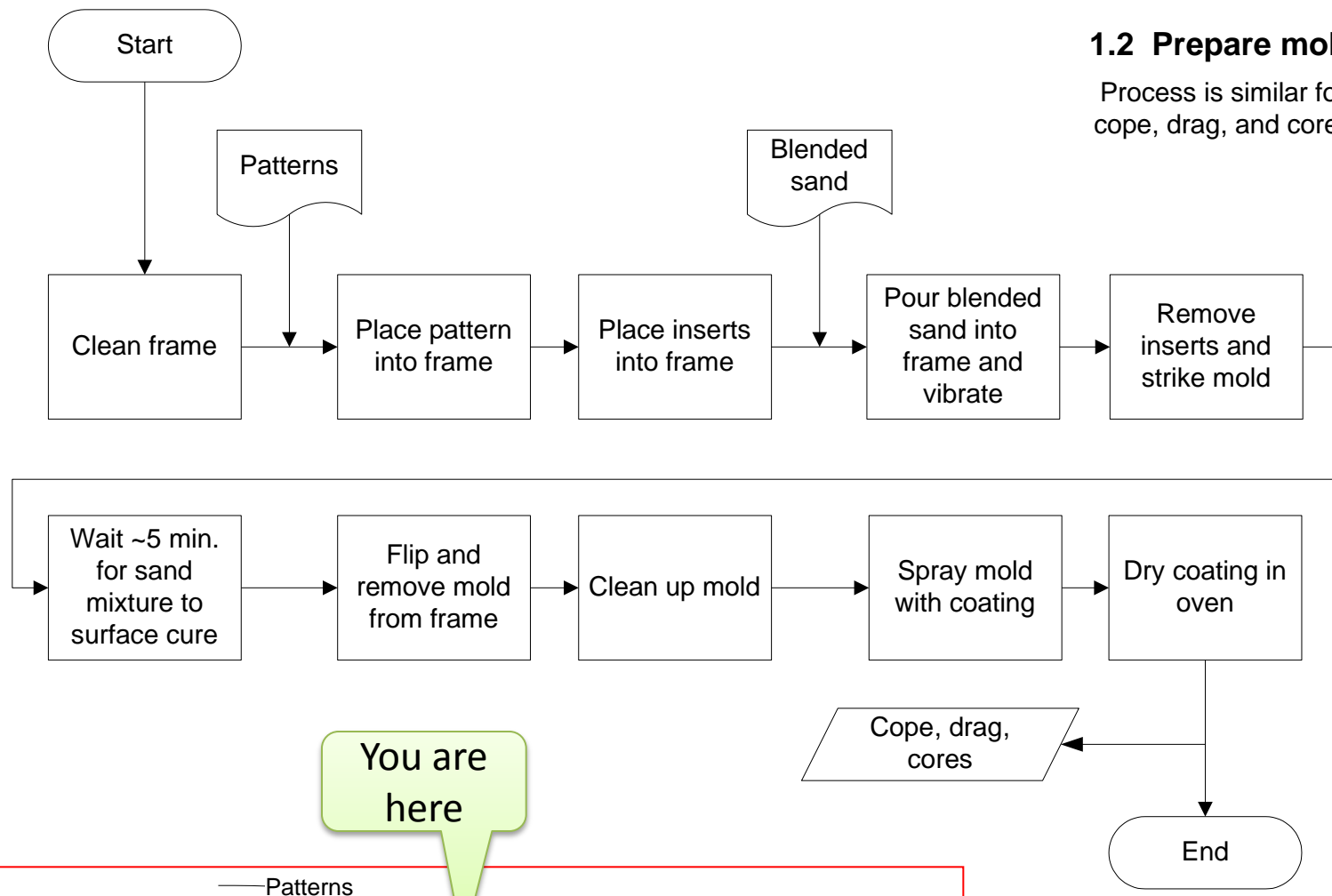


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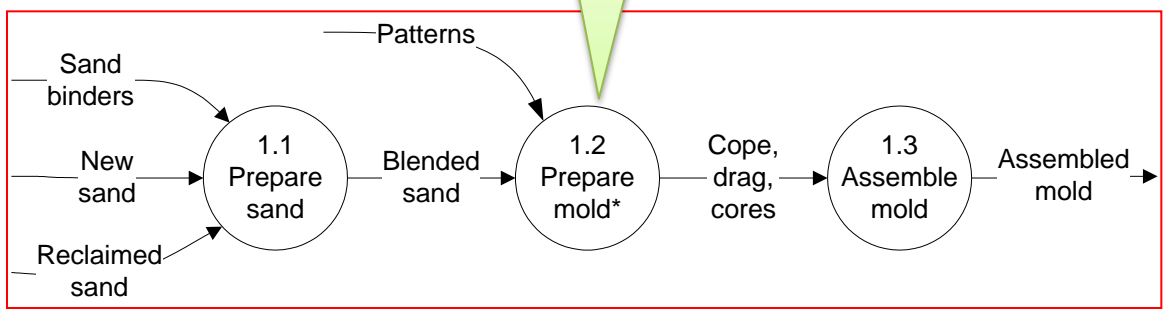


1.2 Prepare mold

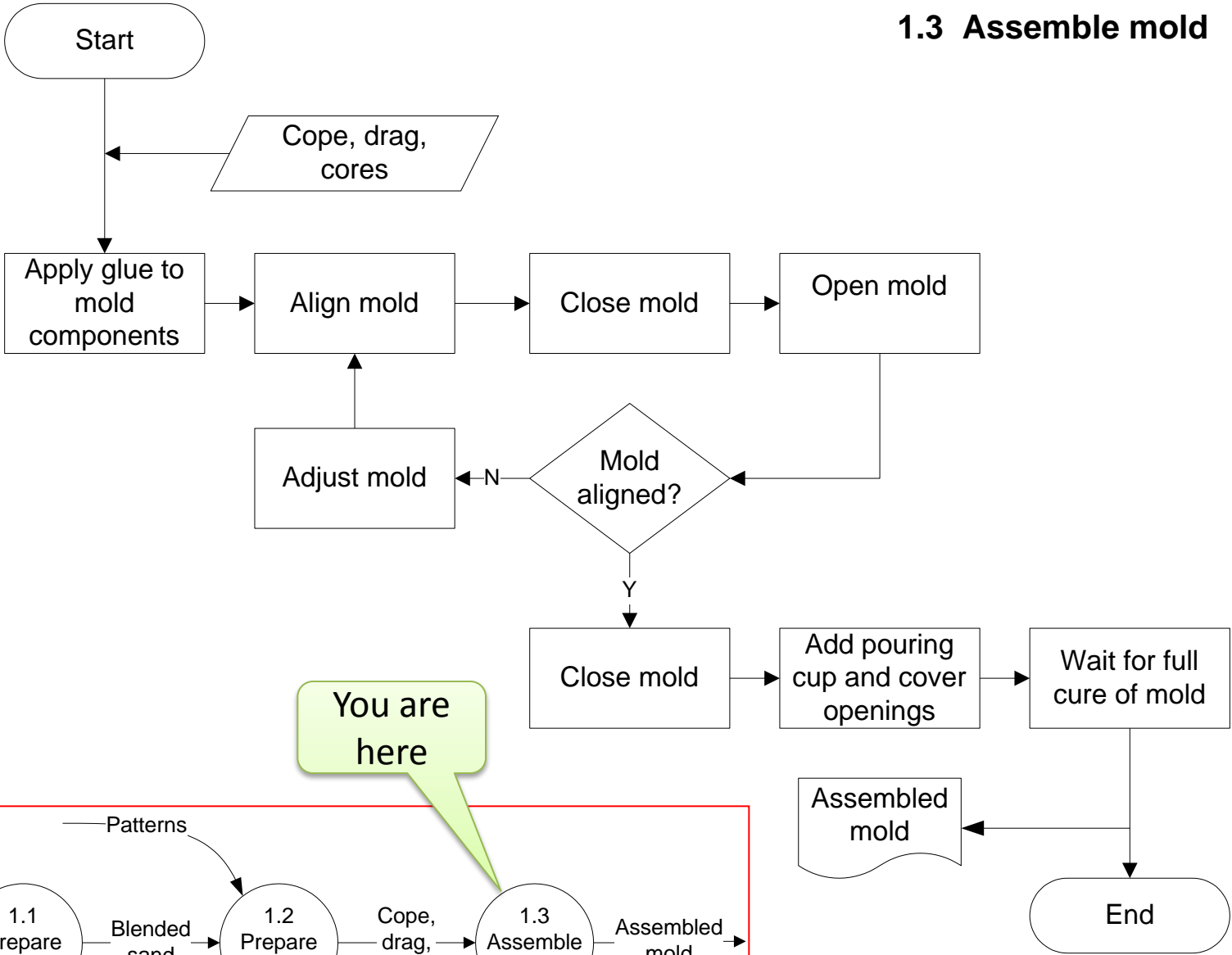
Process is similar for cope, drag, and cores



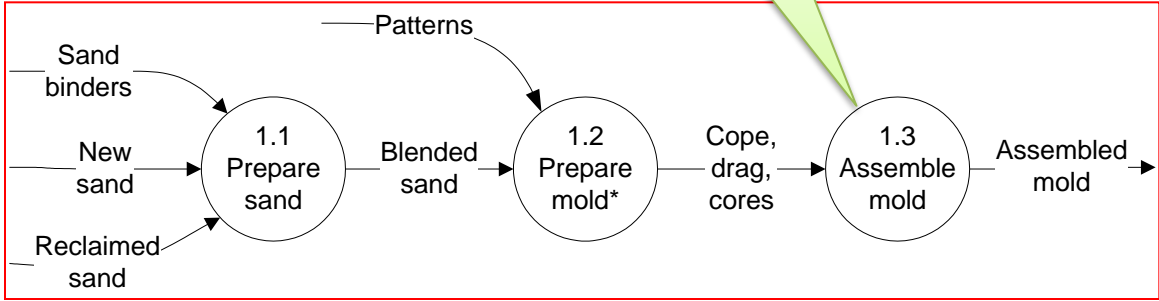
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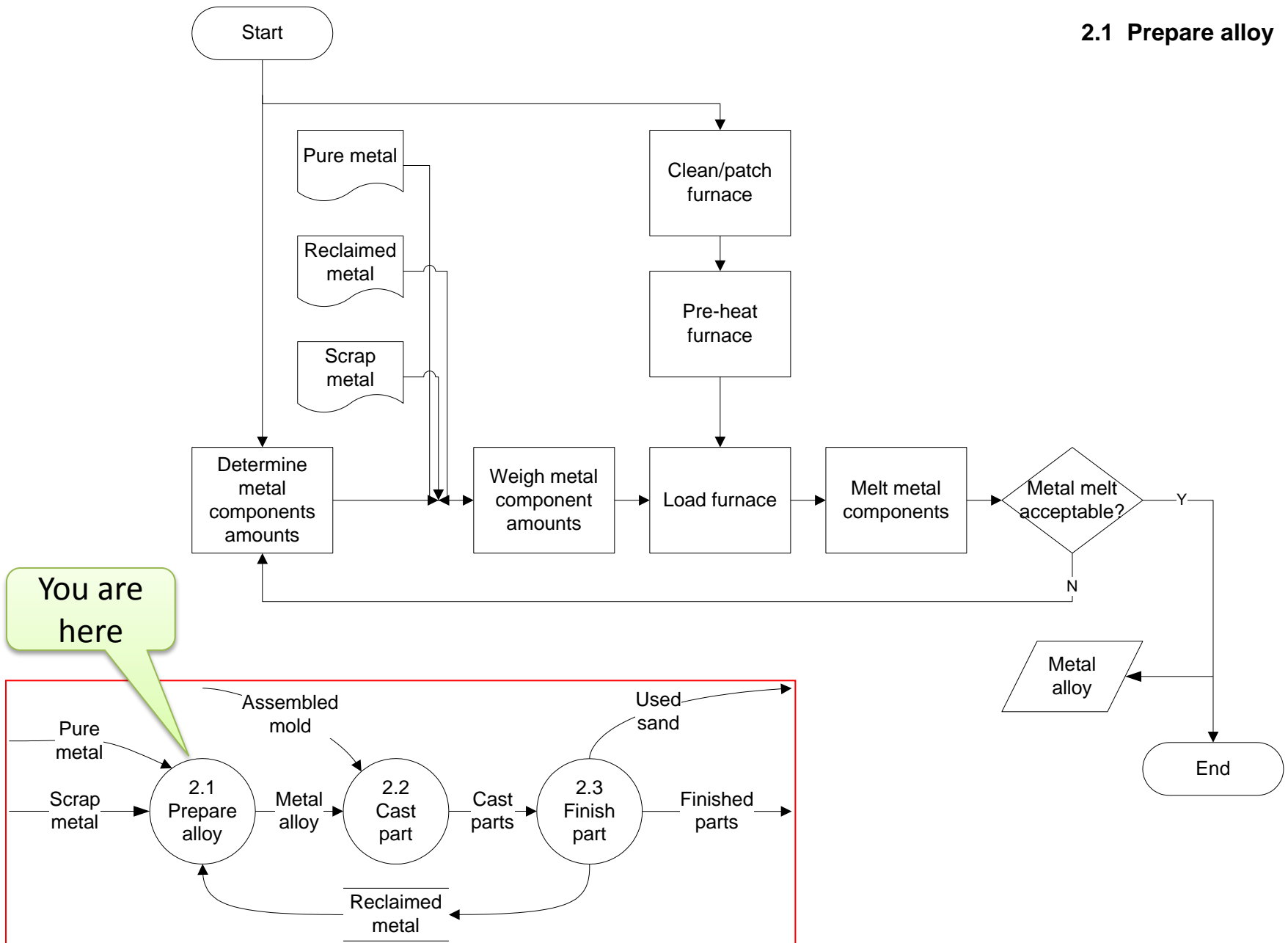
1.3 Assemble mold



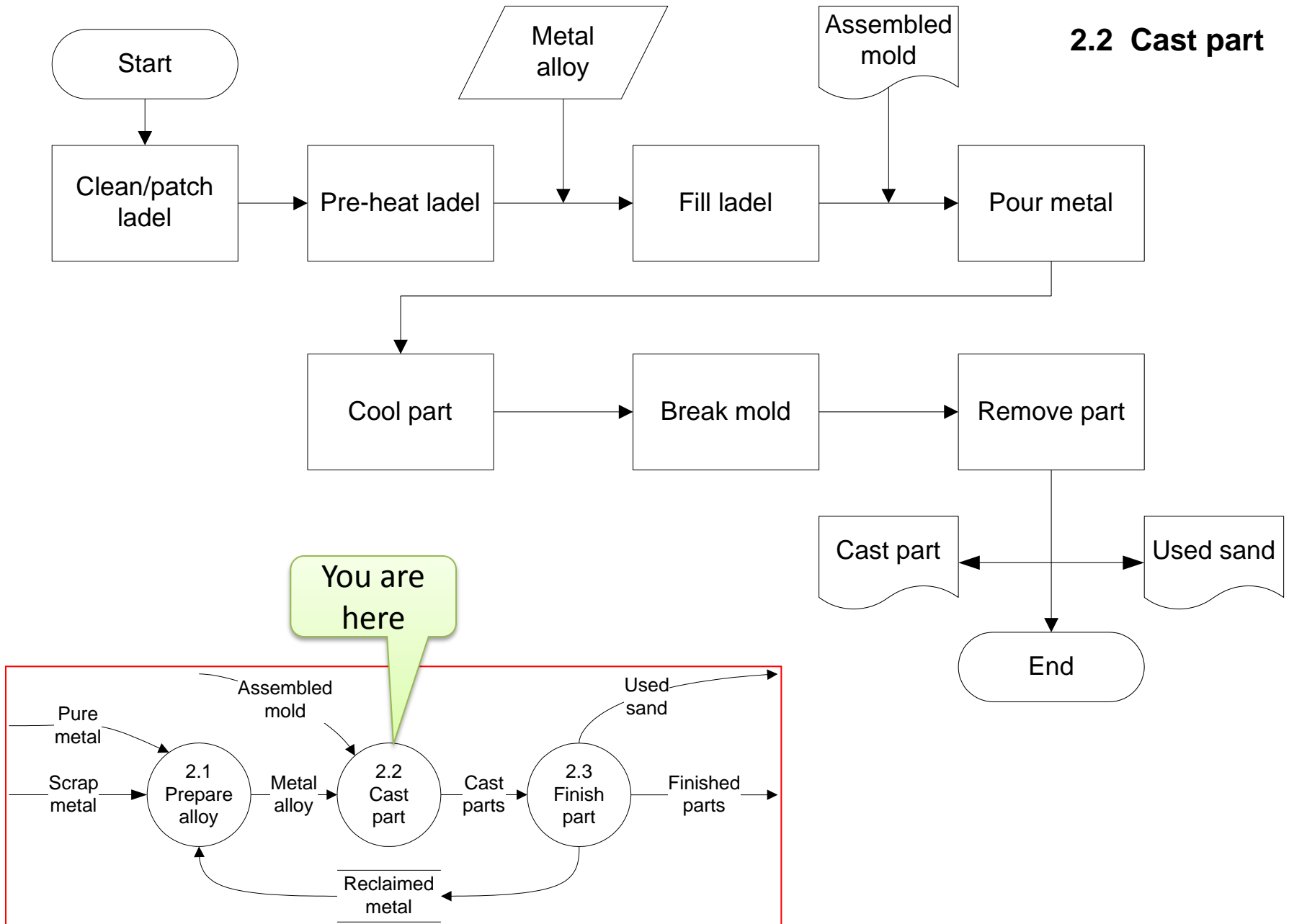
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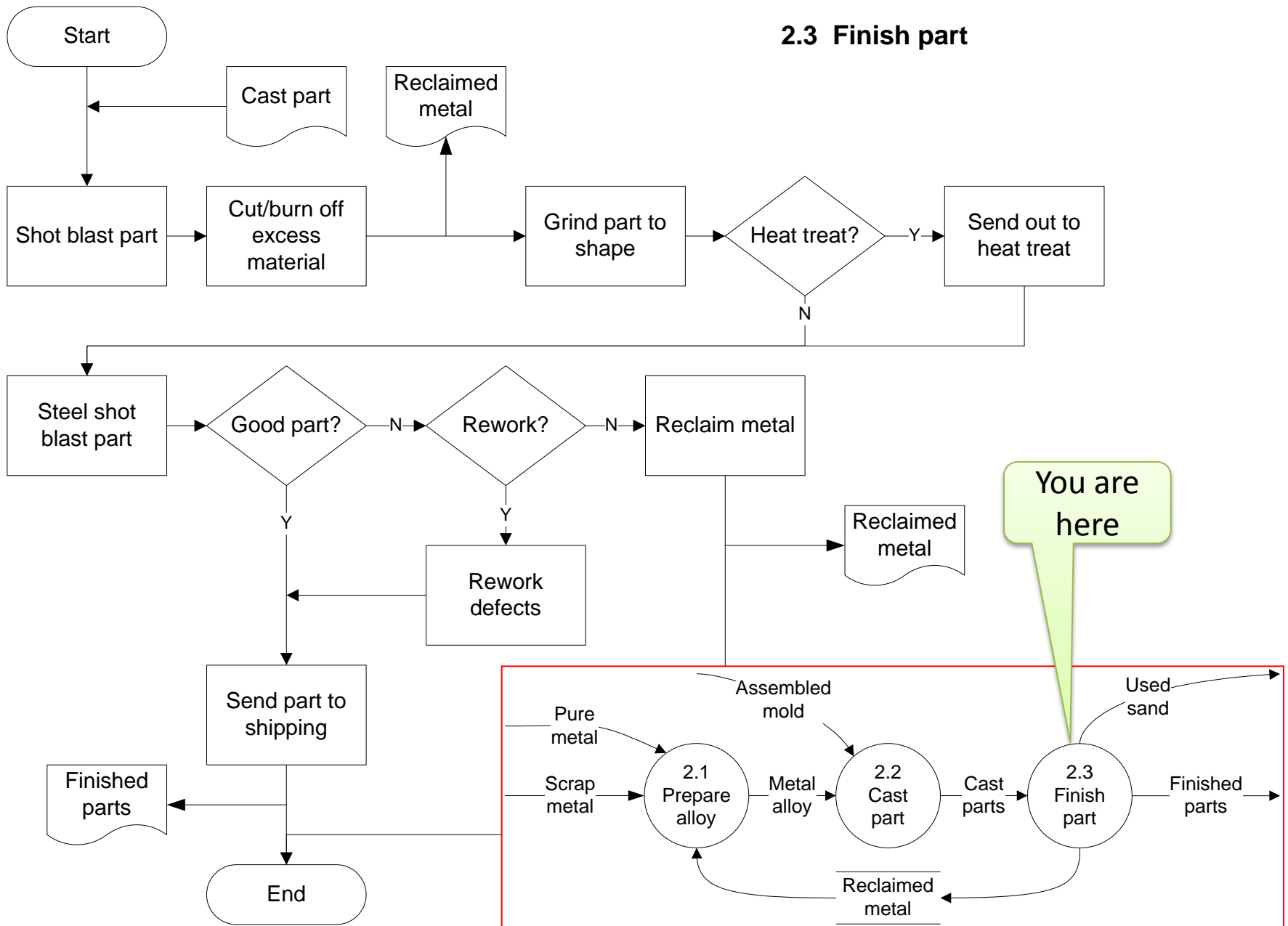
2.1 Prepare alloy



2.2 Cast part



2.3 Finish part



3. Reclaim sand

