Production Confirmation UI Flow

Complete frontend user journey for production confirmation in the MES system.

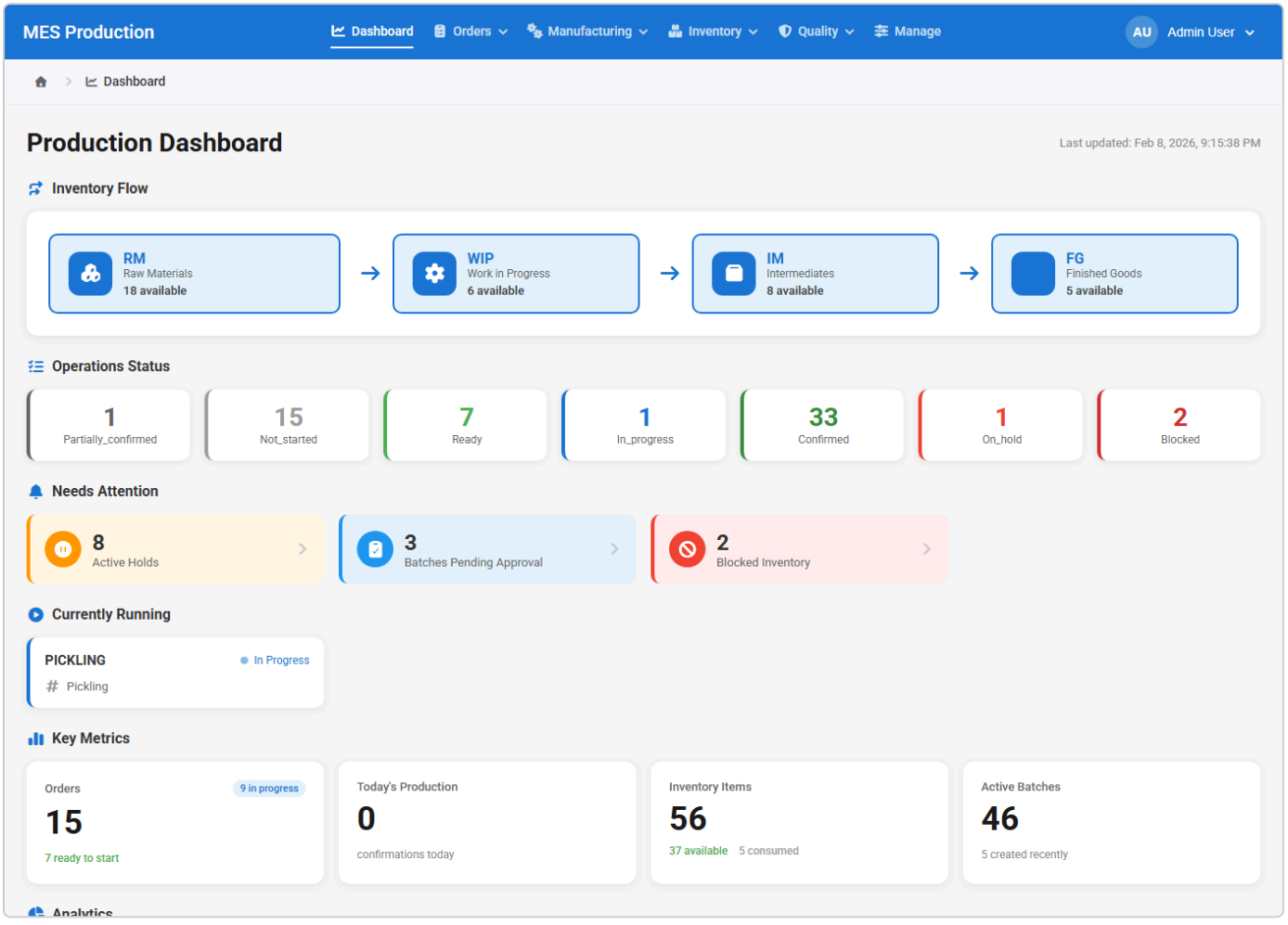
Overview: Operation-Level Confirmation

Production confirmation operates at the **Operation level**, not the Order or Line Item level.

```
Order (ORD-2026-001)
├── LineItem 1: HR-COIL-2MM (150T)
│   ├── Op 1: Scrap Charging → Confirmation #1
│   ├── Op 2: Melting        → Confirmation #2
│   ├── Op 3: Casting        → Confirmation #3
│   └── Op 4: Hot Rolling    → Confirmation #4
└── LineItem 2: HR-COIL-3MM (50T)
    └── Operations 1-4       → Confirmations #5-8
```

Screen 1: Dashboard - Operations Status

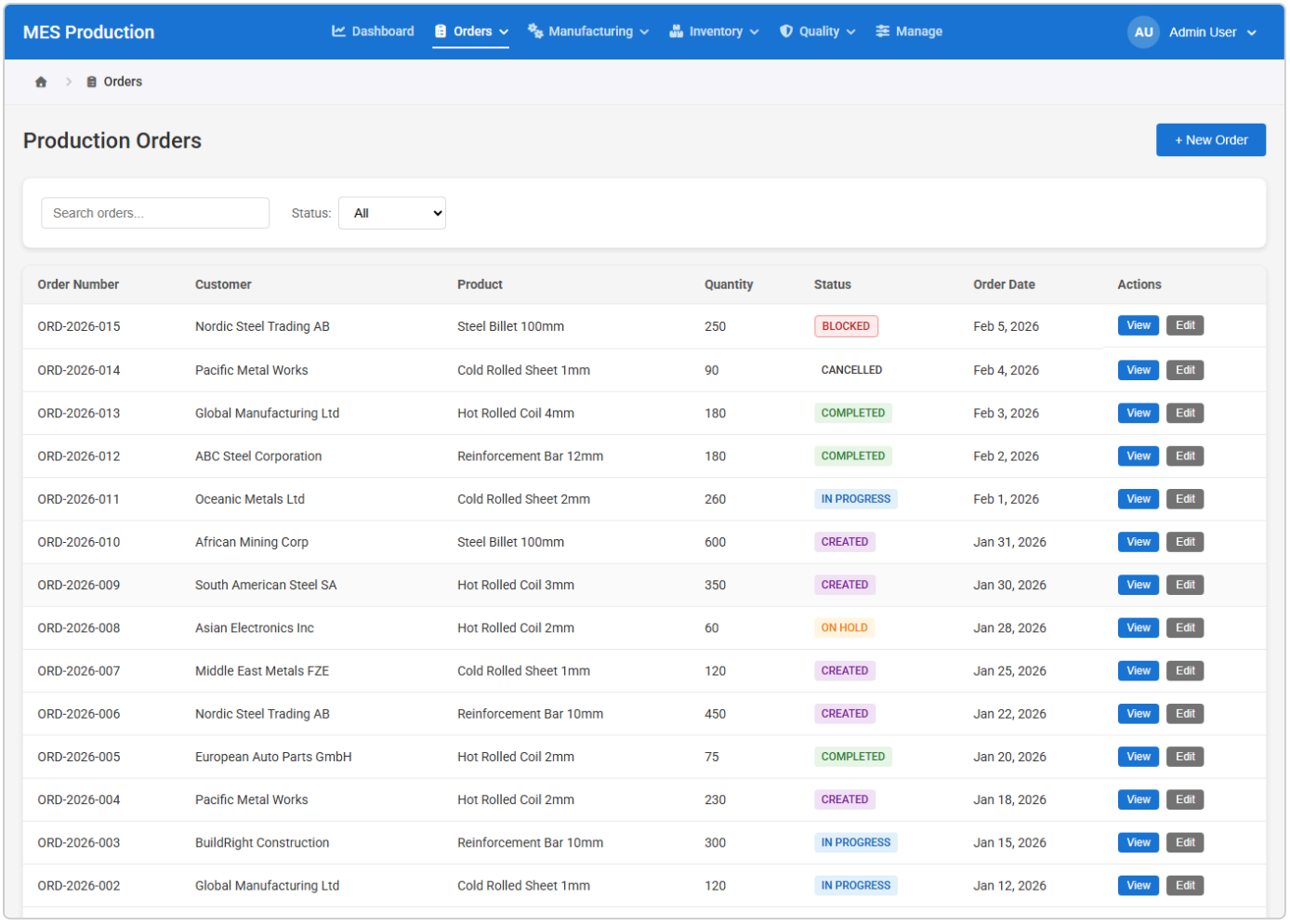
Route: /#/dashboard



Shows: Inventory Flow (RM→WIP→IM→FG), Operations Status counts, Needs Attention alerts.

Screen 2: Orders List

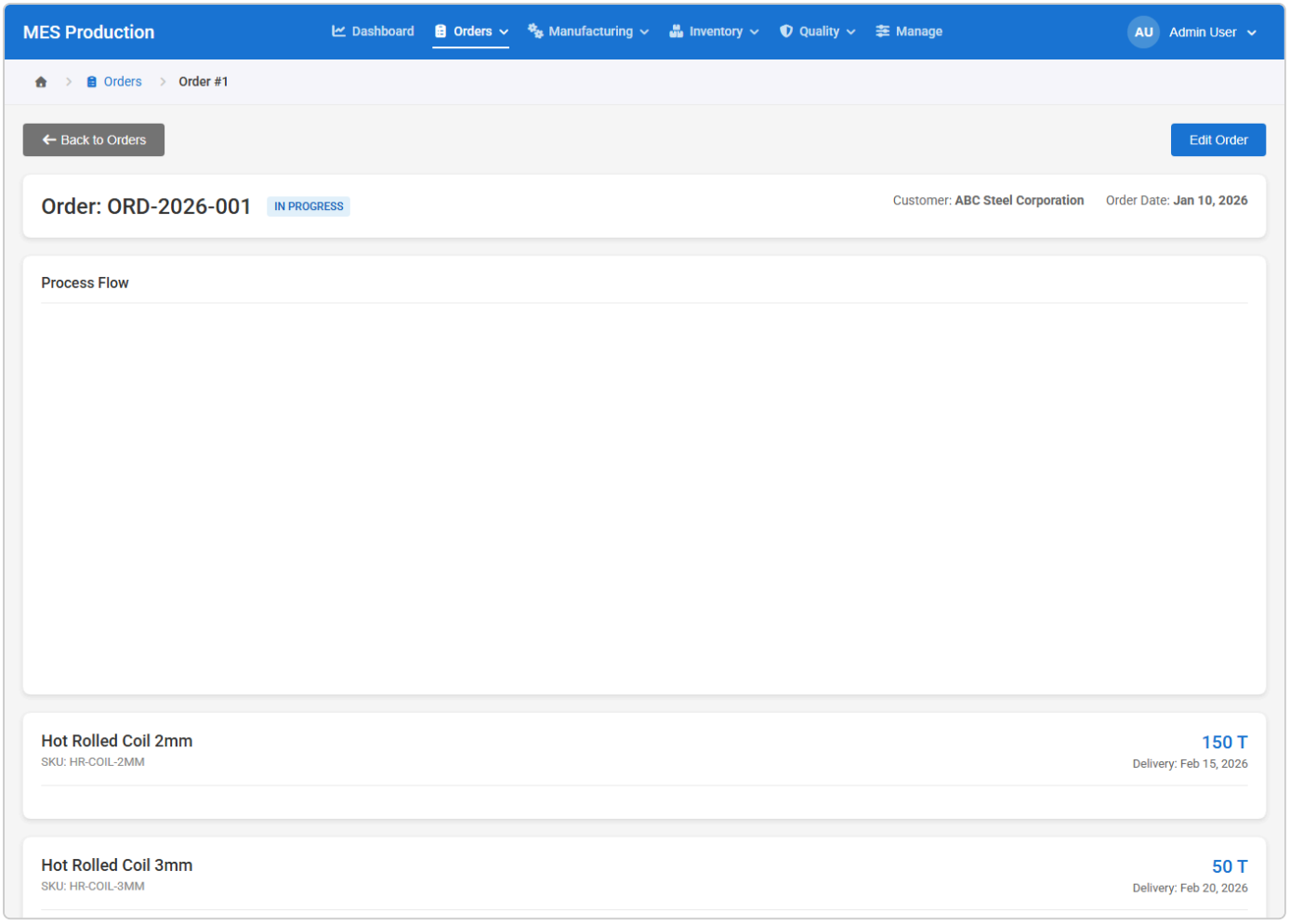
Route: /#/orders



Status	Description	Can Confirm?
CREATED	New order	No
IN PROGRESS	Active production	Yes (READY ops)
COMPLETED	All done	No
ON HOLD / BLOCKED	Blocked	No

Screen 3: Order Detail with Line Items

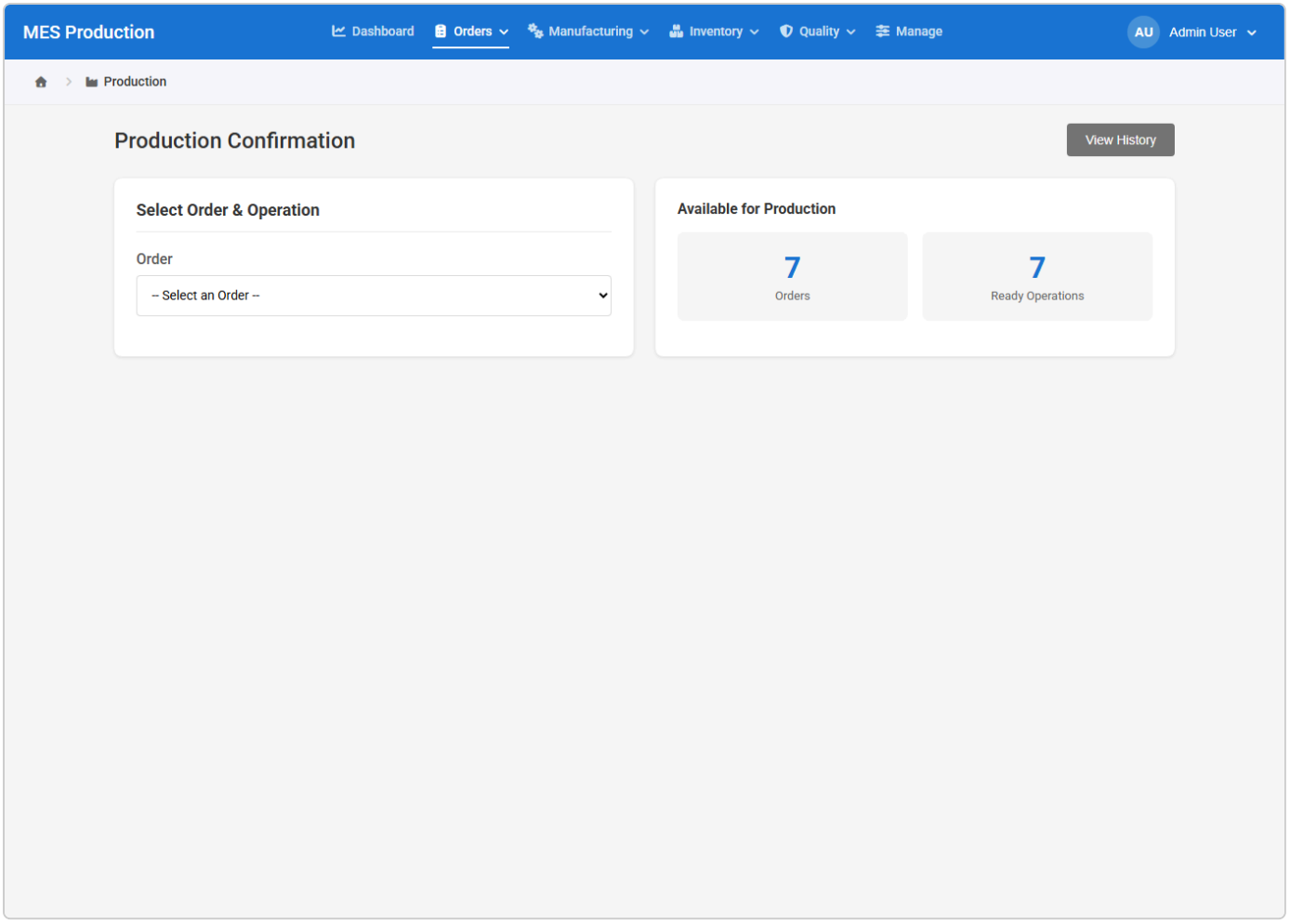
Route: /#/orders/{orderId}



Shows: Order header, Line items with products/quantities, Process flow for each line item.

Screen 4: Production Confirmation Landing

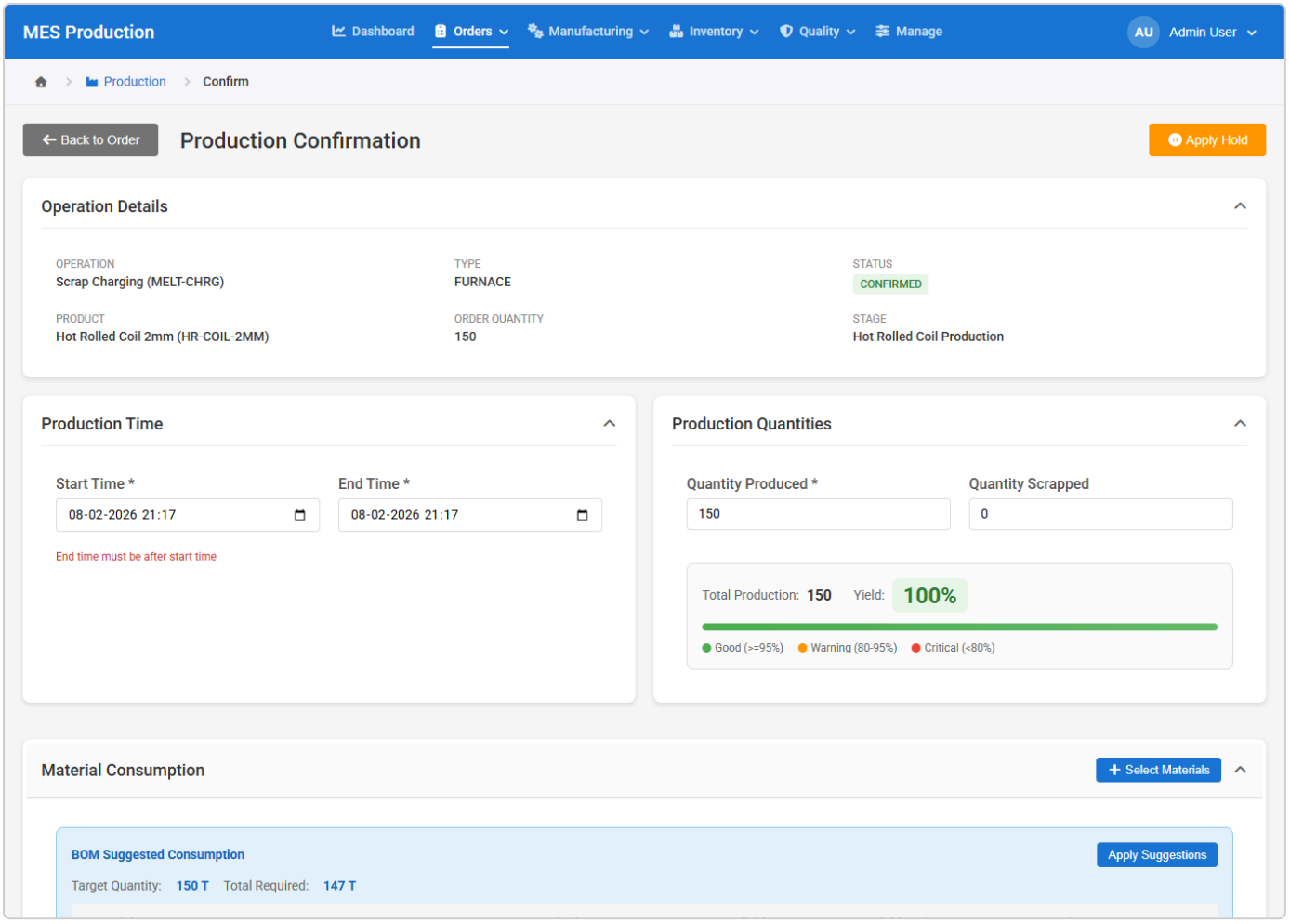
Route: /#/production



Select Order & Operation dropdowns. Shows: 7 Orders available, 7 Ready Operations.

Screen 5: Production Confirmation Form

Route: /#/production/confirm/{operationId}



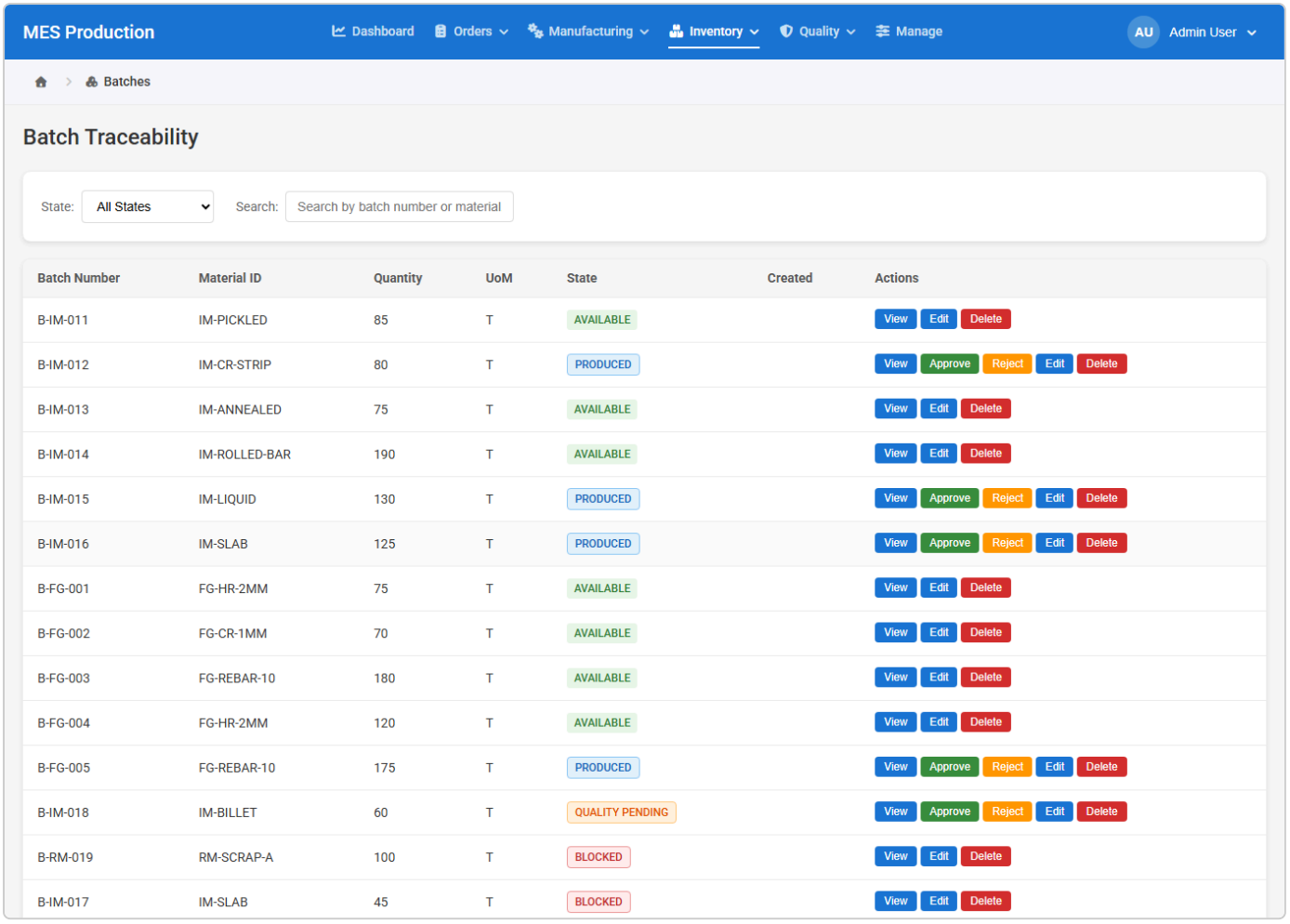
Form Sections:

- **Operation Details:** Name, Type, Product, Order Quantity, Stage
- **Production Time:** Start/End time with validation
- **Production Quantities:** Produced, Scrapped, Yield indicator
- **Material Consumption:** Select materials, BOM suggestions
- **Equipment & Operator:** Filtered dropdowns
- **Process Parameters:** Dynamic fields (Temperature, Power, Speed)
- **Delay Tracking:** Reason, duration, comments
- **Output Batch:** Auto-generated batch number

Yield Indicator: 🟢 ≥95% Good | 🟡 80-95% Warning | 🔴 <80% Critical

Screen 6: Batches List

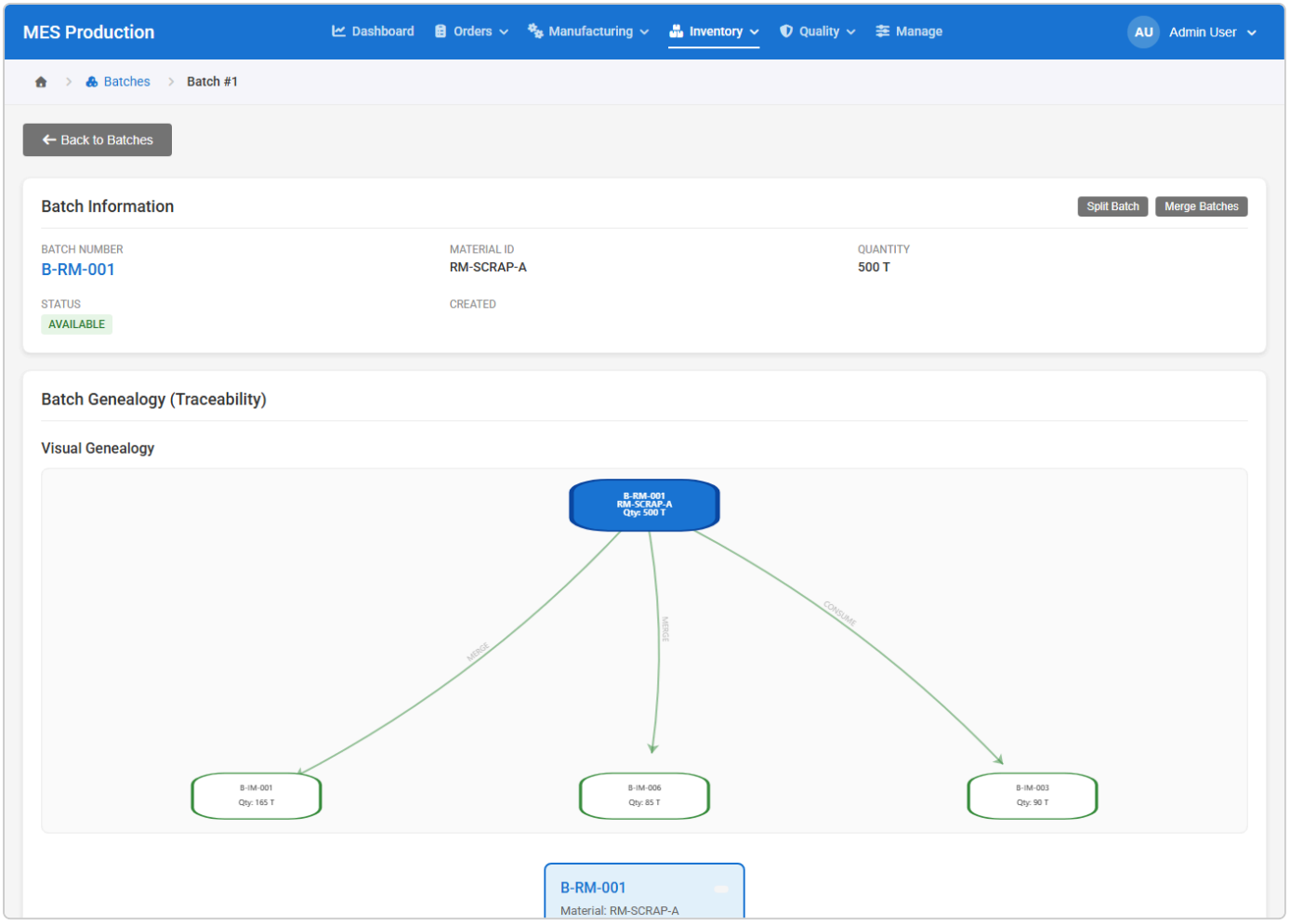
Route: /#/batches



Columns: Batch Number, Material ID, Quantity, State (AVAILABLE/PRODUCED/CONSUMED/QUALITY_PENDING), Actions.

Screen 7: Batch Genealogy (Traceability)

Route: /#/batches/{batchId}



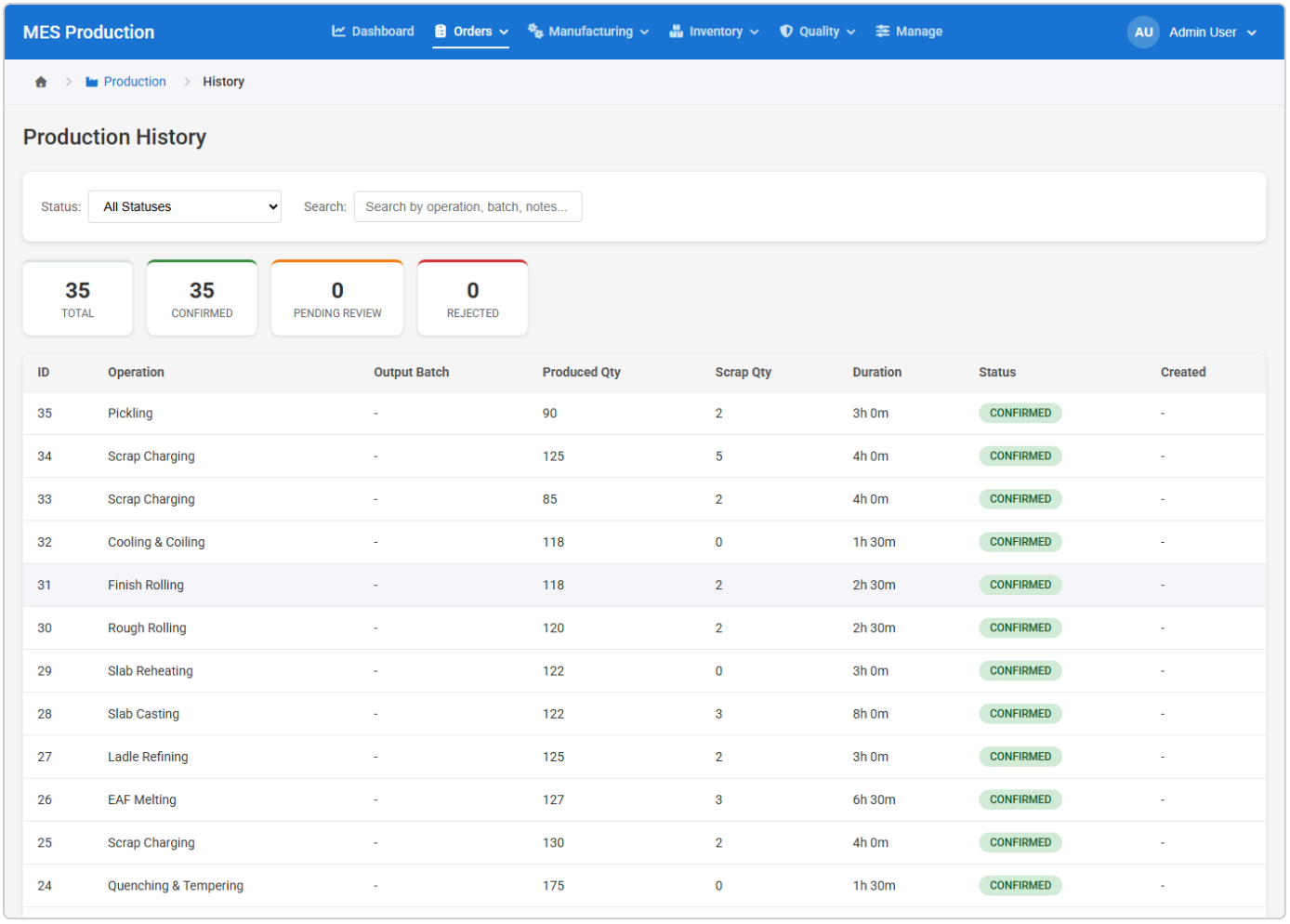
Visual genealogy tree showing parent-child batch relationships.

```
       B-RM-001 (500T)
      /     |      B-IM-001  B-IM-006  B-IM-003
(165T)    (85T)     (90T)
```

Relationship types: CONSUME, MERGE, SPLIT

Screen 8: Production History

Route: /#/production/history



ID	Operation	Output Batch	Produced Qty	Scrap Qty	Duration	Status	Created
35	Pickling	-	90	2	3h 0m	CONFIRMED	-
34	Scrap Charging	-	125	5	4h 0m	CONFIRMED	-
33	Scrap Charging	-	85	2	4h 0m	CONFIRMED	-
32	Cooling & Coiling	-	118	0	1h 30m	CONFIRMED	-
31	Finish Rolling	-	118	2	2h 30m	CONFIRMED	-
30	Rough Rolling	-	120	2	2h 30m	CONFIRMED	-
29	Slab Reheating	-	122	0	3h 0m	CONFIRMED	-
28	Slab Casting	-	122	3	8h 0m	CONFIRMED	-
27	Ladle Refining	-	125	2	3h 0m	CONFIRMED	-
26	EAF Melting	-	127	3	6h 30m	CONFIRMED	-
25	Scrap Charging	-	130	2	4h 0m	CONFIRMED	-
24	Quenching & Tempering	-	175	0	1h 30m	CONFIRMED	-

Summary: 35 Total | 35 Confirmed | 0 Pending Review | 0 Rejected

Columns: ID, Operation, Output Batch, Produced Qty, Scrap Qty, Duration, Status, Created

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Status Flow Diagrams

```
Operation Status:
NOT_STARTED → READY → IN_PROGRESS → CONFIRMED
                ↓           ↓
             ON_HOLD ↔ BLOCKED

Batch Status:
PRODUCED → QUALITY_PENDING → AVAILABLE → CONSUMED
                           → BLOCKED → SCRAPPED
```

Key Points

1. **Granular:** Each operation confirmed individually
2. **Sequential:** Operations follow routing sequence
3. **Traceable:** Every confirmation creates batch genealogy
4. **Quality Gates:** Batches can require QC approval
5. **BOM Integration:** Suggested consumption from Bill of Materials
6. **Yield Tracking:** Visual efficiency indicator

7. **Audit Trail:** Full logging of all confirmations