WSA Steel Taxonomy Analysis Report

Steel Demand Model - Forecast Report

WSA Steel Taxonomy Analysis Report - Track A Production Forecasts

Generated: 2025-07-14 08:31:06
Analysis Framework: World Steel Association Official Steel Industry Hierarchy
Source: WSA Steel Hierarchy Diagrams (5 Official Diagrams)

Executive Summary

This report provides comprehensive analysis of Track A steel production forecasts within the framework of the World Steel Association's official steel industry taxonomy. The analysis is based on the 5 official WSA hierarchy diagrams:

1. **Production Flow Hierarchy** (6-level transformation: Raw Materials → Specialized Products)
2. **Crude Steel Production Methods** (Electric Arc Furnace vs Basic Oxygen Furnace routes)
3. **Trade Flow Hierarchy** (Import/Export structure by product category)
4. **Steel Use Metrics Hierarchy** (3 consumption measurement approaches)
5. **Product Categories Relationship** (Semi-finished vs Finished product classification)

WSA Production Flow Hierarchy Analysis

6-Level WSA Production Structure

Level 0: Raw Materials

WSA Description: Iron ore and raw inputs
WSA Categories: Production of Iron Ore
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 12705.5 Million Tonnes (2025-2050)
- Categories Mapped: 1

- **Production of Iron Ore**: 12705.5 Mt, +nan% CAGR

Level 1: Primary Processing

WSA Description: Pig iron from iron ore processing
WSA Categories: Production of Pig Iron
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 90.0 Million Tonnes (2025-2050)
- Categories Mapped: 1

- **Production of Pig Iron**: 90.0 Mt, +nan% CAGR

Level 2: Crude Steel Production

WSA Description: Total crude steel production (EAF + BOF)
WSA Categories: Total Production of Crude Steel
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 120.8 Million Tonnes (2025-2050)
- Categories Mapped: 1

- **Total Production of Crude Steel**: 120.8 Mt, +nan% CAGR

Level 3: Semi-finished Products

WSA Description: Ingots and continuously-cast steel
WSA Categories: Production of Ingots, Production of Continuously-cast Steel
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 120.8 Million Tonnes (2025-2050)
- Categories Mapped: 2

- **Production of Ingots**: 0.7 Mt, +nan% CAGR
- **Production of Continuously-cast Steel**: 120.1 Mt, +nan% CAGR

Level 4: Hot Rolled Products

WSA Description: Primary finished products from hot rolling
WSA Categories: Production of Hot Rolled Products, Production of Hot Rolled Flat Products, Production of Hot Rolled Long Products
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 103.3 Million Tonnes (2025-2050)
- Categories Mapped: 2

- **Production of Hot Rolled Flat Products**: 64.3 Mt, +nan% CAGR
- **Production of Hot Rolled Long Products**: 39.0 Mt, +nan% CAGR

Level 5: Specialized Finished Products

WSA Description: Value-added and specialized steel products
WSA Categories: Production of Hot Rolled Coil, Sheet, and Strip <3mm, Production of Non-metallic Coated Sheet and Strip, Production of Other Metal Coated Sheet and Strip, Production of Wire Rod, Production of Railway Track Material
Track A Coverage: Yes

Track A Analysis:
- Total Volume: 96.2 Million Tonnes (2025-2050)
- Categories Mapped: 5

- **Production of Hot Rolled Coil, Sheet, and Strip (<3mm)**: 51.7 Mt, +nan% CAGR
- **Production of Non-metallic Coated Sheet and Strip**: 9.2 Mt, +nan% CAGR
- **Production of Other Metal Coated Sheet and Strip**: 22.8 Mt, +nan% CAGR
- **Production of Wire Rod**: 10.9 Mt, +nan% CAGR
- **Production of Railway Track Material**: 1.6 Mt, +nan% CAGR

Tubular Products Branch

Tubular Products Branch: 3.4 Mt (2025-2050)
Parallel production branch from crude steel for specialized tubular applications

WSA Steel Use Metrics Analysis

The WSA defines 3 official steel consumption measurement approaches:

Apparent Steel Use (crude steel equivalent)

Calculation Basis: crude_steel_equivalent
Description: Calculated from Production + Imports - Exports

Track A Volume: 137.7 Million Tonnes (2025-2050)

- Apparent Steel Use (crude steel equivalent): 137.7 Mt (+nan% CAGR)

Apparent Steel Use (finished steel products)

Calculation Basis: finished_products

Description: Finished products basis

Track A Volume: 125.0 Million Tonnes (2025-2050)

- Apparent Steel Use (finished steel products): 125.0 Mt (+nan% CAGR)

True Steel Use (finished steel equivalent)

Calculation Basis: indirect_trade_adjusted

Description: Adjusted for indirect trade

Track A Volume: 168.1 Million Tonnes (2025-2050)

- True Steel Use (finished steel equivalent): 168.1 Mt (+nan% CAGR)

WSA Product Categories Analysis

WSA classifies steel products into Semi-finished and Finished categories:

Semi-finished Products

Trade Category: Intermediate Products

WSA Categories: Ingots and Semis, Continuously-cast Steel

Track A Volume: 120.8 Million Tonnes (2025-2050)

Track A Categories:

- Production of Ingots: 0.7 Mt (+nan% CAGR)
- Production of Continuously-cast Steel: 120.1 Mt (+nan% CAGR)

Finished Flat Products

Trade Category: Flat Products
WSA Categories: Sheets/Strips/Coils, Coated Products
Track A Volume: 147.9 Million Tonnes (2025-2050)
Track A Categories:
- Production of Hot Rolled Flat Products: 64.3 Mt (+nan% CAGR)
- Production of Hot Rolled Coil, Sheet, and Strip (<3mm): 51.7 Mt (+nan% CAGR)
- Production of Non-metallic Coated Sheet and Strip: 9.2 Mt (+nan% CAGR)
- Production of Other Metal Coated Sheet and Strip: 22.8 Mt (+nan% CAGR)

Finished Long Products

Trade Category: Long Products
WSA Categories: Wire Rod, Railway Track Material, Other Long Products
Track A Volume: 51.5 Million Tonnes (2025-2050)
Track A Categories:
- Production of Hot Rolled Long Products: 39.0 Mt (+nan% CAGR)
- Production of Wire Rod: 10.9 Mt (+nan% CAGR)
- Production of Railway Track Material: 1.6 Mt (+nan% CAGR)

Finished Tubular Products

Trade Category: Tubular Products
WSA Categories: Pipes and Tubes
Track A Volume: 3.4 Million Tonnes (2025-2050)
Track A Categories:
- Total Production of Tubular Products: 3.4 Mt (+nan% CAGR)

WSA Trade Flow Analysis

Track A production categories mapped to WSA trade flow structure:

Intermediate Products

Total Volume: 120.8 Million Tonnes (2025-2050)

Track A Categories:

- Production of Ingots
- Production of Continuously-cast Steel

Flat Products

Total Volume: 147.9 Million Tonnes (2025-2050)

Track A Categories:

- Production of Hot Rolled Flat Products
- Production of Hot Rolled Coil, Sheet, and Strip (<3mm)
- Production of Non-metallic Coated Sheet and Strip
- Production of Other Metal Coated Sheet and Strip

Long Products

Total Volume: 51.5 Million Tonnes (2025-2050)

Track A Categories:

- Production of Hot Rolled Long Products
- Production of Wire Rod
- Production of Railway Track Material

Tubular Products

Total Volume: 3.4 Million Tonnes (2025-2050)

Track A Categories:

- Total Production of Tubular Products

Summary and Conclusions

WSA Taxonomy Compliance

Production Hierarchy Coverage: 6/6 WSA levels covered
Consumption Metrics Coverage: 3/3 WSA measures covered
Product Categories: Complete coverage of finished product categories
Trade Flow Integration: All production mapped to WSA trade structure

Key Insights

1. **Production Focus**: Track A provides excellent coverage of WSA Levels 2, 4, and 5 (Crude Steel → Finished → Specialized)
2. **Value Chain Position**: Track A captures the key value-adding stages of steel production
3. **International Compatibility**: Full alignment with WSA reporting standards enables global comparison
4. **Trade Integration**: Production forecasts directly support trade flow analysis
5. **Consumption Metrics**: Comprehensive coverage of WSA steel use measurement approaches

Applications

- **Global Benchmarking**: Compare Australian steel production with other WSA member countries
- **Trade Analysis**: Support import/export planning and trade balance analysis
- **Market Intelligence**: Align with international steel market reporting standards
- **Policy Development**: Support evidence-based steel industry policy making
- **Investment Planning**: Inform steel industry investment decisions with WSA-compliant forecasts

Report generated by WSA Steel Taxonomy Analysis Module

Based on official WSA Steel Industry Hierarchy Diagrams
