

Hot Stamping Experience and Tech Tour



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PMA

PRECISION
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The Compact Strip Production Process for PHS Grades

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Nucor today



LARGEST STEEL AND STEEL PRODUCTS PRODUCER IN NORTH AMERICA.

- 25.2 million tons of steel and steel products shipped to outside customers in 2023
- Approximately **32,000 teammates** working safely at over **300 facilities** in North America



LARGEST RECYCLER IN NORTH AMERICA

Nucor recycles about 20M tons of scrap metal annually at its 29 EAF steel mills



FORTUNE 150 COMPANY

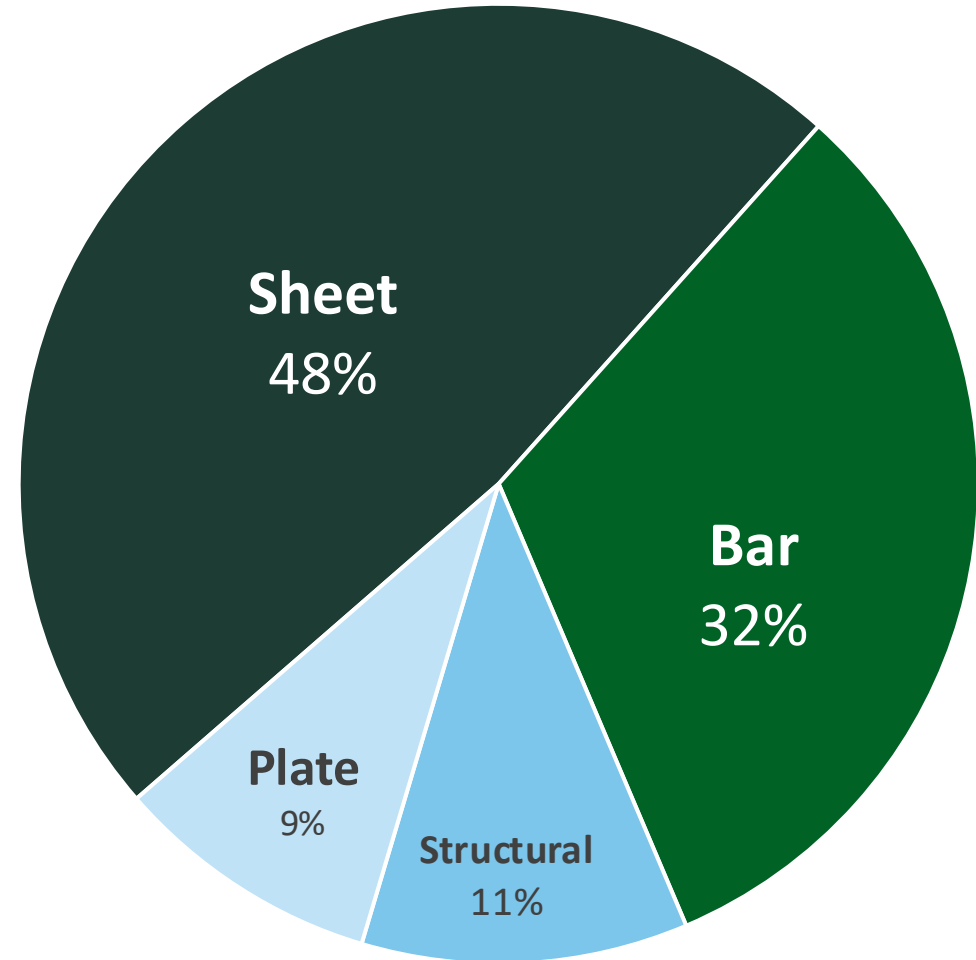
- \$34.7 billion in sales in 2023
- \$14.7 billion in capital returned to Nucor stockholders since 2012
- NYSE listed: NUE

Annual Capacity: Steel mills

PRODUCT	CAPACITY
Sheet	14.6
Bar	9.5
Structural	3.2
Plate	2.8
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Total Steel	30.2

Capacity in millions of short tons as of December 31, 2023

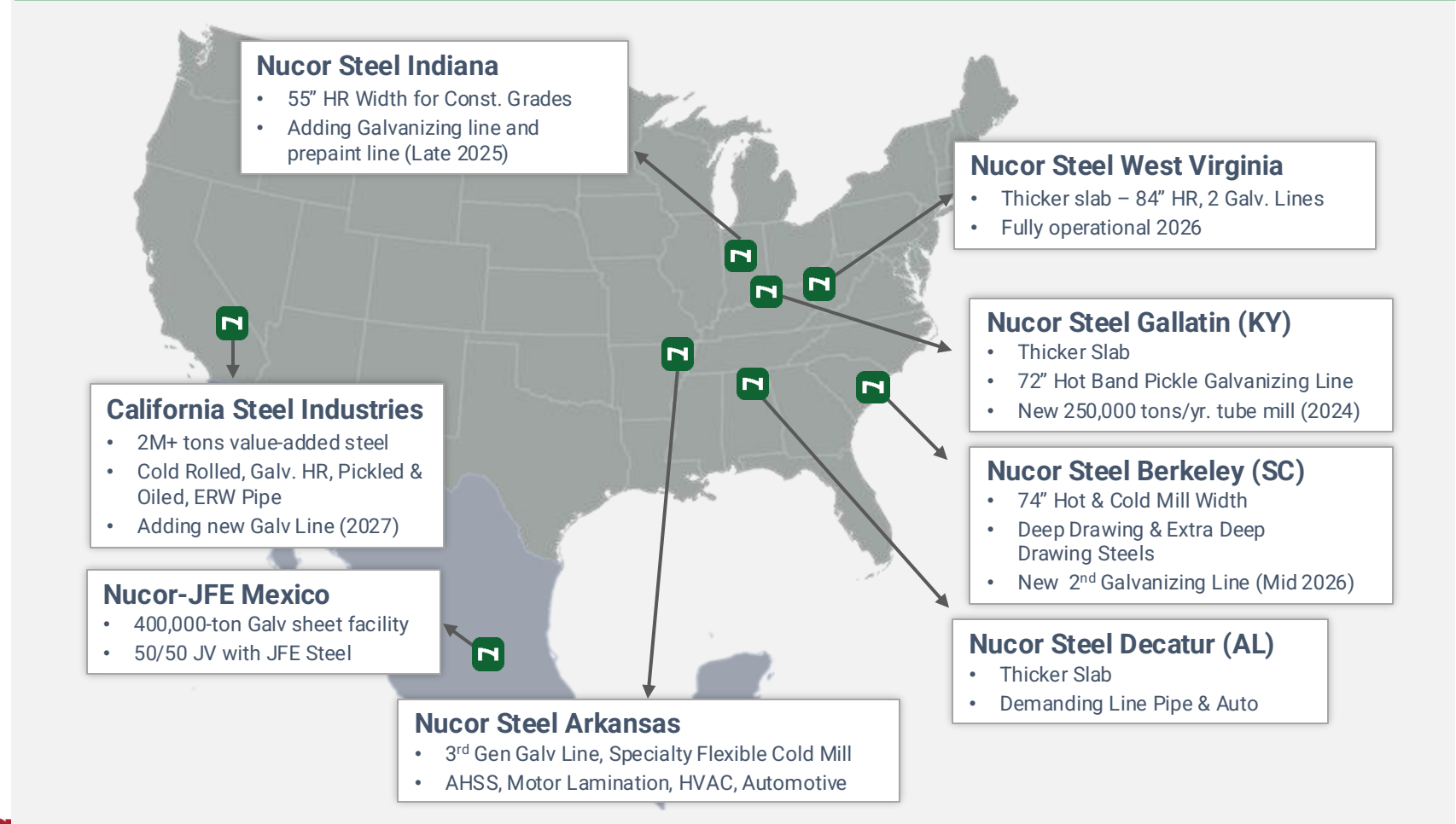
Excludes the Nucor Steel Crawfordsville Sheet Mill Expansion, the Nucor West Virginia Sheet Mill, and the Nucor micro mill in Lexington, North Carolina.



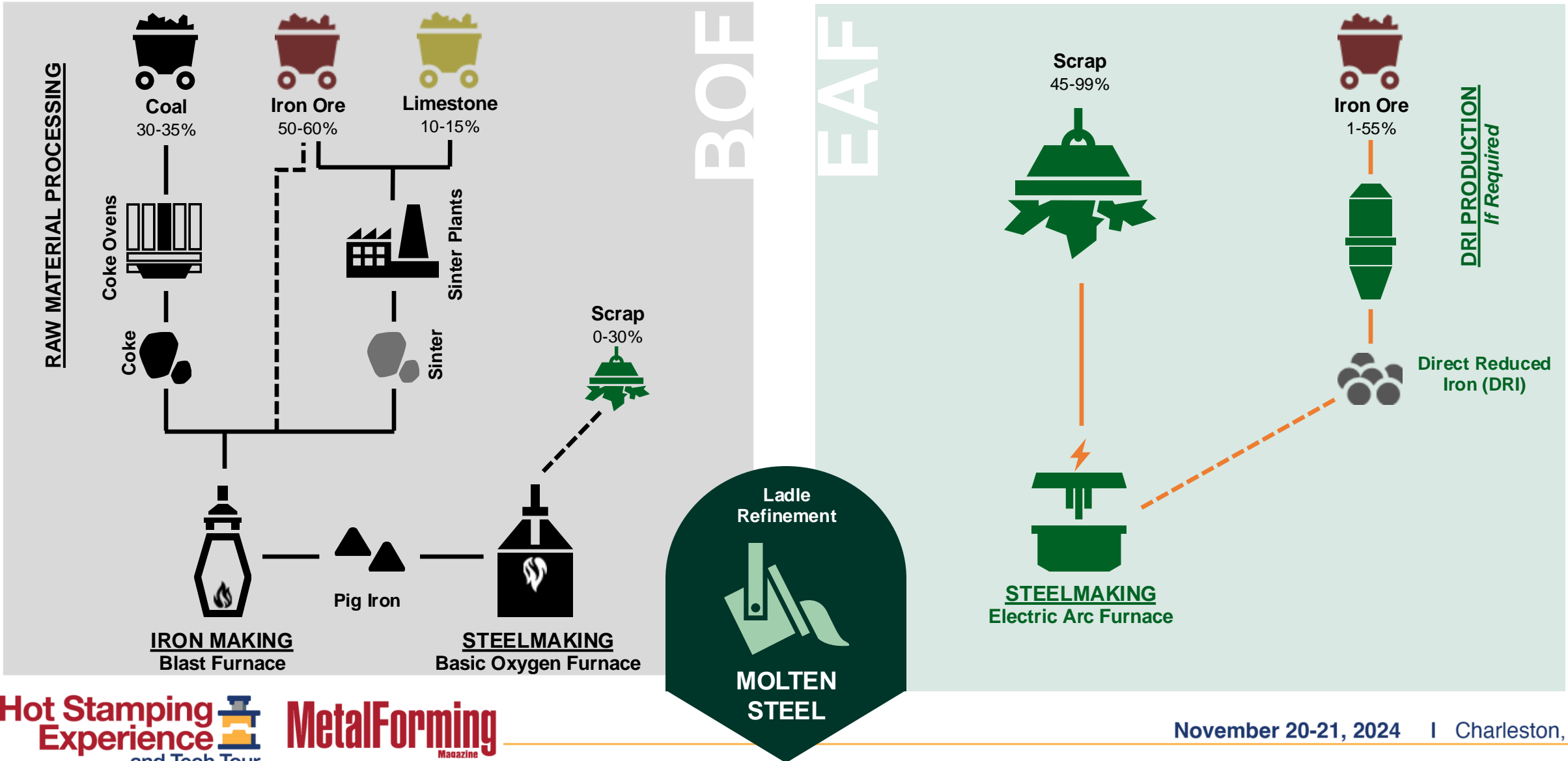
Building out a Broad Array of Targeted Capabilities in Steel Sheet



EXPANDING SHEET CAPABILITIES



Extractive vs. Circular Process

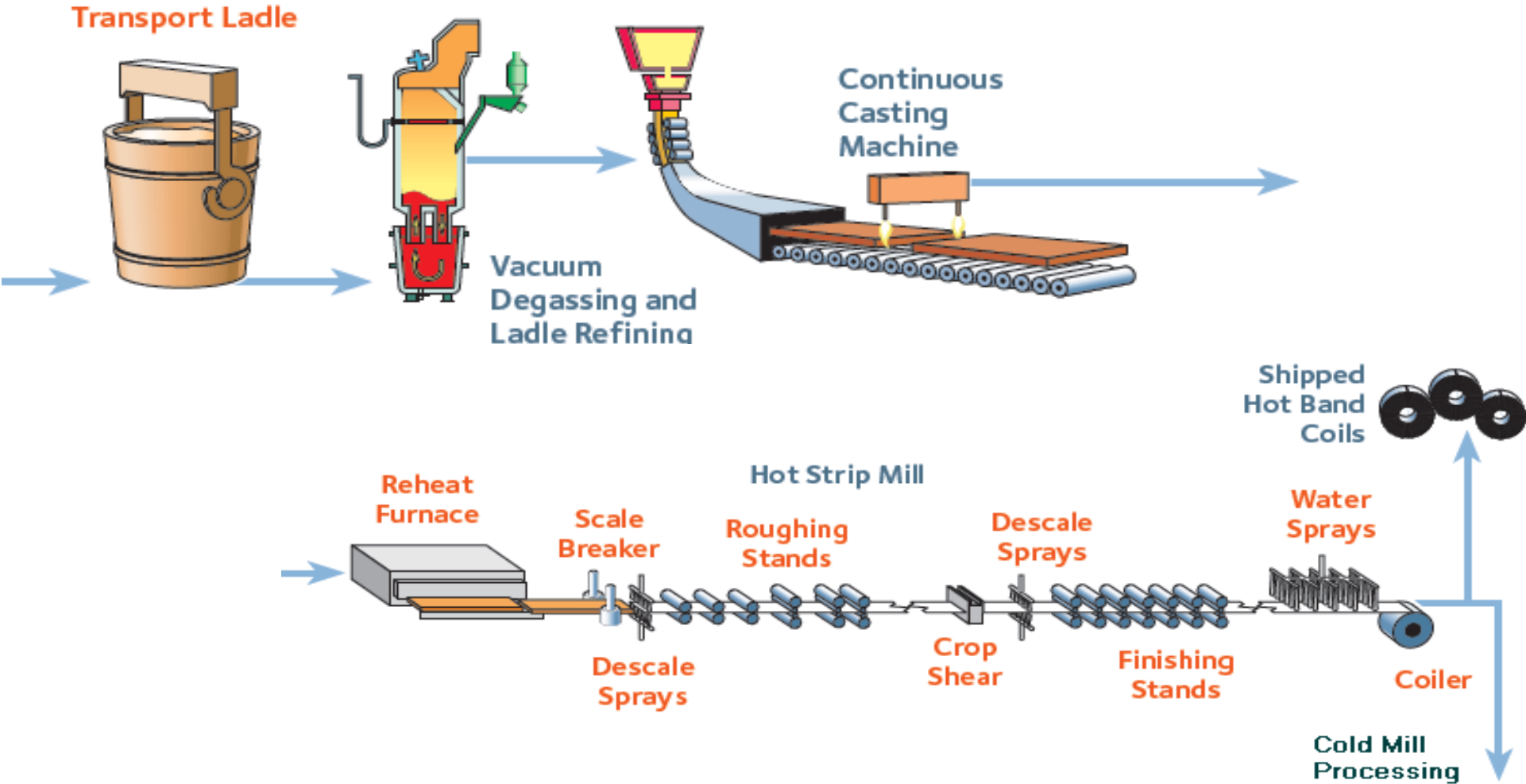


Nucor PHS Grades Produced & In Development

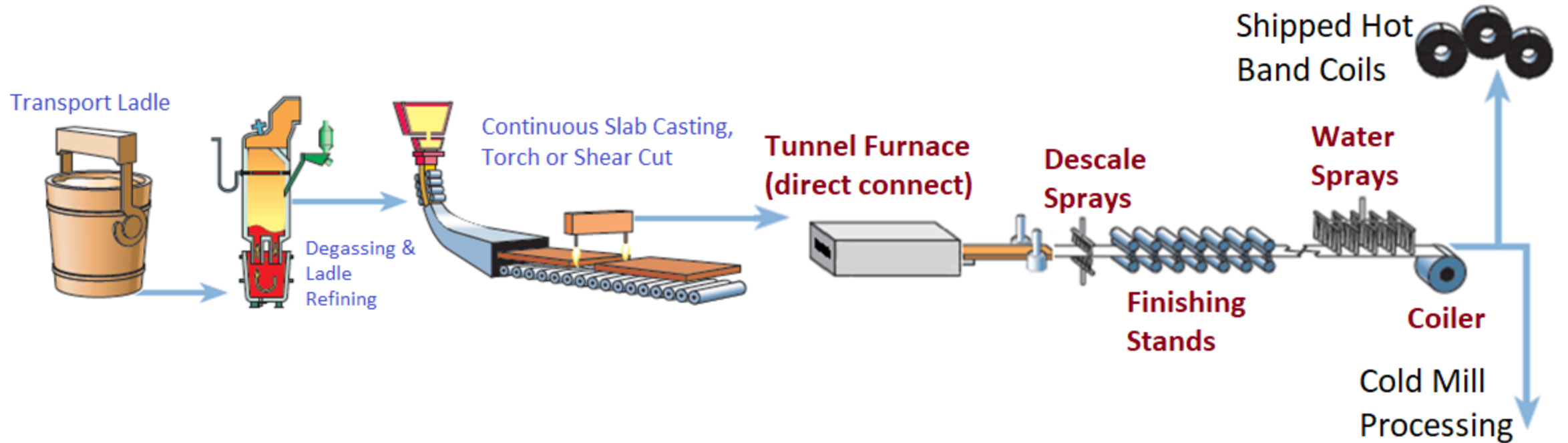
- ✓ PHS 1500
- ✓ Coating Free PHS (in development)
- ✓ PHS 2000 (in development)



Conventional Steel Casting & Hot Mill Process



Compact Strip casting and hot mill Process



Nucor's Process for PHS Production

- Scrap is selected based on desired residual chemistry requirements
- Scrap & pig iron are charged into furnace
- DRI is fed through chute into furnace
- DC Furnace, \approx 160-ton heat, 100-ton heel



Tap & Ladle Refining

- Heats tapped open (not killed)
- Bottom tap from furnace
- ≈160-ton heat, 100-ton heel
- Transferred to Ladle Metallurgy Furnace for alloying, refining, argon stir & temp adjustment
 - Boron is final addition to ensure free boron for heat treatability



Casting

- Thin Slab Caster, 55-65mm
- Up to 1905mm wide (75")
- Straight funnel mold
- Can use Liquid Core Reduction
- Thin slabs pass directly through tunnel furnace to hot mill



Hot Rolling

- 7-stand finishing mill
- Induction furnaces prior to finishing mills to trim temperature if needed





THANK YOU

NUCOR®