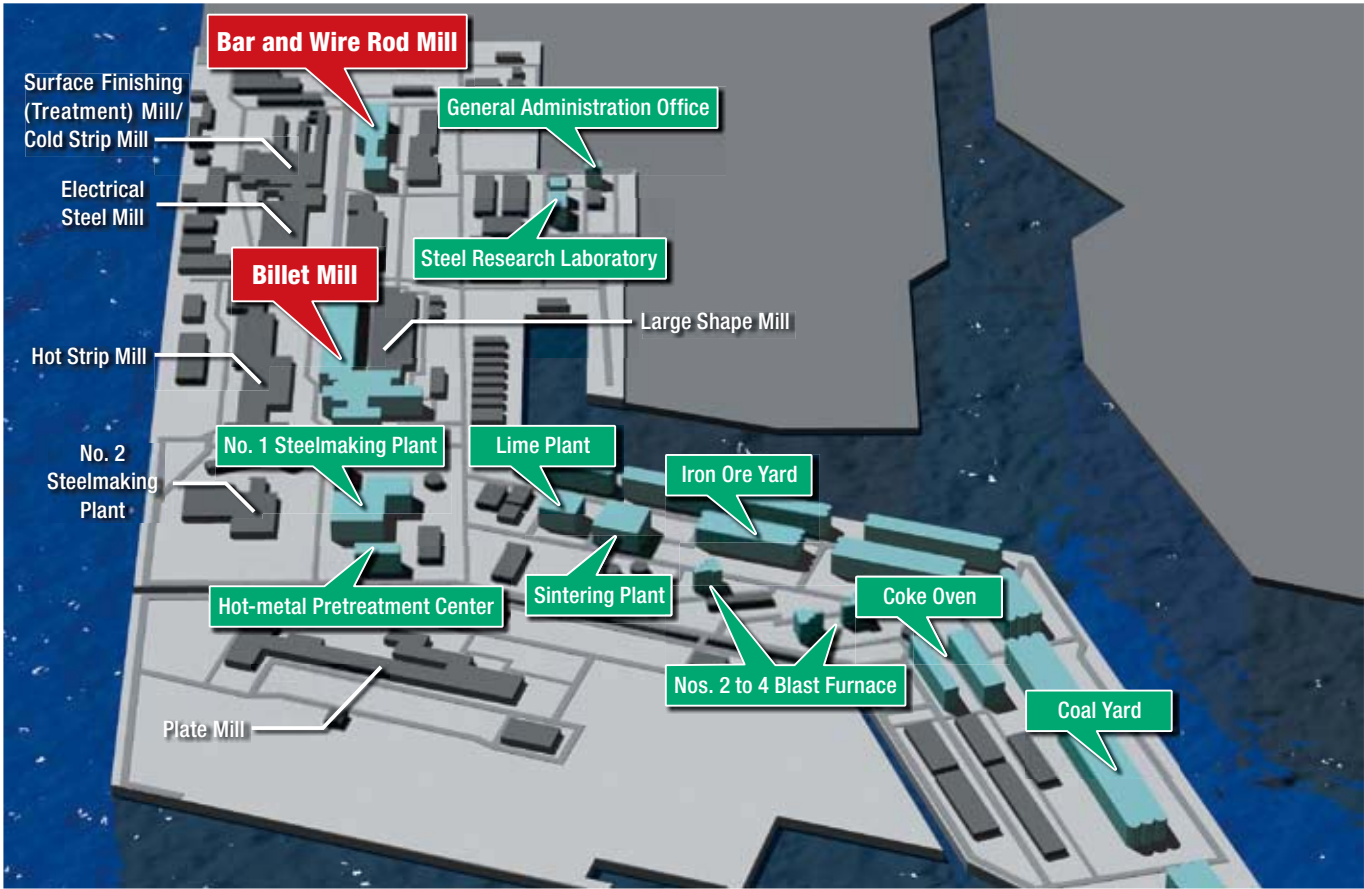
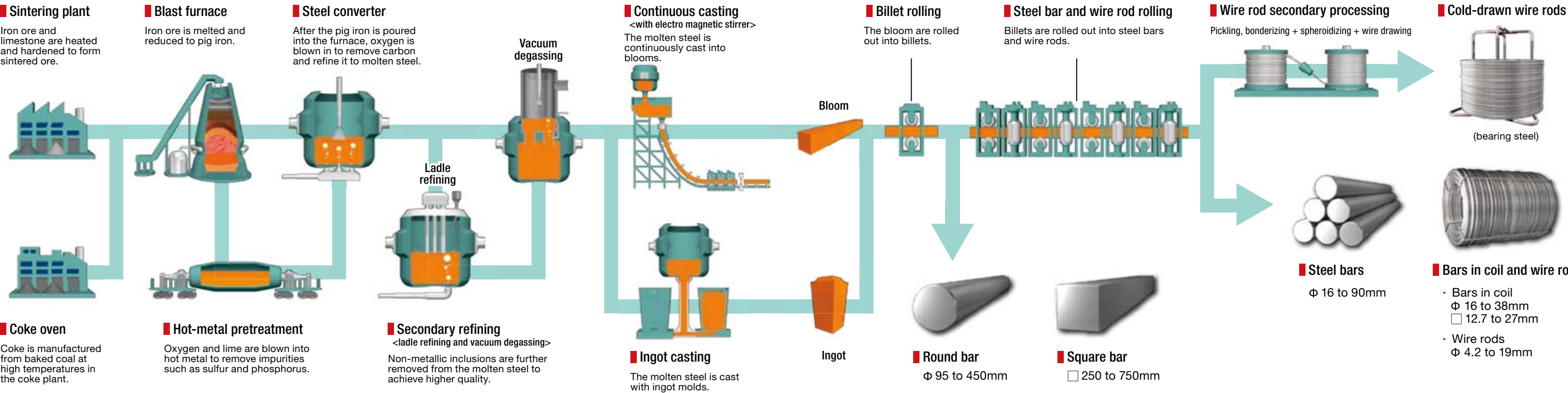




Overview



Blast furnace



Steel converter



Ladle refining equipment



Vacuum degassing equipment



Continuous casting equipment

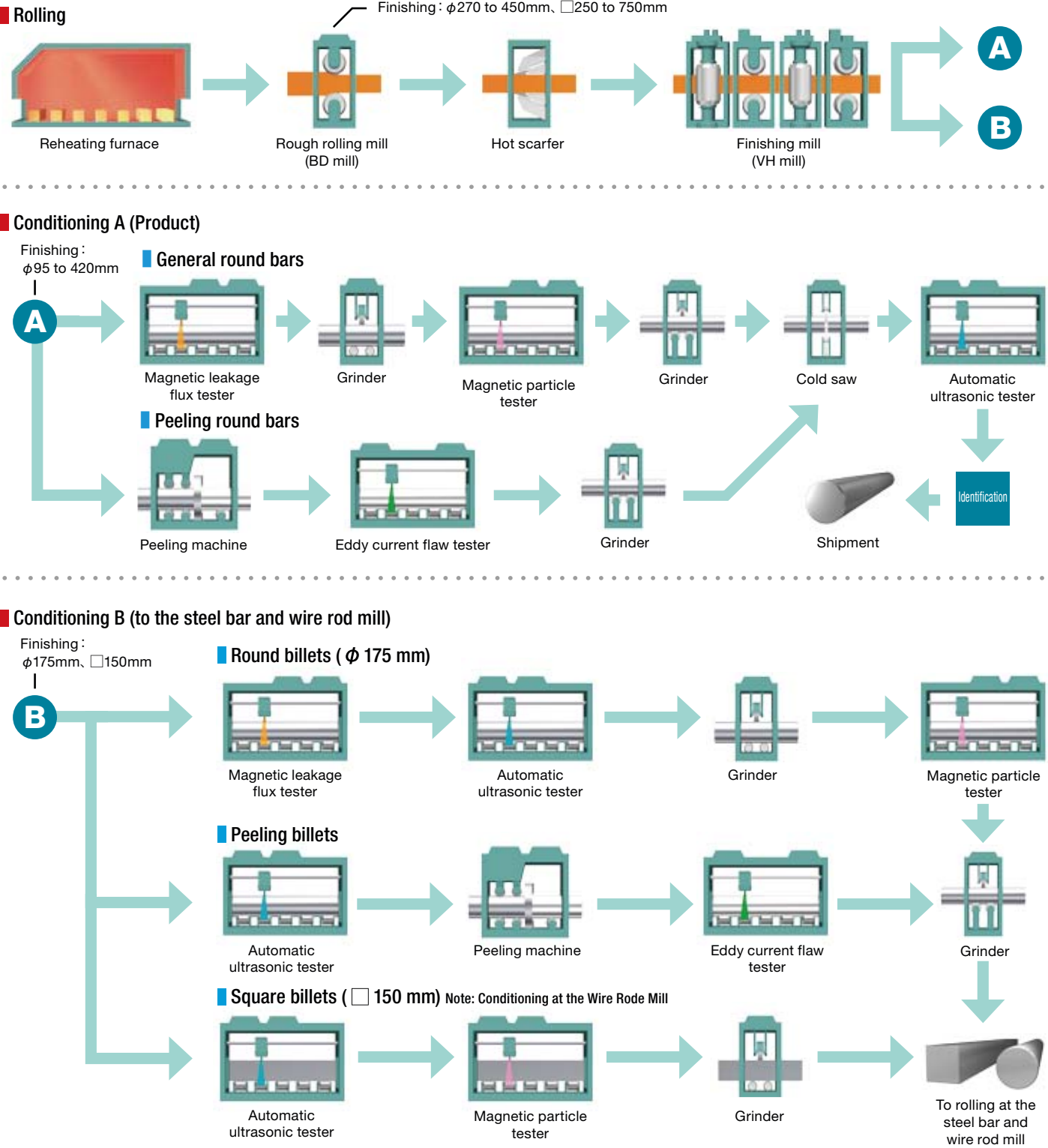


Ingot casting machine

Equipment used in No. 1 Steelmaking Plant			
Furnace	Steel converter (LD-KGC method)	200 t / operation	3 units
Secondary refining equipment	Ladle refining equipment	200 t / operation	1 unit
	Vacuum degassing equipment	200 t / operation	2 unit
Continuous casting machine	Fully curved continuous casting	4 strand *1	1 unit
Ingot casting equipment	Bottom casting	Ingot weight 12 t / 24 t	2 unit

*1: Bloom dimensions: 300 mm (thickness) × 400 mm (width), and 400 mm (thickness) × 560 mm (width)

Manufacturing Process at Billet Mill



Rough rolling mill



Finishing rolling mill



Automatic ultrasonic tester



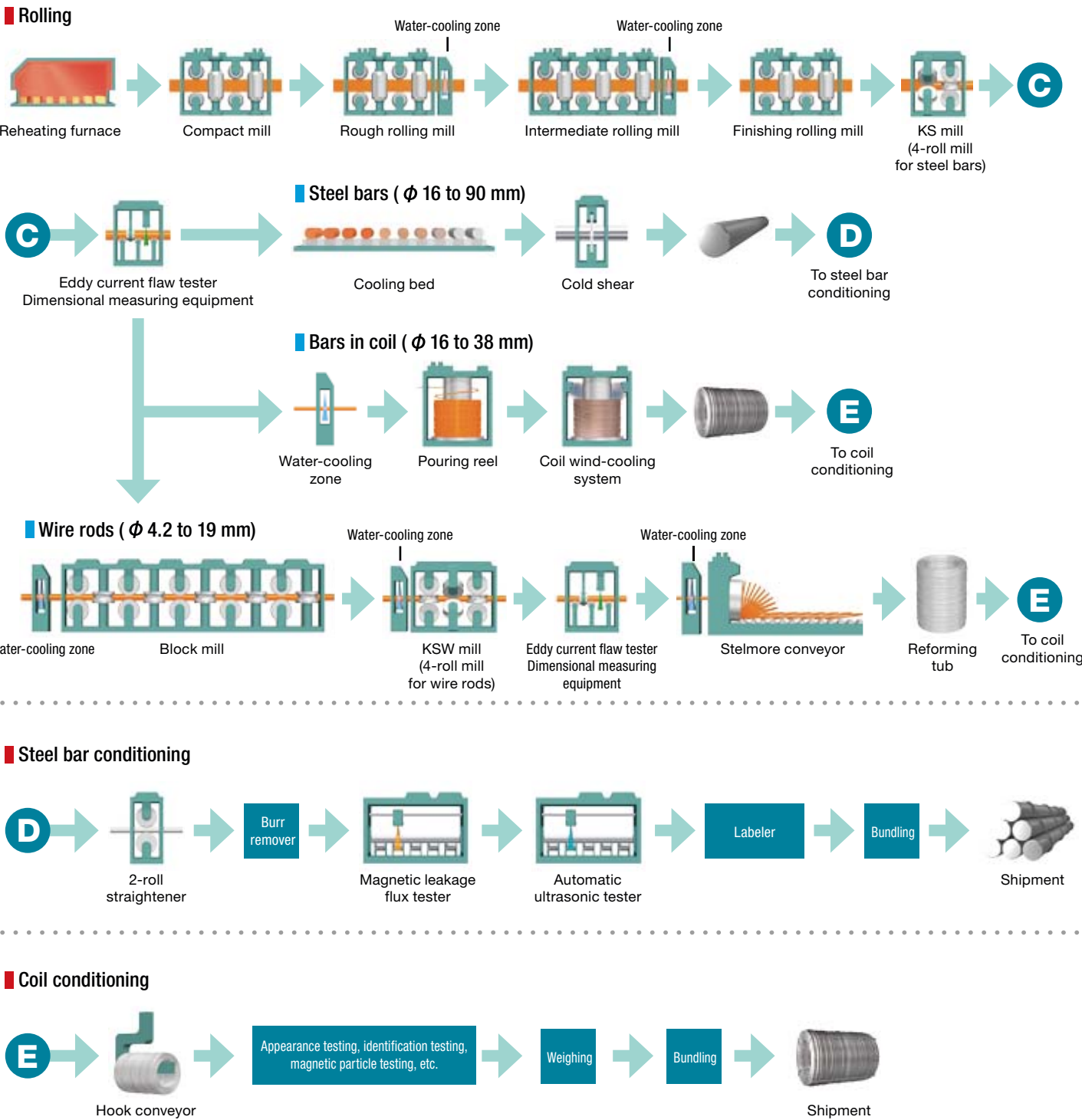
Peeling machine

Equipment used in Billet Mill

Rolling mill	Rough rolling mill (high-lift dual reversible system)	1 unit
	Finishing rolling mill (dual continuous type, VH mill)	4 stands
Conditioning inspection equipment	Press straightener	2 units
	Magnetic leakage flux tester	1 unit
	Automatic ultrasonic tester for round bar full cross section	2 units
	Magnetic particle tester	2 units
	Billet grinder equipment	5 units
	Peeling machine	2 units
	Eddy current flaw tester	1 unit

[Nominal capacity: 1,440,000 tons annually]

Manufacturing process at Steel Bar and Wire Rod Mill



Equipment used in Steel Bar and Wire Rod Mill

Rolling mill	Rough rolling mill (H-V system)	8 units
	Intermediate rolling mill (H-V system)	6 units
	Finishing rolling mill (H-V system)	4 units
	KS mill (4-roll mill for steel bars)	2 stands
	Wire rod finishing rolling mill (block mill)	10 stands
	KSW mill (4-roll mill for wire rods)	3 stands
Conditioning inspection equipment	Straightener	2 units
	Magnetic leakage flux tester	2 units
	Automatic ultrasonic tester for round bar full cross section	2 units
	Magnetic particle tester	1 unit

[Nominal capacity: 580,000 tons annually]



Rough rolling mill



KS mill



Steel bar conditioning line



Stelmor conveyor