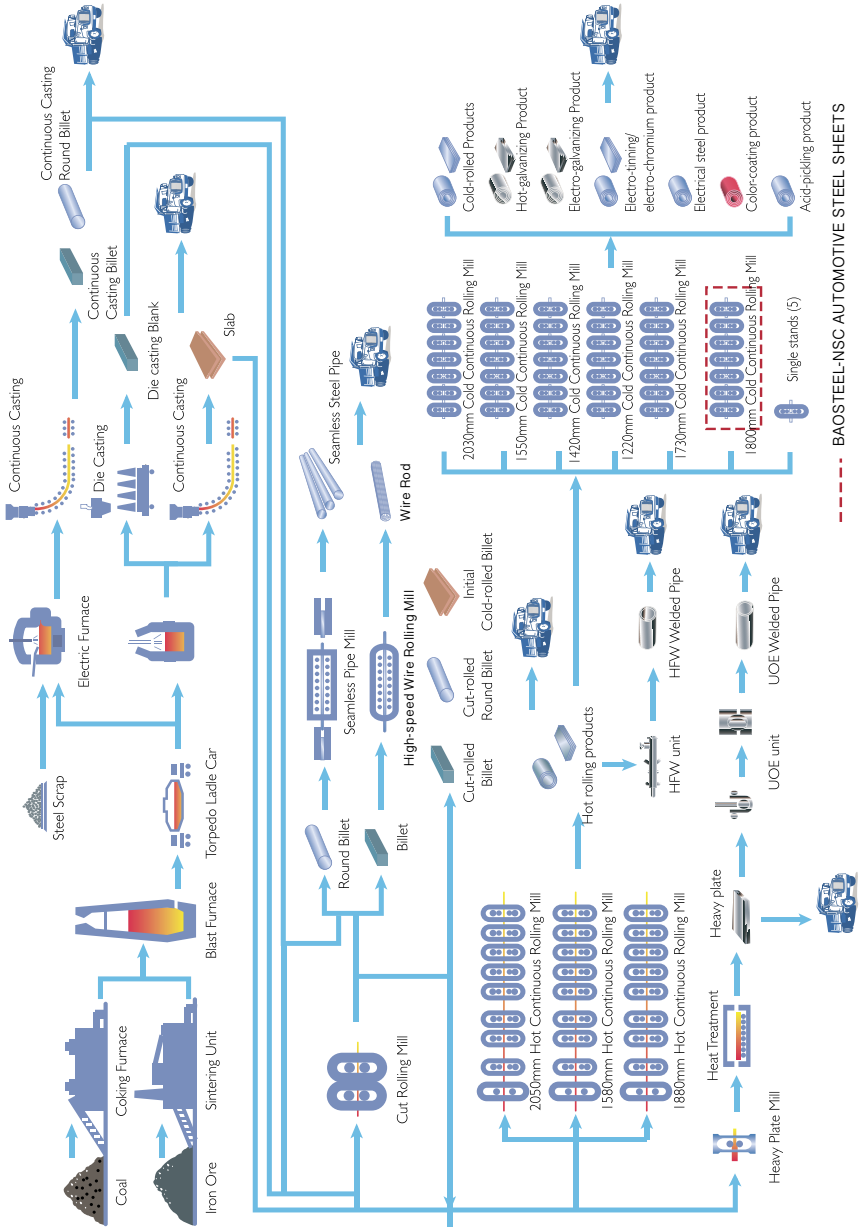


X. Production

Carbon Steel Process Flowsheet

Production Process Flow Diagram of Directly-controlled Factories & Departments



--- BAOSTEEL-NSC AUTOMOTIVE STEEL SHEETS

Main Production Equipment

	Qty.	Model	Operation Year (Major maintenance)	Designed Capacity (Production capacity) 10,000 tons/ year
Baoshan Base				
1# blast furnace	1	4966m ³	1985(2008)	350 (402)
2# blast furnace	1	4707m ³	1991(2006)	350 (354)
3# blast furnace	1	4850m ³	1994(2013)	350 (404)
4# blast furnace	1	4747m ³	2005(2014)	350 (399)
1# converter 300t	1	Top and bottom combined blow	1985(2007)	677.6 (752)
2# converter 300t	1	Top and bottom combined blow	1985(2007)	
3# converter 300t	1	Top and bottom combined blow	1986(2007)	
250t converter	2	Top and bottom combined blow	1998	488 (646)
250t converter	1	Top and bottom combined blow	2006	
150t EAF	1	Double furnace body DC electrical arc furnace	1996 (2006)	100 (115)
150t EAF	1	UHP AC electrical arc furnace	2008	100 (85)
2050mm Hot strip mill	1	2050mm	1989 (2014)	400 (591)
1580mm Hot strip mill	1	1580mm	1996 (2013)	279 (355)
5000mm heavy plate mill	1	5150mm	2005 (2014)	180 (204)
1880 hot rolling mill	1	1880mm	2007	370 (404)
2030 Hot rolling pickling line	1		1988(2013)	237 (290)
2030 New Hot rolling pickling line	1		2001	75
1220 Hot rolling pickling line	1		2011	60 (70)
2030mm Steel strip cold rolling mill	1	2030mm	1988	210 (255)
Single stand cold rolling mill	1		2015	30
1420mm Steel strip cold rolling mill	1	1420mm	1997	77.86
1550mm Steel strip cold rolling mill	1	1550mm	2000(2007)	106 (140)
1220mm Steel strip cold rolling mill	1	1220mm	1991(2007)	77 (69)
1730mm Steel strip cold rolling mill	1	1730mm	2008	173 (204)

	Qty.	Model	Operation Year (Major maintenance)	Designed Capacity (Production capacity) 10,000 tons/ year
--	------	-------	--	---

Baoshan Base

1800mm Steel strip cold rolling mill	1	1800mm	2005 (2012)	176.4 (240)
High speed wire rod mill	1	5-25mm, 120m/s	1999	40
Seamless steel tube	1	21.3-177.8mm	1985	50
Medium-diameter longitudinally welded pipe (HFW)	1	φ610	2005	30
Large-diameter longitudinally submerged arc welded pipe	1		2007	50

Meishan Base

2#blast furnace	1	1280M ³	2004.4	107
4#blast furnace	1	3200 M ³	2009.5	246.4
5#blast furnace	1	4070 M ³	2012.6	327
1#converter	1	150T	1999	120
2#converter	1	150T	1999	120
3#converter	1	150T	2008	120
250t converter	2	250T	2012	410
1422 hot strip mill	1	Six-stand 1422 hot rolling line	1994	300
1420 cold rolling mill	1	1420 picking continuous rolling mill unit	2009	80
Hot rolling pickling line	1		2011	100
1780 hot strip mill	1	1780mm	2012	400

Dongshan Base

1# blast furnace	1	5050m ³	2015	411.5
2# blast furnace	1	5050m ³	2016	411.5
350t converter	2	Top and bottom combined blow	2015	600
350t converter	1	Top and bottom combined blow	2016	300
2250mm Hot strip mill	1	2250mm	2015	547
2030 Cold rolling	1	2030 picking continuous rolling mill unit	2016	226
1550 Hot rolling pickling line			2016	100
4200mm heavy plate rolling mill	1	4200mm	2016	120

Supplementary Data

WISCO	Qty.	Model	Operation Year	Designed Capacity (Production capacity) 10,000 tons/ year
Qingshan Base				
1# blast furnace	1	2200m ³	2001	169.4
4# blast furnace	1	2600m ³	2007	209.3
5# blast furnace	1	3200m ³	2007	257.6
6# blast furnace	1	3200m ³	2004	246.4
7# blast furnace	1	3200m ³	2006	257.6
8# blast furnace	1	3800m ³	2009	332.5
Converter I	2	120t	2008(2009)	230
Converter II	2	80t	1992	160
Converter III	3	250t	1996(2005)	730
Converter IV	2	180t	2007	360
Converter for CSP production line	2	150t	2009	260
Hot rolling I 1700 production line	1	1700mm	2009	350
Hot rolling II 2250 production line	1	2250mm	2003	500
Hot rolling III 1580 production line	1	1580mm	2007	280
CSP production line	1	1600mm	2009	250
Medium and heavy plate production line	1	3000mm	2011	100

Output

	Unit: kiloton			
	2013	2014	2015	2016
Pig iron	21,220	20,988	22,174	26,613
Crude steel	21,996	21,529	22,642	27,449
Steel products				
Hot rolled (HRC)				
Pickled coil	6,515	6,489	7,352	9,949
Heavy plate	1,145	1,265	1,156	1,706
CRC	4,276	4,322	4,332	4,983
Hot-dip galvanized steel	3,007	3,086	3,114	3,821
Electro-galvanized steel	769	762	716	768
Color-coated sheet	686	672	673	679
Tin plate	904	897	866	872
Chrome-coated sheet	183	180	178	184
Electrical steel	1,331	1,495	1,465	1,183
Tube	1,536	1,477	1,637	1,525
Billet	981	721	679	697
High speed wire rod	499	502	487	593
Rebar	226			
Total steel products	22,058	21,868	22,655	26,961