

Duplex stainless steel

<p>Classification, nameplate No. and standard of double phase stainless steel</p> <p>1.Double phase stainless steel can be generally classified into low alloy type, middle alloy type, high alloy type and super double phase stainless steel pipe etc.</p> <p>2.The common-used nameplate No. of double phase stainless steel and proximate value of nameplate Number in other countries are listed in the following form:</p>	model	country	China	USA	Sweden	Germany	France	Japan
	Low alloy type		00Cr23Ni4N	UNS S32304	SS2327(SAF2304)	W.Nr.1.4362	UR35N	DP11
	Medium alloy type		00Cr18Ni5MoSi2 00Cr22Ni5Mo3N	UNSS31500 UNS S31803/S32205	SS2376(3Re60) SS2377(SAF2205)	W.Nr.1.4417 W.Nr.1.4462	UR45N	DP1
	High alloy type		0Cr25Ni5Mo2 00Cr25Ni7Mo3WcuN	UNS S32900 UNSS31260	SS2324(10RE51)	W.Nr.1.4460 W.Nr.1.4501		329J1 329J21
Super Duplex Steel		00Cr25Ni7Mo4N 0Cr25Ni6Mo3CuN	UNS S32750 UNS S32550	SS2328(SAF2507)	W.Nr.1.4410 W.Nr.1.4507	UR47N- UR52N-		

<p>The relevant standards adopted phase stainless steel products by our</p>	materials	Seamless and welded tubes	Rod materials	Sheet materials strip materials	Forgings (Flanges)	Coating	welding wires, welding bars
	Double phase stainless steel	ASTM A789 ASTM A790 ASTM A450 ASTM A530	ASTM A276 ASTM A479 ASTM A484	ASTM A240	ASTM A182 ASTM A788	ASTM A351 ASTM A995	ASME/AWS A5.4 ASME/AWS A5.9

<p>Common-used performance of double phase stainless steel Chemical components (%)</p>	Grade of steel	C≤	Mn≤	Si≤	S≤	P≤	Cr	Ni	Mo	Cu≤	N
	S32750(SAF2507) 00Cr25Ni7Mo4N	0.03	1.20	0.80	0.020	0.035	24.0/ 26.0	6.0/ 8.0		0.50	0.24/ 0.32
	S31803/S32205 (SAF2205) 00Cr22Ni5Mo3N	0.03	2.00	1.0	0.02	0.030	21.0 23.0	4.50/ 6.50	2.50/ 3.50		0.08/ 0.20
	S31500(3RE60) 00Cr18Ni5Mo3Si2	0.03	1.2/ 2.00	1.4/ 2.00	0.030	0.030	18.0/ 19.0	4.25/ 5.25	2.50/ 3.00		0.05/ 0.10

<p>Mechanical property</p>	Grade of steel	Item	°C	α_b (Mpa) ≥	α_s (Mpa) ≥	6 % ≥	Hardness	
							Brinell	Rockwell
	S32750(SAF2507) 00Cr25Ni7Mo4N		1025-1125 water drop	800	550	15	310	32
	S31803/S32205 (SAF2205) 00Cr22Ni5Mo3N		1020-110 water drop	620		25	290	30.5
S31500(3RE60) 00Cr18Ni5Mo3Si2		980-1040 water drop	620	440	30	290	30.5	

Metallurgical structure
 The internal control standard of our company has made stipulations to the phase proportion.
 The metallurgical structure under solid solution status is ferrite phase austenitic phase, among which, the content of austenitic phase is 40%-60%. There shall have no precipitation of crisp phase equal to α in the metallurgical structure.
 The continuous working temperature of double phase stainless steel shall be within the range of -50°C-280°C.
 The heat processing temperature shall not be less than 950°C.