

2205 DUPLEX STAINLESS STEEL

ASTM/ASMEUNS S31803, S32205, SAF 2205

EURONORMW.Nr 1.4462, X2CrNiMoN 22.5.3

NACE MR0175

PRODUCTS OF 2205 AVAILABLE @KAYSUNS

- Buttwelded Fittings to ASME B16.9, MSS SP-43, EN 10253-3, EN 10253-4 etc.
- Pipe & Tube to ASTM SA790, SA789, EN 10216-5 etc.
- Sockweld and Threaded Fittings to ASME B16.11, BS 3799, MSS SP97
- Flange and Special Forgings to ASME B16.9, ASME B16.47, B16.48, EN 1092-1

GENERAL PROPERTIES

Duplex 2205 is a two-phase, ferritic, austenitic 22% chromium, 3% molybdenum, 5 to 6% nickel alloyed stainless steel. It is the most widely used duplex stainless steel grade and is characterized by high yield strength, double that of the standard austenitic stainless steel grades. It also demonstrates good fatigue strength, as well as outstanding resistance to stress corrosion cracking, crevice, pitting, erosion, and general corrosion in severe environments.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Ni	Mo	N	Ti	PREN
≦0.030	≦1.00	≦2.00	≦0.030	≦0.020	22.0-23.0	4.50-6.50	3.00-3.50	0.14-0.20	-	≧34

ASTM SPECIFICATION

Pipe Smls&Welded	Tube Smls&Weld	Sheet/Plate	Forgings	Castings	Weld Fittings
A790	A789	A240	A182	A890	A815

MECHANICAL PROPERTIES PARAMETER OF ASTM A790

Tensile Strength, Min. MPA	.2% Yield Strength, Min. MPA	Hardness Max. (HRC)
655	450	30

CHARACTERISTICS OF DUPLEX 2205

- High resistance to chloride stress corrosion cracking
- Resistance to chloride pitting and crevice corrosion
- stress corrosion cracking (especially chloride stress corrosion cracking)
- Good sulfide stress corrosion resistance
- High Strength

APPLICATIONS OF DUPLEX 2205

- Chemical process vessels, piping and heat exchangers
- Pulp mill digesters, bleach washers, chip pre-steaming vessels
- Sea water treatments
- Oil field piping and heat exchangers
- Flue gas desulfurization equipments