



## Nickel and Nickel Alloys

Nickel in its purest form is the fifth most available element on earth with a shiny silvery appearance. The main usage of Nickel is for alloying with other elements to produce various grades of corrosion resistant steels, almost 70% of Nickel is used in production of Stainless Steel.

Nickel Alloys was a versatile invention, to perform in the environments demanding high performance, corrosion resistance, strength, formability, high temperature etc. They are non-ferrous metals and their superior characteristics qualify them to be categorized as Corrosion Resistant Alloys and Super Alloys category.

INCOLOY®, INCONEL®, MONEL®, HASTEALLOY® are the registered tradenames of their respective owners and are the most commonly addressed names in industry for Nickel based alloys.

Categorizations of Nickel and Nickel Alloys and their most common UNS designations to refer are

Wrought Nickel ( UNS N02200 )	Nickel - Titanium ( UNS N01555 )
Nickel - Iron ( UNS K93600 )	Nickel - Chromium ( UNS N06600 / N06625 )
Nickel - Copper ( UNS N0400 )	Nickel - Chromium - Iron ( UNS N08800 / N08825 )
Nickel - Molybdenum ( UNS N010665 )	Nickel - Chromium - Cobalt ( UNS N06617 / N12160 )
Nickel - Chromium - Molybdenum ( UNS N10276 )	

Chemical and Mechanical properties of Nickel Alloy grades available from our stock programme

Grade	UNS	C %	Cr %	Ni %	Mo %	Tensile	Yield Point	Elongation	Hardness
Alloy 20	N08020	0.06	19.00 - 21.00	32.50 - 35.00	2.00 - 3.00	620	324	35	200
Alloy 400	N0400	0.30	-	63.00min	-	550	240	40	140/80
Alloy C22	N06022	0.010	20.00 - 22.00	Bal	12.50 - 14.50	690	310	45	100
Alloy C276	N10276	0.01	14.50 - 16.50	Bal	15.00 - 17.00	690	283	40	226/100
Alloy 625	N06625	0.10	20.00 - 23.00	58 min	8.00 - 10.00	895	465	50	226/100
Alloy 825	N08825	0.50	19.50 - 23.50	38.00 - 46.00	2.50 - 3.50	690	310	45	165/87
Cu Ni 90/10	C70600	0.05	-	9.00 - 11.00	-	275	105	27	70/120

Available size ranges in Nickel Alloy grades to ASME B36.10 / ASME B36.19 specifications

Category	Construction	Size Range (DN)	SCH/Ratings	Standard
Pipe	Seamless	015 - 200	10S - XXS	ASTM B444 / B622 / B165 / B729
	Welded	NA		
BW Fittings	Seamless	015 - 200	10S - XXS	ASTM B366
	Welded	NA		
SW Fittings	Forged	015 - 050	CL 3000 - 6000	ASTM B564 / B462
Flanges	Forged	015 - 100	CL 150 - 1500	ASTM B564 / B462

## Stock Certifications, Testings and Reports

All stock available materials from Ferro FPF are coming with full traceability and necessary testing reports along with Material Test Certificates to EN 10204 3.1. Most of our process piping materials from stock is coming with dual certification. This is achieved according to the international standards by controlling the chemical composition and mechanical properties in the permissible ratio meeting different grades and standards. This is an optimal way of providing our customers with a comprehensive range of material grades in the most efficient way suiting the project requirements.

Any client and project requirements over and above the normal standards are achieved with possible additional testings, modifications and inspections using in-house and approved third party facilities. All project confirmed modifications are performed according to relevant international standards and backed with conformity reports.

Ferro Pipe and Fittings is having a demonstrated experience in managing project package supplies of Pipes, Fittings, Flanges and Valves for various national and international projects directly with end users and through international EPC's. [Contact us](#) to discuss on our capacities and custom solutions we can offer to your project piping requirements.

