

This page is mainly introduced the Incoloy A-286 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Incoloy A-286, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Superalloys Incoloy A-286

Incoloy A-286 Standard Number:		
ITEM	Standard Number	Descriptions
4	ASTM B516	Pipe
5	ASTM A453	Bolt

Incoloy A-286 Chemical composition (mass fraction) (wt.%)									
Chemical				Min. (%)			Max. (%)		
C							0.08		
Cr				13.50			16.00		
Ni				24.00			27.00		
Mo				1.00			1.50		
Ti				1.75			2.30		
V				0.10			0.50		
B				0.001			0.010		
Mn				1.00			2.00		
Fe							Bal		
Al							0.40		
Si							1.00		
P							0.030		
S							0.020		
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Note: a cold pull rods, round cakes and ring blank standard (Ti) 1.80% ~

2.35%.

2 (B) of hot-rolled and cold-rolled sheet standard 0.003% ~ 0.010%, 2.00% or less (Mn), (P) acuties were 0.020%, 0.015% or less (S).

3 (Al) of cold drawn wire standard acuties were 0.35%, 1.75% ~ 2.35% (Ti) and (Si) 0.40% ~ 1.00%, 0.020% or less (P), (S) of 0.015% or less.

Use the wire, cold heading standards (Ti) 1.75% ~ 2.35%, 0.40% ~ 1.00% (Si), (P) acuties were 0.025%, 0.020% or less (S).

5 hot rolled and forged bar standard (Cu) of 0.25% or less.

1.5), heat treatment system is the standard heat treatment system are shown in table 1-3; Alloy is 900 °C heat treatment system plus or minus 10 °C, 1 to 2 h, oil cooled to + 750 °C + 10 °C, 16 h, air cooling.

Incoloy A-286 Physical Properties

Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	123-321	-
HRC	30	-

Incoloy A-286 Mechanical Properties

Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	235-268	-
HRC	30	-

Incoloy A-286 Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

Incoloy A-286 Range of products				
Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	Φ8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot-Rolled	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID-WASHED

We can produce Superalloys the specifications follows: