This page is mainly introduced the SB-649 R20033 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of SB-649 R20033,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Specialsteel SB-649 R20033

SB-649 R20033 Standard Number:		
ITEM	Standard Number	Descriptions
1	SB-649	Specification for Ni-Fe-Cr-Mo-Cu Low-Carbon Alloy (UNS N08904), Ni-Fe-Cr-Mo-Cu-N Low-Carbon Alloys (UNS N08925, UNS N08031, and UNS N08926), and Cr-Ni-Fe-N Low-Carbon Alloy (UNS R20033) Bar and Wire

SB-649 R20033 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.12
Si		0.30
Mn		0.80
Cr		19.00
Ni		14.00
Mo		
Co		
W		
Al		
Cu		
Ti		
Fe		remaining
Nb		1.60

C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Specification for Ni-Fe-Cr-Mo-Cu Low-Carbon Alloy (UNS N08904), Ni-Fe-Cr-Mo-Cu-N Low-Carbon Alloys (UNS N08925, UNS N08031, and UNS N08926), and Cr-Ni-Fe-N Low-Carbon Alloy (UNS R20033) Bar and Wire

SB-649 R20033 Physical Properties		
Tensile strength	115-234	σb/MPa
Yield Strength	23	σ 0.2 ≥/MPa
Elongation	65	δ5≥ (%)
ψ	-	ψ≥ (%)
Akv	-	Akv≥/J
HBS	123-321	-
HRC	30	-

SB-649 R20033 Mechanical Properties		
Tensile strength	231-231	σb/MPa

Yield Strength	154	σ 0.2 ≥/MPa
Elongation	56	δ5≥(%)
ψ	-	ψ≥(%)
Akv	-	Akv≥/J
HBS	235-268	-
HRC	30	-

SB-649 R20033 Heat Treatment Regime

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

SB-649 R20033 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 Specialsteel the specifications follows: