

This page is mainly introduced the 1Cr12Ni3Mo2VN Steel for Turbine Blades Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 1Cr12Ni3Mo2VN Steel for Turbine Blades, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Steels of blade for steam turbine 1Cr12Ni3Mo2VN Steel for Turbine Blades

1Cr12Ni3Mo2VN Steel for Turbine Blades Standard Number:

ITEM	Standard Number	Descriptions
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1Cr12Ni3Mo2VN Steel for Turbine Blades Chemical composition (mass fraction) (wt.%)

Chemical				Min.(%)				Max.(%)			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta		
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other		

Exhaust stage blade steel for steam turbine has been researched , effect of chemical composition and heating temperature for rolling on δ -ferrite has been investigated .Deoxidation system of electroslag melting process for producing steel with low - oxygen , low - sulphur and low - inclusion has been set up . Recent findings of heat treatment for steel 1Cr12Ni3Mo2VN has been introduced

1Cr12Ni3Mo2VN Steel for Turbine Blades 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	-

1Cr12Ni3Mo2VN Steel for Turbine Blades 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	-

1Cr12Ni3Mo2VN Steel for Turbine Blades Heat Treatment Regime

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

1Cr12Ni3Mo2VN Steel for Turbine Blades 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	Φ 8-1200mm*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 Steels of blade for steam turbine the specifications follows: