

This page is mainly introduced the turbine blade steel KT5931ASO Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of turbine blade steel KT5931ASO, 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 turbine blade steel KT5931ASO

turbine blade steel KT5931ASO Standard Number:

ITEM	Standard Number	Descriptions
------	-----------------	--------------

turbine blade steel KT5931ASO 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

The electric arc furnace + ladle furnace and electroslag remelting (EBT+LF+ESR) process, through the 800/650mm * 4 rolling mill of ultra supercritical steel blade KT5931ASO (phi 200) trial process. Chemical composition of product uniformity, high purity, compact structure, has good high-temperature mechanical properties, high temperature endurance performance and process performance, product the physical quality has reached the international advanced level, to meet the requirements of ultra supercritical steam turbine blade steel technology export company Hitachi

turbine blade steel KT5931ASO 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	-

turbine blade steel KT5931ASO 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	-

turbine blade steel KT5931ASO Heat Treatment Regime

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

turbine blade steel KT5931ASO 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	$\Phi 8$ -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: