Physical properties, Mechanical properties, Heat treatment, and Micro structure

This page is mainly introduced the LWCF17 chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of LWCF17,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Data Table for Grades Stainless Steels LWCF17

	LWCF17 Standard Number:			
ITEM	Standard Number	Descriptions		
		Specification for seamless and welded steel tubes for automobile , mechanical and general engineering purposes. Specific requirements for longitudinally welded stainless steel tubes		

LWCF17 Chemical composition(mass fraction)(wt.%)				
Chemical	Min.(%)	Max.(%)		
С		0.07		
Si	0.20	1.00		
Mn	0.50	2.00		
Р		0.045		
S		0.030		
Cr	16.50	18.50		
Ni	10.00	13.00		
Мо	2.25	3.00		

LWCF17 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	-		

LWCF17 Mechanical Properties			
Tensile strength	231-231	σb/MPa	
Yield Strength	154	σ 0.2 ≥/MPa	

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Elongation	56	δ5≥(%)
Ψ	- ψ≥	
Akv	-	Akv≥/J
HBS	235-268	-
HRC	30	-

LWCF17 Heat Treatment Regime				
Annealing	Quenching	Tempering	Normalizing	Q & T
\checkmark	√	√	√	√

LWCF17 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 Stainless Steels the specifications follows:

Note

(1) listed in the table apex diameter (d), to steel thickness (a) multiples said.

(2) in the ASTM A6 standard specified scope can meet any additional conditions.

(3) from the standard for 50 mm (2 in).

Mechanical properties

Mechanische Eigenschaften

Caracteristiques mecaniques

ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d'elasticite minimale

 $Rm\ Tensile\ strength\ /\ Zugfestigkeit\ /\ Resistance\ a\ la\ traction$

A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal

J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc

Round bar:

Diameter: 1mm-2000mm

Square bar:

Size: 50mm * 50mm-600mm *600mm

Plate steel/flat bar:

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Size: Thickness: 0.1mm-800mm Width: 10mm to 1500mm

Tube/pipe:

Size: OD: 6-219mm WT: 1-35 mm.

Cold-rolled sheet: Thickness: 2-5mm Width:1000mm Length: 2000mm

Hot-rolled sheet: Thickness:6-80mm Width: 210-610mm

Length: We can supply any length based on the customer's requirement.

Forging/hot rolling/ extrusion of steel.

Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes

Finished goods condition: hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any

conditions based on the customer's requirement

Surface conditions: scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement

 $Furnaces\ for\ metallurgical\ processing:\ electrode\ arc + LF/VD/VOD/ESR/Vacuum\ consumable\ electrode.$

Ultrasonic inspection: 100% ultrasonic inspection for any inperfections or based on the customer's requirement.

UTS according to SEP 1921 C/c,D/d,E/e;A388 or GB/T 6402

Excellent service for all kinds of industries, with advantages of technologies, equipment and price.

We serve you with our honesty, integrity, and professionality.

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