



# **JFE THIN HOT ROLLED STEEL SHEET**

**JFE-HTC**



JFE Steel Corporation

## FORWARD

JFE Steel Corporation has developed an “endless hot rolling process” which makes continuous hot rolling possible at the No.3 Hot Strip Mill in East Japan Works (Chiba). This enables us to manufacture ultra thin-hot rolled steel sheet in coil under 1.2mm in thickness, which was formally able to produce only via the cold rolling process. We have commercialized this hot rolled product as JFE-HTC, substituting it for the conventional cold rolled products.



East Japan Works (Chiba)

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# pplication



Residential House Fence



Furniture



Water Tube Pipe



Small Diameter Pipe



Sliding Door Shutter



Purlin

# Characteristics

## 1. Good appearance

JFE-HTC has the same appearance as conventional hot rolled products with thickness of 1.2mm.

## 2. High gauge accuracy

It is outstanding in terms of accuracy of thickness due to the endless hot rolling process.

## 3. Superior Paintability

It demonstrates high performance for painting processes such as furniture pipes due to its thin scale layer.

# Specification

## Chemical Composition and Mechanical Properties

Designation	Chemical Composition, %				Tensile Test				Bend Test			
	C max.	Mn max.	P max.	S max.	TS, MPa min.	El, % min.	Test Piece	Testing Direction	Bend Angle	Internal Radius	Test Piece	Testing Direction
JFE-HTC	0.15	0.60	0.050	0.050	270	24	JIS No.5	Rolling	180°	Flat on itself	JIS No.3	Rolling

## Tolerances

Designation	Width range, mm (inch)	Tolerances	
		Thickness Tolerance	Width Tolerance
JFE-HTC	1000 (40) to 1200 (48) excl.	± 0.10 mm (0.0039 in.)	- 0, +30 mm (1.2 in.)

# Applicable Size

Designation	Thickness, mm (inch)	Width, mm (inch)
JFE-HTC	$0.9 (0.035) \leq t < 1.0 (0.040)$	1000 (40)
	$1.0 (0.040) \leq t < 1.2 (0.047)$	1198, 1199



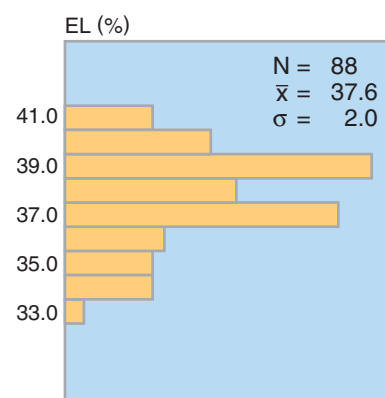
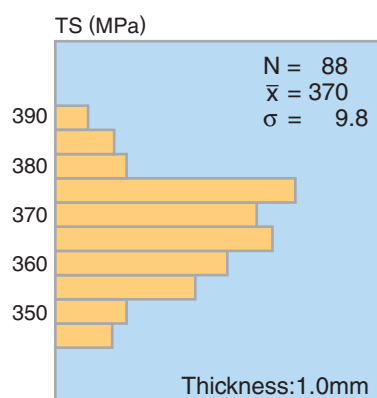
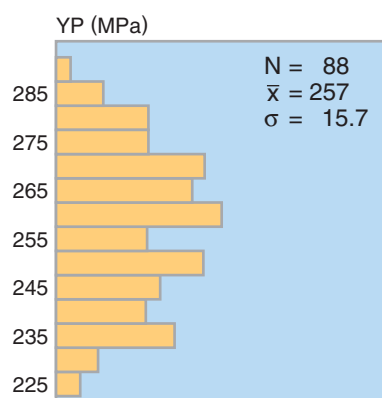
# Product Data

Note : Following values are for reference only.

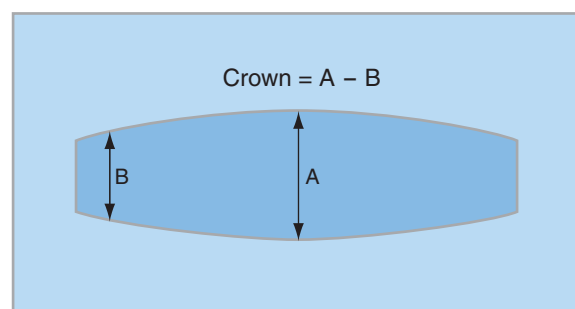
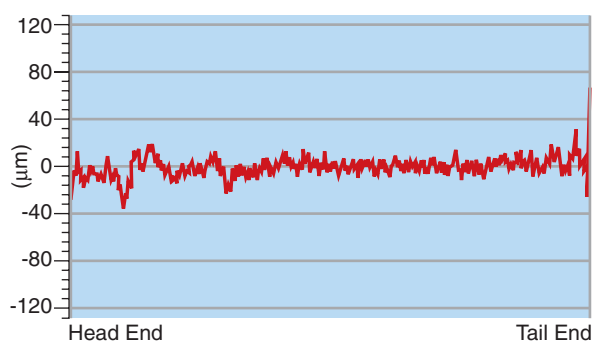
## Mechanical Test Results (Examples)

Designation	Thickness, mm	Tensile Test				
		YP, MPa	TS, MPa	EL, %	Test Piece	Testing Direction
JFE-HTC	1.0	265	375	39	JIS No.5	Rolling

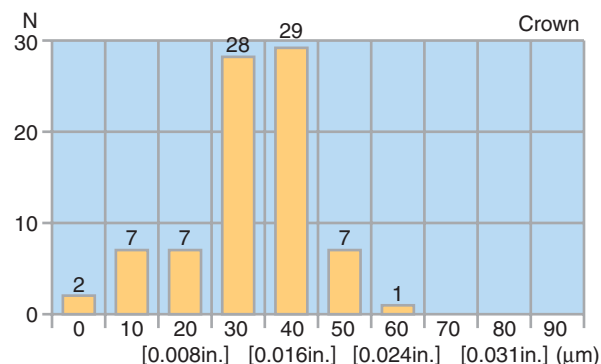
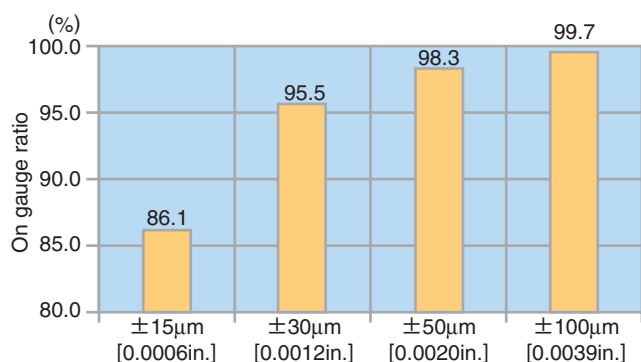
JFE-HTC (Thickness : 1.0mm [0.040in.])



## Accuracy of Thickness



JFE-HTC (Thickness : 1.0mm [0.040in.])

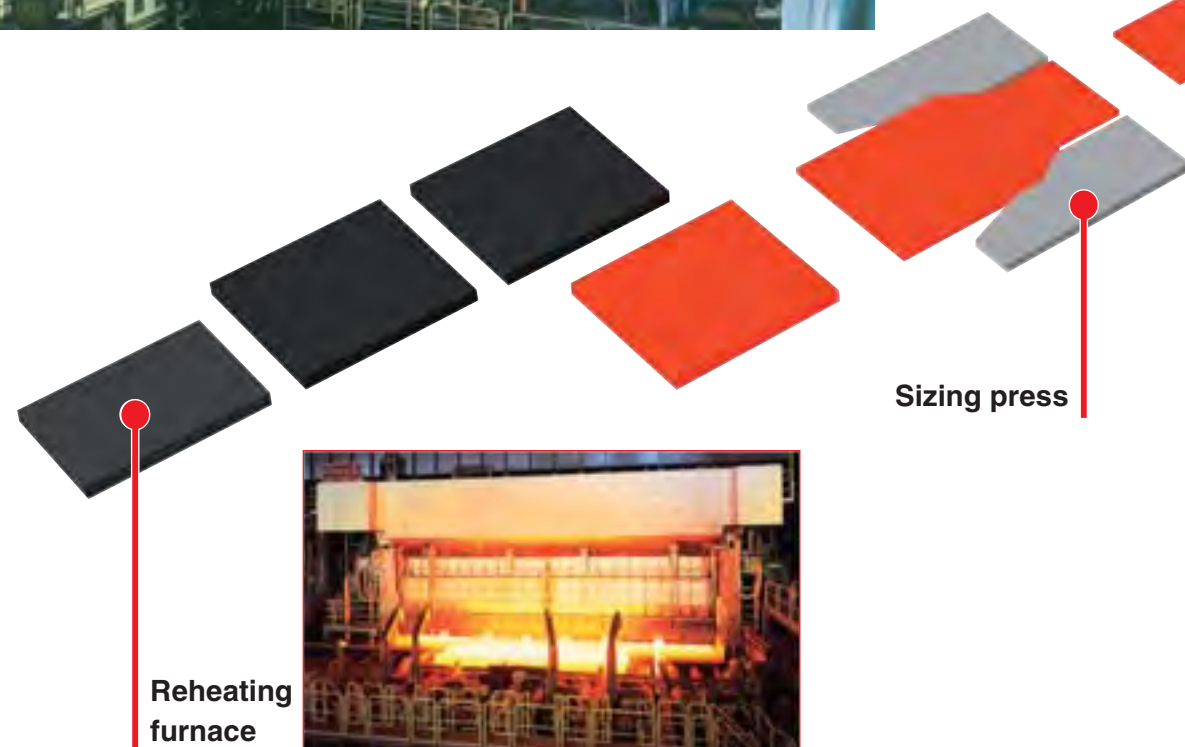


# Endless Hot Rolling Process

Here you see revolutionary innovations which have opened up a new chapter in the history of steel making.

“Endless rolling”, a hot-rolling process unique in the world.

In endless rolling, sheet bars (semi-finished products 30 to 40mm thick produced by rough-rolling slabs) are joined and rolled continuously. This process enables stable quality in finish rolling, simplifies the production process, and makes it possible to produce entirely new products. Endless rolling is a dream that has come true thanks to a new technology developed at East Japan Works (Chiba).



**Sheet bar coiler**  
Sheet bars are coiled to prevent temperature drop.



**Joining machine**  
Sheet bars are joined by an innovative induction welding technology.



**Coiler**

**Roughing mill**  
The heating furnace, sizing press and roughing mill process slabs at high speed and high pitch to make endless rolling possible.

**Finishing mill**  
The finishing mill rolls the arriving sheet bars to the specified thickness



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