

# HK HUANGSHANGYOU STEEL INDUSTRIAL LIMITED

香港煌商佑鋼鐵實業有限公司

考頓鋼

CORTEN STEEL



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# CONTENTS

## 目錄

- |  |   |   |
|--|---|---|
| <b>01</b> What Is Corten Steel ?<br>什麼是考頓鋼？  | <b>09</b> Corten B Steel<br>Corten B 考頓鋼          | <b>14</b> JIS G3125 SPA-H Corten Steel<br>JIS G3125 SPA-H 考頓鋼 |
| <b>03</b> Features of Corten Steel<br>考頓鋼的特性 | <b>10</b> ASTM A588 Corten Steel<br>ASTM A588 考頓鋼 | <b>15</b> 09CuPCrNi-A Corten Steel<br>09CuPCrNi-A 考頓鋼         |
| <b>04</b> Application Examples<br>應用實例       | <b>11</b> S355J2W+N Corten Steel<br>S355J2W+N 考頓鋼 | <b>16</b> Q355NH Corten Steel<br>Q355NH 考頓鋼                   |
| <b>06</b> Steel Grades<br>鋼材等級               | <b>12</b> S355J0WP Corten Steel<br>S355J0WP 考頓鋼   | <b>17</b> Weight of Corten Steel Plates<br>考頓鋼板的重量            |
| <b>08</b> Corten A Steel<br>Corten A 考頓鋼     | <b>13</b> S355J2WP Corten Steel<br>S355J2WP 考頓鋼   | <b>18</b> Job Reference<br>工程案例                               |

# What Is Corten Steel ?

## 什麼是考頓鋼？



Corten steel, also known as COR-TEN steel or weathering steel, is a low-alloy, high-strength outdoor steel and is one of the groups of 'Weathering Steels' developed to eliminate the need for painting and form a stable rust-like appearance, even after several years of exposure to weather influences. This new steel type was named COR-TEN because of the properties: COR (corrosion resistant) and TEN (tensile strength).

考頓鋼，也稱為COR-TEN鋼或耐候鋼，是一種低合金、高強度的室外鋼，是“耐候鋼”的一種，其開發目的是消除對油漆的需要，並形成穩定的銹狀外觀，即使在氣候的影響下暴露數年也是如此。這種新型鋼因其特性而被命名為Cor（耐腐蝕）和ten（抗拉強度）。

The entire oxidation process of corten steel can take between 4-10 years, however more frequent wet and dry cycles will speed this process up. Whilst the corten steel doesn't prevent rusting, it will reduce the amount of corrosion and won't need painting or other external treatment any kind when applied correctly.

考頓鋼的整個氧化過程可能需要4-10年的時間，但如果乾濕循環更加頻繁會加快這一過程。雖然考頓鋼不能防止生銹，但它會減少腐蝕量，並且在正確使用時不需要做塗漆或任何其他外部處理。

Weather resistant steel can be used in a wide range of structural applications. It is a commonly used product in bridge construction because of the lack of maintenance costs. It is also popular in modern architecture where the aesthetically pleasing finish is in great demand for sculptural buildings and fascias.

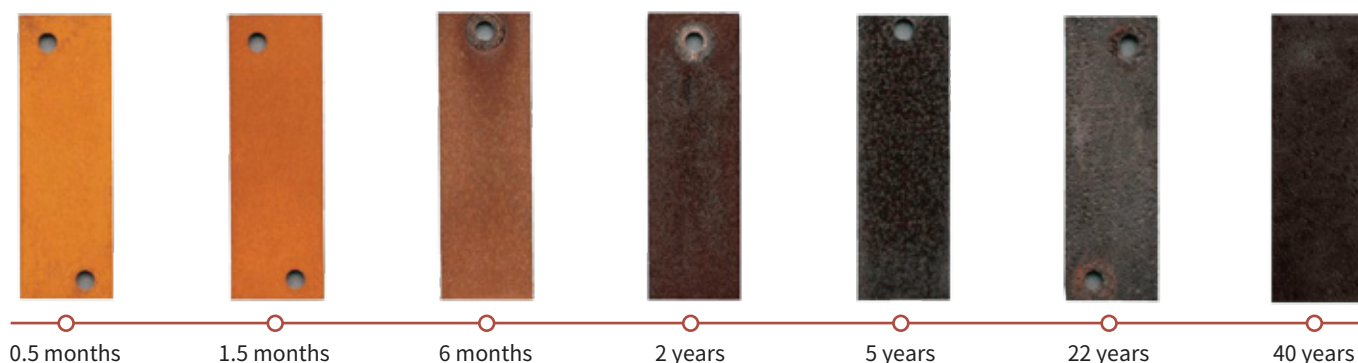
耐候鋼可用於廣泛的結構應用。由於維護成本低，它是橋樑建設中的常用產品。它在現代建築中也很流行，因為在現代建築中，雕塑建築和裝飾板的美觀飾面有極大的需求。

When the material is subjected to the alternating wet and dry conditions which exist outdoors, the steel oxidises with pollutants in the air forming a thick layer of rust – this formation acts as a protective layer which prevents the steel from corroding and reduces the amount of glare which can be found on standard metals. This process reduces the amount of maintenance which is required whilst simultaneously increasing the life span of the material. Over time, the rust layer develops into a patina layer changing the colour from orange to dark brown through continuous regeneration promoting resistance to corrosion.

當材料處於室外乾濕交替的條件下時，考頓鋼與空氣中的污染物一起氧化，形成厚厚的鐵銹層。這層銹鏽起到保護層的作用，防止鋼材腐蝕並減少了標準金屬的眩光。這一過程減少了所需的維護量，同時增加了材料的壽命。隨著時間的推移，銹層發展為銅綠層，通過不斷地再生促進抗腐蝕性，顏色從橙色變為深棕色。

In the initial stage of application, COR-TEN shows a yellowish appearance. This is followed by a gradual change in the color of the protective rust from brown to a stable dark brown after one to two years in general application environments. Afterwards, the coloration shows no clear change except perhaps to a deeper dark brown.

在使用初期，考頓鋼呈淡黃色。在一般的應用環境中，一到兩年後，保護銹的顏色從棕色逐漸變為穩定的深棕色。之後，顏色沒有明顯的變化，可能變為更深的深棕色。



#### Typical applications for weathering structural steels:

- External wall claddings of buildings, weather strips
- Chimneys and other structures under flue gas conditions
- Transport tanks
- Freight containers
- Bridges
- Heat exchangers
- Similar other steel structures

#### 耐候結構鋼的典型應用：

- 建築外牆包層、擋風雨條
- 煙氣條件下的煙囪和其他結構
- 運輸罐
- 貨運集裝箱
- 橋樑
- 熱交換器
- 其他類似的鋼結構



# Features of Corten Steel

## 考頓鋼的特性



### Weather Resistance

耐候性

### Weldability

可焊性

### Workability

可加工性

因為考頓鋼具有很高的耐候性，所以不用噴漆就可以使用。不噴漆的應用不僅有降低重新噴漆成本的經濟優勢，還提供了與保護銹層的平靜色相關的美學益處。耐候性取決於產品等級和使用環境，考頓鋼的耐候性是普通鋼的4-8倍。

Because corten steel has high weather resistance, it can be used without painting. Unpainted applications not only offer the economic advantage of reducing repainting costs; they also offer aesthetic benefits associated with the calming color of the protective rust. While weather resistance depends on the product grade and the application environment, COR-TEN's weather resistance is nearly 4~8 times that of ordinary steel.

在考頓鋼中加入微量的合金元素，如銅 (Cu) 和鉻酸鹽 (Cr) 以確保高耐候性，同時降低碳含量以提供適當的焊接性。考頓鋼可採用手工焊、氣體保護焊或埋弧焊進行焊接。此外，點焊也可用於薄厚度的耐候鋼。

While trace amounts of alloying elements such as copper (Cu) and chromate (Cr) are added to COR-TEN to ensure high weather resistance, the carbon content is lowered to provide appropriate weldability. Accordingly, COR-TEN can be welded using either manual, gas-shield or submerged arc welding. In addition, spot welding can be applied to thin-gauge COR-TEN.

考頓鋼具有與同等強度的普通鋼相似的加工性能 (冷成型，熱成型和氣割)。對於帶材軋製產品，最好是軸線與主要軋製方向橫向彎曲。對於成型性能要求更高的應用，符合EN10155的鋼材可以提供有保證的易變性。

COR-TEN possesses workability (cold forming, hot forming and gas cutting) is similar to ordinary steels of same strength. For strip rolled products, bending with the axis transverse to the major rolling direction is preferred. For applications calling for better forming properties, steels in accordance with Standard EN 10155 can be supplied with guaranteed aneability.

# Application Examples

## 應用實例

### Unpainted Use (Bare) 未上漆使用(裸露)

The unpainted application of COR-TEN not only offers economical advantages but, thanks to the calming color of the protective rust, it also demonstrates excellent aesthetic properties. Because of this, COR-TEN is applied in a wide range of fields such as buildings and monuments. Because the initial outflow of rust dirties the surrounding area, it is necessary to fully examine the application site and the purpose for using COR-TEN and to devise a structuring method.

考頓鋼的未上漆應用不僅提供了經濟優勢，而且由於保護性鐵銹具有平和的顏色，它還顯示出優異的美學性能。正因如此，考頓鋼被廣泛應用於建築和紀念碑等領域。由於銹蝕的初始流出會污染周圍區域，因此有必要對應用場地和使用目的進行全面考察，並設計構造方案。





## Unpainted Use (Complementary Rust Stabilization Treatment) 未上漆使用(補充防銹處理)

There have been obstacles linked to the use of COR-TEN in spite of its superior economic advantages. These concerns usually referred to adverse landscaping associated with the yellowish color of the initial rust and to the contamination of surrounding areas caused by the runoff of early-stage rust washed away by rainwater. In order to solve these problems, supplementary rust stabilization treatment was developed. In the case of Complementary Rust Stabilization Treatment, agents similar in color to rust have been selected on the premise that the agents would be converted to rust in the future.

Because the Complementary Rust Stabilization Treatment agents will eventually be converted to rust, there is a certain period when the color will cease, over time, to remain uniform. When countermeasures are required from a landscaping perspective, it is necessary to apply an easy restoration treatment for surface layer film.

儘管考頓鋼擁有優越的經濟優勢，但在使用方面仍然存在障礙。這些問題通常是指最初的銹黃造成的不良景觀，以及早期銹跡被雨水沖走的徑流對周圍地區造成的污染。為了處理這些問題，開發了輔助防鏽處理技術。在補充防銹處理中，選擇顏色與銹跡相似的藥劑，前提是這些藥劑將來會轉化為銹。

由於補充的防銹穩定劑最終會轉化為銹跡，在一定時期內顏色會停止，久而久之保持均勻。從景觀美化的角度採取對策時，有必要對表層膜進行簡單的修復處理。



# Steel Grades

## 鋼材等級

ASTM			
Corten-A	Corten-B		
A588 Gr.A	A588 Gr.B	A588 Gr.C	
A242	A709 Gr.50W		
ASME			
SA588 Gr.A	SA588 Gr.B	SA588 Gr.C	SA588 Gr.K
SA871 Type I Gr.60	SA871 Type I Gr.65	SA871 Type II Gr.60	
SA871 Type II Gr.65	SA871 Type III Gr.60	SA871 Type III Gr.65	
EN			
S235J2W	S355J2WP	S355J0W	S355J0WP
S355J2G1W	S355J2G2W	S355K2G1W	S355K2G2W
JIS			
SPA-H	SMA400AW	SMA400BW	SMA490AW
SMA490BW	SMA490CW	SMA50AW	SMA50CP
UNI			
Fe360DKI	Fe510C1KI	Fe510D1KI	Fe510C2KI
Fe510D2KI	WR50A	WR50B	WR50C
NFA			
E24W4	E36WA3	E36WA4	E36WB3
E36WB4	WTSt37-3	WTSt52-3	
GB			
09CuPCrNi-A	Q235NH	Q355NH	Q355qC
Q355qD	Q345qE		

### The Selection of Steel Grades 鋼材等級的選擇

The steel grades S355J0WP, S355J2J0WP and COR-TEN A have the best weathering properties. Because of the phosphorus used as an alloying element, however, the impact strength of these steel grades is lower than that of other weathering steels. These weathering steels are best suited for sheet steel structures that are not under the risk of brittle fracture.

When the risk of brittle fracture has to be taken into consideration in the design because of high material thickness, low service temperature or for other reasons, it is better to choose another EN 10155 steel or COR-TEN B. Then the impact strength requirements for hot rolled steel can be agreed upon as for general structural steels.

At temperatures above 540°C, S355J0WP, S355J2WP, COR-TEN A and COR-TEN B have a clearly higher resistance to scaling than general structural steels.

耐候性能最好的鋼牌號為S355J0WP、S355J2J0WP和Corten A。然而，由於磷被用作合金元素，這些鋼材等級的衝擊強度低於其他耐候鋼。這些耐候鋼最適用於不存在脆性斷裂風險的鋼板結構。

當由於高材料厚度、低操作溫度或其他原因，在設計中必須考慮脆性斷裂的風險時，最好選擇其他的EN 10155鋼材或者Corten B。這樣，熱軋鋼的衝擊強度要求就可以和一般鋼結構的衝擊強度要求達成一致。

在540°C以上的溫度，S355J0WP、S355J2WP、Corten A和Corten B具有明顯高於一般結構鋼的抗剝落性。



## Outlining A/B Corten Steel A/B考頓鋼概述

Corten steel is created using copper (Cu), chromium (Cr), and nickel (Ni) as the primary alloying elements with less than 0.2% carbon (C) present. It is available in two distinct grades, each of which is structurally and chemically distinct from the other. Corten A is mainly distinguished by additional phosphorous (P), which is generally present in the alloy at concentrations of 0.07% – 0.15%. This imparts enhanced corrosion-resistant properties. Corten B, meanwhile, is not as anti-corrosive but is more suitable for heavy, load-bearing applications.

考頓鋼的主要合金化元素是銅 (Cu)，鉻 (Cr) 和鎳 (Ni)，其碳含量低於0.2%。它有兩種不同的等級，每一個等級在結構和化學上都是不同的。Corten A的主要特征是附加的磷 (P)，通常以0.07%-0.15%的濃度存在於合金中。這增強了耐腐蝕性能。同時，Corten B的抗腐蝕性不強，但更適合重型、承重的應用。



### When to Use Corten A 何時使用Corten A

The self-generating patina of Corten A benefits from the enhanced corrosion-resistant properties of the alloy, enjoying longer-lasting and more robust weatherproof properties. This also enables the use of Corten steel in more harsh environments, such as gas flues and for various components in industrial and hot-working environments.

Corten A is also more suitable for meeting the demands of aesthetic architectural applications. The improved corrosion resistances ensure the attractive, rust-like finish lasts for longer with minimal to no maintenance.

Corten A 的自生銅綠得益於增強的合金耐腐蝕性能，具有更長的持久性和更強的耐候性，這也使得考頓鋼能夠在更惡劣的環境中使用，如煙道，以及工業和熱加工環境中的各種部件。

Corten A 也更適合於滿足建築美學應用的需求。改進的耐腐蝕性確保了吸引力，類似生鏽的表面持續時間更長，最低限度或無需維護。



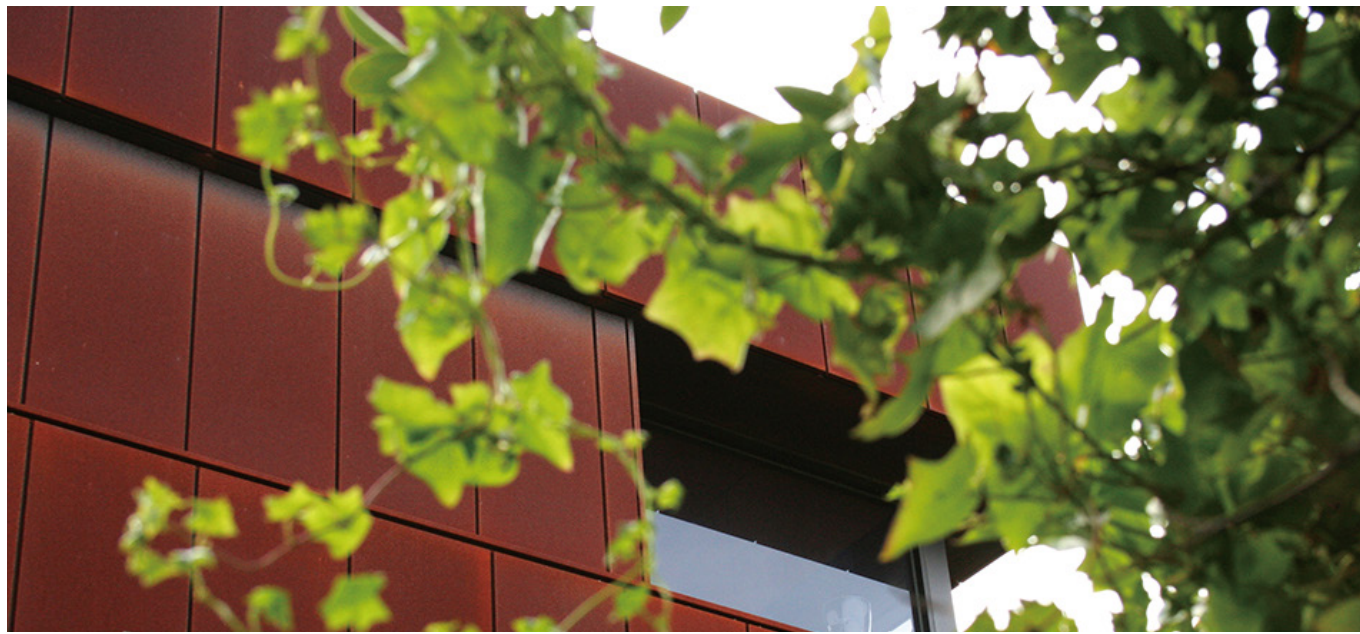
### When to Use Corten B 何時使用Corten B

Corten B is preferable for heavy structural applications due to its enhanced tensile strength. The minimum tensile strength of Corten B strips is approximately 485 N/mm<sup>2</sup>. This provides significantly improved load-bearing capabilities, which makes Corten B suited for heavyweight fascia and structural elements that are constantly exposed to atmospheric corrosives and weathering conditions.

Corten B 由於其增強的抗拉強度，更適合於重型結構的應用。Corten B 鋼條的最小抗拉強度約為485N/mm<sup>2</sup>，這大大提高了承載能力，使Corten B適用於經常暴露在大氣腐蝕和風化條件下的重量級面板和結構元件。

# Corten A Steel

## Corten A 考頓鋼



### Grades & Equivalents 等級和當量

TKS Standard	EN 10025	ASTM Standard	Material No. 材料編號
Corten A	S355J0WP	ASTM A242 Type1	1.8945

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
1mm~200mm	1000mm~4000mm	1000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Thickness 厚度 (mm)		Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
	Strip 條形	Plate 板			
Corten A	2~12	6~12	345	485	20

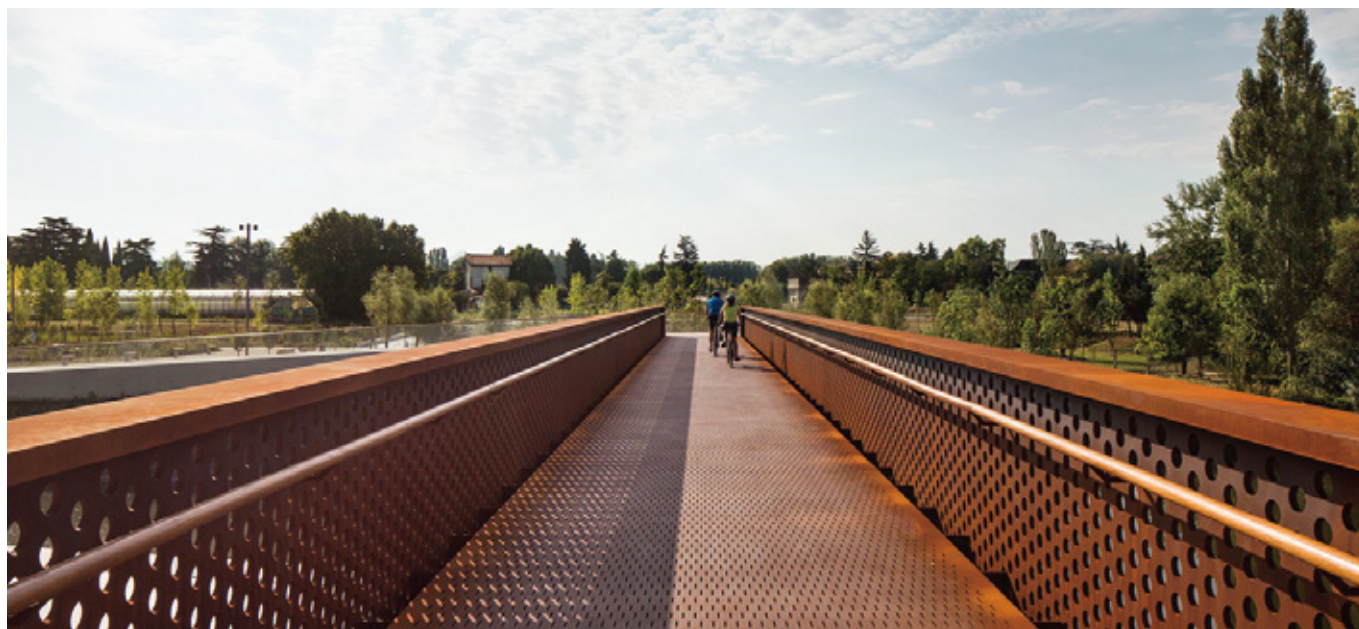
### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Al%	V%	Cu%	Cr%	Ni%
Corten A	≤0.12	0.25~0.75	0.20~0.50	0.07~0.15	≤0.030	0.015~0.06	—	0.25~0.55	0.50~1.25	≤0.65



# Corten B Steel

## Corten B 考頓鋼



### Grades & Equivalents 等級和當量

TKS Standard	EN 10025	ASTM Standard	ASTM Standard	Material No. 材料編號
Corten B	S355J0W	ASTM 588 Grade B	ASTM B242 Type2	1.8946

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
1mm~200mm	1000mm~4000mm	1000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Thickness 厚度 (mm)		Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
	Strip 條形	Plate 板			
Corten B	2~13	6~40	355	485	19

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Al%	V%	Cu%	Cr%	Ni%
Corten B	≤0.19	0.30~0.65	0.80~1.25	≤0.035	≤0.030	0.02~0.06	0.02~0.10	0.25~0.40	0.40~0.65	≤0.40

# ASTM A588 Corten Steel

## ASTM A588考頓鋼



A588 corten steel plate engraving is not only beautiful, but also perfectly combined. The A588 Corten steel plate has become one of the materials for modern landscape art design. Corroded steel sheets change with time, and their color brightness and saturation are higher than that of general structure materials, so they are easy to stand out under the background of garden green plants.

A588考頓鋼的雕刻不僅美觀，而且結合完美。A588已經成為現代景觀藝術設計的材料之一。銹蝕的鋼板隨著時間變化，其顏色亮度和飽和度均高於一般結構材料，在園林綠化植物的背景下容易脫穎而出。

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
6mm~200mm	1500mm~4050mm	3000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
A588 Gr.A	355	485	18
A588 Gr.B	355	485	18
A588 Gr.C	355	485	18

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Cr%	V%	Ni%	Cu%
A588 Gr.A	≤0.19	0.30~0.65	0.80~1.25	≤0.040	≤0.050	0.40~0.65	0.02~0.10	≤0.40	0.25~0.50
A588 Gr.B	≤0.20	0.15~0.50	0.75~1.35	≤0.040	≤0.050	0.40~0.70	0.01~0.10	≤0.50	0.20~0.40
A588 Gr.C	≤0.15	0.15~0.40	0.80~1.35	≤0.040	≤0.050	0.30~0.50	0.01~0.10	0.25~0.50	0.20~0.50



# S355J2W+N Corten Steel

## S355J2W+N 考頓鋼

S355J2W+N are structural steel which is also weather resistant. S355J2W+N alloy is the most ideal choice of alloy because of its excellent mechanical as well as chemical properties. In addition to this, such plates also offer excellent resistance properties such as it is corrosion-resistant, pitting and crevice resistant; it is resistant to oxidation, resistant to chloride stress cracking corrosion, etc.

S355J2W+N是結構鋼也是耐候鋼，具有優良的力學性能和化學性能，是最理想的合金選擇。除此之外，此類鋼板還具有優良的耐腐蝕、耐點蝕、抗裂縫等耐腐蝕性能，具有抗氧化、抗氯化物應力開裂腐蝕等性能。

### Grades & Equivalents 等級和當量

EN 10025	DIN	BS	JIS	NFA	ASTM	Material No. 材料編號
S355J2G1W	WSt52.3	WR50C	SMA570W	E36WB4	A588Gr.A	1.8965

### Specifications 規格

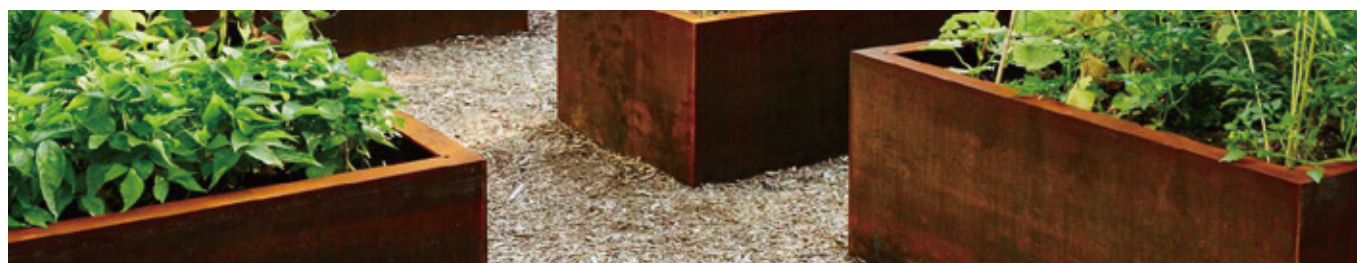
Thickness 厚度	Width 寬度	Length 長度	Process 加工
1.6mm~200mm	1500mm~4050mm	3000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
S355J2W+N	355	510~680	20

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Cr%	Zr%	Ni%	Cu%	Mo%	CEV
S355J2W+N	≤0.16	≤0.50	≤0.50	≤0.03	≤0.03	0.40~0.80	≤0.15	≤0.65	0.25~0.55	≤0.03	≤0.44



# S355J0WP Corten Steel

## S355J0WP 考頓鋼

### Grades & Equivalents 等級和當量

EN 10025	NFA	UNI	UK	ASTM	Material No. 材料編號
S355J0WP	E36WA3	Fe510C1K1	WR50A	A588	1.8945

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
0.3mm~500mm	1000mm~3500mm	1000mm~12000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Yield Strength 屈服強度 (N/mm <sup>2</sup> )						Tensile Strength 抗拉強度 (N/mm)		
	Thickness 厚度 (mm)						Thickness 厚度 (mm)		
	t≤16	16<t≤40	40<t≤63	63<t≤80	80<t≤100	100<t≤150	t≤3	3<t≤100	100<t≤150
S355J0WP	355	345	335	325	315	295	510~680	470~630	450~600

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	N%	Addition of nitrogen binding elements	Cr%	Cu%
S355J0WP	≤0.12	≤0.75	≤1.0	0.06~0.15	≤0.035	0.009	—	0.30~1.25	0.25~0.55

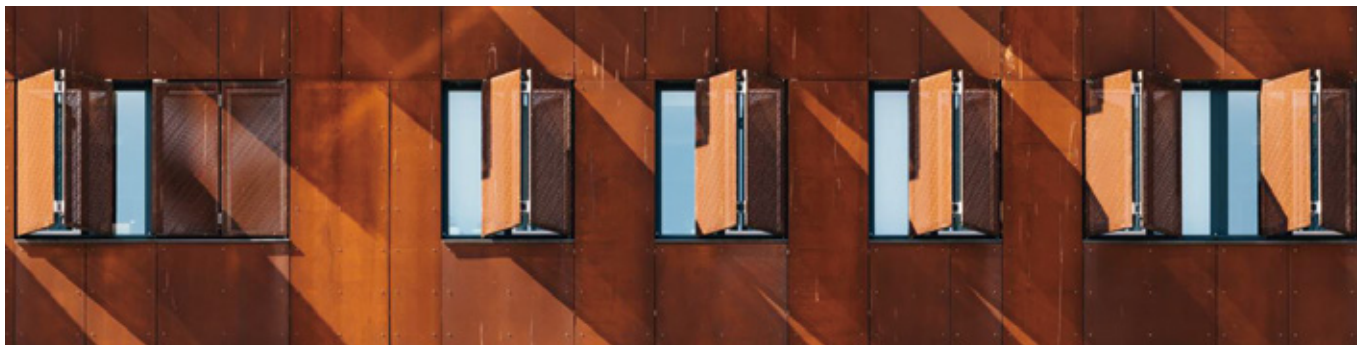
S355J0WP (which is an equivalent grade to Corten A) is a structural weathering steel which is also referred to as atmospheric corrosion resistant steel. S355J0WP provides a long lasting and economic structural steel solution for use in applications such as steel bridges stack gas applications and in steel sculptured buildings due to the material's aesthetically pleasing finish.

S355J0WP (相當於Corten A級) 是一種結構耐候鋼，也稱為耐大氣腐蝕鋼。S355J0WP提供了一個持久經濟的結構鋼解決方案，可用於鋼橋、煙囪氣體應用。因其材料具有令人愉悅的美學外觀，也可用於鋼結構雕塑建築。



# S355J2WP Corten Steel

## S355J2WP 考頓鋼



### Grades & Equivalents 等級和當量

EN 10025	Material No. 材料編號
S355J2WP	1.8946

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
6mm~200mm	1500mm~4050mm	3000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Yield Strength 屈服強度 (N/mm <sup>2</sup> )						Tensile Strength 抗拉強度 (N/mm)		
	Thickness 厚度 (mm)						Thickness 厚度 (mm)		
	t≤16	16<t≤40	40<t≤63	63<t≤80	80<t≤100	100<t≤150	t≤3	3<t≤100	100<t≤150
S355J2WP	355	345	—	—	—	—	510~680	470~630	—

Grade 等級	Elongation 延伸率 Min.(%)						
	Thickness 厚度 (mm)						
	t≤1.5	2<t≤2.5	2.5<t≤3	3<t≤40	40<t≤63	63<t≤100	100<t≤150
S355J2WP	14	15	16	20	—	—	—

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	N%	Cr%	Cu%
S355J2WP	≤0.12	≤0.75	≤1.0	0.06~0.15	≤0.03	—	0.30~1.25	0.25~0.55

# JIS G3125 SPA-H Corten Steel

## JIS G3125 SPA-H 考頓鋼



JIS G3125 SPA-H resists the corrosive effects of rain, snow, ice, fog, and other meteorological conditions. Delivery conditions Can be Hot Rolled, Cold Rolled, Normalized, Quenched, Tempering, Thermal Mechanical Control Process (TMCP) .

JIS G3125 SPA-H可抵抗雨、雪、冰、霧等氣象條件的腐蝕性影響。交貨條件可為熱軋、冷軋、標準化、淬火、回火、熱機械控制工藝 (TMCP)。

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度	Process 加工
6mm~200mm	1500mm~4050mm	3000mm~15000mm	Hot Rolled 熱軋

### Mechanical Properties 機械性能

Grade 等級	Plate Thickness 板厚 (mm)	Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
JIS G3125 SPA-H	≤6	345	480	22
	≥6	335	490	15

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Cu%	Cr%	Ni%
JIS G3125 SPA-H	≤0.12	0.25~0.75	0.20~0.50	0.07~0.15	≤0.04	0.25~0.60	0.30~1.25	0.65



# 09CuPCrNi-A Corten Steel

## 09CuPCrNi-A 考頓鋼

09CuPCrNi-A weathering steel plate is most common used in China weathering steel industries, for high bridges built, shipping containers and other steel constructions in bad situations. 09CuPCrNi-A is totally the same as Cor-ten A.

09CuPCrNi-A耐侯鋼板是中國耐侯鋼工業中最常用的一種耐侯鋼板，用於建造高橋、集裝箱和其他惡劣環境下的鋼結構。09CuPCrNi-A和Corten A完全一樣。

### Grades & Equivalents 等級和當量

EN 10025	Material No. 材料編號
09CuPCrNi-A	1.8945

### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度
1mm~300mm	1000mm~4050mm	3000mm~15000mm

### Mechanical Properties 機械性能

Grade 等級	Plate Thickness 板厚 (mm)	Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)	Delivery State 交貨狀態
09CuPCrNi-A	≤4	310	440	26	Cold Rolled 冷軋
	>4	345	480	24	Hot Rolled 熱軋

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Cr%	Cu%	Ni%	Re%
09CuPCrNi-A	≤0.12	0.25~0.75	0.20~0.50	0.06~0.12	≤0.02	0.30~1.25	0.25~0.50	0.12~0.65	—

# Q355NH Corten Steel

## Q355NH 考頓鋼

Q355NH has good anti rust protection and welding ability and is used in shipping container, support frame of outside building etc. Q355NH also remarkably enhances the anti-corrosive performance of the structural element, lengthens the structural element service life.

Q355具有良好的防銹和焊接性能，適用於集裝箱、室外建築支撐架等。Q355還顯著提高了構件的耐腐蝕性能，延長了構件的使用壽命。



### Specifications 規格

Thickness 厚度	Width 寬度	Length 長度
2mm~300mm	1000mm~4200mm	3000mm~18000mm

### Mechanical Properties 機械性能

Grade 等級	Plate Thickness 板厚 (mm)	Yield Strength 屈服強度 Min.(N/mm <sup>2</sup> )	Tensile Strength 抗拉強度 Min.(N/mm <sup>2</sup> )	Elongation 延伸率 Min.(%)
Q355NH	≤16	355	490~630	20
	16<t≤40	345		
	40<t≤60	335		
	t>60	325		

### Chemical Composition 化學成分

Grade 等級	C%	Si%	Mn%	P%	S%	Cr%	Cu%	Ni%
09CuPCrNi-A	≤0.16	≤0.50	0.50~1.50	≤0.03	≤0.03	0.40~0.80	0.25~0.55	≤0.65

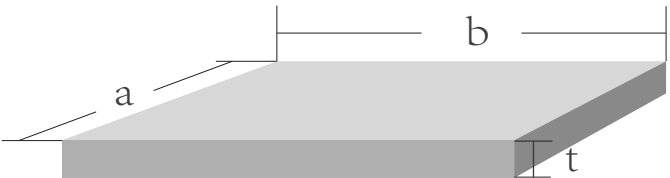


# Weight of Corten Steel Plates

## 考頓鋼板的重量

歐盟標準/中國標準 European Standard/Chinese Standard

Thickness 厚度 t(mm)	Weight 重量 (kg/pcs)							
	Size 尺寸 axb (mm)							
	( 3' x 6' )	( 3' x 7' )	( 4' x 8' )	( 5' x 10' )	( 5' x 20' )	( 6' x 20' )	( 6' x 24' )	( 8' x 20' )
	914 x 1829	914 x 2134	1219 x 2438	1524 x 3048	1524 x 6069	1829 x 6069	1829 x 7315	2438 x 6069
5.0	65.61	76.56	116.65	182.32	363.03	435.68	525.13	580.75
6.0	78.74	91.87	139.98	218.79	437.57	525.15	630.16	700.00
8.0	105.00	122.50	186.64	291.72	583.43	700.19	840.21	933.34
9.0	118.13	137.81	209.97	328.18	656.36	787.72	945.24	1050.00
10.0	131.25	153.12	233.30	364.64	729.29	875.24	1050.26	1166.67
12.0	157.50	183.74	279.96	437.57	875.15	1050.29	1260.31	1400.00
14.0	183.72	214.36	326.61	510.50	1021.00	1225.34	1470.37	1633.34
15.0	196.88	229.68	349.94	546.97	1093.93	1312.66	1575.31	1750.01
16.0	210.00	244.99	373.27	583.43	1166.86	1400.39	1680.42	1866.67
19.0	249.38	290.93	443.26	692.82	1385.65	1662.96	1995.50	2216.67
20.0	262.50	306.24	466.59	729.29	1458.58	1750.48	2100.52	2333.34
22.0	288.75	336.86	513.25	802.22	1604.44	1925.53	2310.58	2566.68
25.0	328.13	382.80	583.24	911.61	1823.22	2188.11	2625.66	2916.68
30.0	393.75	459.36	699.89	1093.92	2187.87	2625.73	3150.78	3500.01



# Job Reference

## 工程案例

2020.3

|

至今

Time / amount  
施工時間/工程量

### Name of Projects 工程名稱

SS G506 – Glass railing, ironware, glass canopy, weathering steel, steel frame, stainless steel of construction of Station Square at Kai Tak Phase

啟德車站廣場建造工程(第一期)  
玻璃欄杆 鐵器 玻璃雨棚 耐候鋼 鋼架 不鏽鋼項目

### Major Content 主要工程內容

Steel Structure Fabrication and Installation, Glass railing, glass canopy, weathering steel

鋼結構製造及安裝, 玻璃欄杆, 玻璃雨棚, 耐候鋼

### Client name 客戶名稱

SFK-CEC Joint Venture  
建築署 Architectural Services Department

### Grade of Quality 質量等級

In-process 在建

2020.3

|

2020.7

Time / amount  
施工時間/工程量

### Name of Projects 工程名稱

DC/2018/05-Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction

DC/2018/05 – 搬遷沙田污水處理廠往岩洞-工地開拓及連接隧道建造工程

### Major Content 主要工程內容

Weathering steel, CLP House, Steel Structure Project, Steel & Metal works

耐候鋼、鐵器工程、中電火牛房、鋼結構工程、閘門、五金冷貨

### Client name 客戶名稱

順盛建設工程有限公司  
中國建築聯營 China State Joint Venture

### Grade of Quality 質量等級

Excellent 優



## DC/2018/05 - Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction

DC/2018/05 – 搬遷沙田污水處理廠往岩洞-工地開拓及連接隧道建造工程



We provide various sizes and grades of weathering steel, which can be processed and customized according to customer requirements. We are looking forward to hearing from you soon.

我們提供各種尺寸、等級的耐候鋼，可根據客戶要求進行加工、定制，期待著您的垂詢惠顧。

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