



WORLDWIDE STEEL SOLUTIONS





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#### Boiler Plate & Vessel Offshore 10 14 Shipbuilding 05 Clad **Plates** Pressure Vessel Structural & Steels (UK) Ltd Weathering (South Africa) 11 15 Armour & Profiling High Yield 06 19 Chrome Contact Us Molv 17 12 D.S. Willetts Sections (Stainless) 07 Abrasion & Quench and 2002 Tempered 13 Pipes & Tubulars 08 **Stainless** established Formed

## • • • • • About Us

Masteel was founded in 2002, growing from a small privately owned steel trading company to a globally recognised steel stockholder. Based in the West Midlands (United Kingdom), we specialise in the supply of a wide variety of carbon & stainless materials.

We also have a branch in South Africa (Pressure Vessel Steels (UK) Ltd) and a sister company in Belgium (Masteel BV) that are supported by our UK Headquarters, offering global coverage. We also have an office in Poland which covers Central & Eastern Europe. In 2023, Masteel also acquired 100% ownership of D.S. Willetts (Stainless). Based in Wolverhampton (United Kingdom), D.S. Willetts (Stainless) specialise in the supply of stainless steel plates and profiles.

Out stock materials are ordered to international standards with additional stringent restrictions applied to the chemical, mechanical and testing requirements. This ensures that where clients have more complex requirements, we can comply using ex stock material.

This stock can be delivered all over the world with Masteel UK Limited's impressive stock range including grades to suit a wide variety of applications.

Our profiling services combined with the comprehensive stock of carbon steel allow us to meet the needs of your projects. We use fully computerised multihead profiling machines to guarantee the utmost quality.

established in

**UK Warehouse** 

established in

We are based in a central position in the UK (Lichfield), and are able to deliver our products throughout the whole of the UK as well as globally. We also have great relationships with a variety of different mills throughout the world. Our supply arrangements are from some of the highest quality steel mills in Western Europe, South Korea & Japan.

Unlike many of our competitors, we are not limited to specific mills, offering our business the flexibility to source mill quantity steels for projects that fit the exact requirements of our customers.

Our stock portfolio has been designed to cover an extensive numerous of specifications relating to a range of industries including:

- Petrochemical
- Oil & Gas
- Offshore
- · Power Generation
- Quarrying
- Mining
- Military

We are committed to producing high quality products. To showcase this commitment, our quality management systems adhere to stringent of standards.

• We are Joscar Registered, approved to Joscar Cat 1,2 & 3

Based in

Belgium

Poland

of stainless steel

specialists D.S. Willetts

(Stainless)

We are also ISO 9001 Certified

Group completes

full acquisition of

Masteel

Rolls Royce Approved



South Africa United Kingdom

Headquarters

Steels (UK) Ltd

Boilers and pressure vessels are usually created by welding a number of curved steel plates together to create a spherical or cylindrical component. As it is formed into one of these shapes, the component is able to endure the extreme strain placed on them by the pressurized fluids and liquidized gases held at cryogenic temperatures. Because of this, weldability is one of the most important attributes of boiler quality plates.

Pressure vessel and boiler quality steel are commonly found throughout the oil industry (including onshore and offshore), the petrochemical industry and the gas production industry. The companies in these industries set the highest demands in terms of quality, testing and conditions of supply. Masteel UK Limited have all the necessary expertise to meet these demand.

Our boiler & pressure vessel steel is of Western European origin which is the steel of choice for the world's boiler & pressure vessel fabricators.

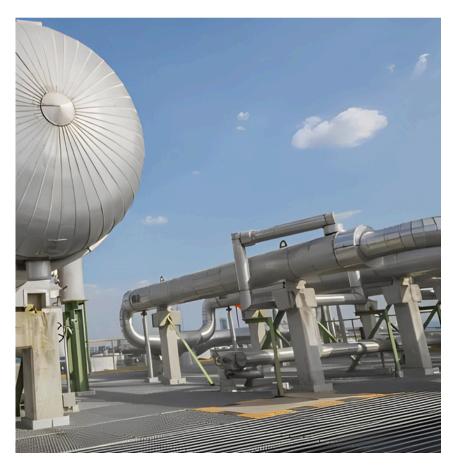
Grades we supply:

- SA516 Gr.60/P265GH
- SA516 Gr.70/P355NL2
- A285 Gr.C



Scan/Click to find out more about our Boiler & Pressure products MASTERHIC is Masteel UK Limited's designation for HIC Steel for fine grain pressure vessels, offering specific and superior properties for sour gas application. HIC resistant steel is manufactured via the electric arc furnace with desulphurisation, dephosphorisation, ladle refining and vacuum degassing to provide an ultra clean and homogeneous steel. HIC steel is particularly suited for pressure equipment where wet H2S corrosion can be a problem

Combatting the problem of hydrogen induced cracking in sour service, HIC steel plate is carbon steel plates which are tested to assess the susceptibility of the material to hydrogen induced cracking. This is a problem commonly found in wet H2S/sour service operating environments such as in the Oil, Gas and Petrochemical Industry..



Our HIC range is supplied as:

ASTM/ASME A/SA516
Grade 60 / 65 / 70
in accordance with
MASTERHIC 5 / 10 / 15
HIC Resistant steel for
Pressure Equipment in
Sour Service

Scan/Click to find out mor about our HIC Products



Chrome Molybdenum steel (often referred to in the industry as Chrome Moly) is used for a wide variety of applications

particularly in the oil and gas industry, the nuclear industry and fossil fuel power stations. Chrome moly steel is a

unique engineering material with enhanced corrosion resistance and high-temperature performance. These ideal

chemical and thermal properties are accompanied by high tensile strength, which makes it preferable to the likes of

mild carbon steel products for demanding areas of application. The molybdenum provides increased strength and

higher working temperatures whilst the chromium facilitates excellent corrosion resistance and oxidation.

S275 and S355 are Masteel UK Limited's core range of structural grade steels. Often, you may see further letters and classifications alongside S275 and S355 which refer to the mechanical properties and manufacturing process.

Predominantly we supply structural grades to companies involved in construction, yellow goods, general fabrications and steel profilers. Along with our structural grades we also supply from stock weather resistant steel including Corten™.

Weather resistant steel can be used in a wide range of structural applications. It is often used in bridge construction projects due to 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 which is proving popular with architects and design engineers.



Scan/Click to find out more about our Structural products



Scan/Click to find out more bout our Weathering products

## Grades we supply:

S355JR

S355J0

• S235JO S355J2

**S355ML** 

S355JOWP

• S275J2 S355J2W



- SA/A387 Gr.5
- SA/A387 Gr.9
- SA/A387 Gr.11
- SA/A387 Gr.12
- SA/A387 Gr.22
- SA/A387 Gr.91
- 10CrMo910
- 13CrMo45
- 16Mo3





Scan/Click to Find out more about our Chrome Moly

Abrasion resistant steel is a high-carbon alloy steel plate. This means that the material is much more resistant to abrasion than standard steel due to this addition of carbon. It is also malleable and weather-resistant due to the other alloys added. When carbon is added to steel it enhances the overall hardness and toughness whilst simultaneously decreasing the strength. This is why abrasion resistant steel is mainly used in applications where abrasion resistance is the most important factor such as in mining, construction, manufacturing, and material handling. Masteel UK Limited stock and supply a comprehensive range of wear resistant steels, available in a range of thicknesses up to 160mm.

## Grades we supply: **400HB**, **450HB**, **500HB**



scan/Click to find out more bout our Abrasion & QT

## **Quench and Tempered**

Ultra high yield steels are manufactured to perform exceptionally under extreme load stresses. The types of stress inflicted upon steel, and other heavy industry components, include vibration, compression, and impact. We stock and supply a range of Quenched & Tempered steels, available in a range of thicknesses up to 250mm.

Grades we supply: • **\$690QL** 

S860QL

S960QL

Our Abrasion and Quenced & Tempered grades can be supplied in plate form, or as profiles. Profiles are produced with our in-house gas and plasma cutting service. All our stock material is sourced from the most reputable European Steel mills, complete with full traceability and 3.1 Material certs.



Scan/Click to find out more about our Stainless products

Stainless steel plate is often referred to as "corrosion-resistant steel" – it does not stain, corrode or rust as easily as normal carbon steel. It would however be misleading to say it is corrosionproof. It differs significantly from standard carbon steel due to the amount of chromium present, which limits surface corrosion unlike carbon steel which will rust when exposed to air and any moisture in the atmosphere. Due to its anti-oxidation qualities, stainless steel is often a popular solution.

## <u>Grades we supply:</u>

- 304, 304L, 304H
- 316, 316L, 316H
- 321, 347, 410
- 1.4057, UNS S31254, UNS S32205
- UNS 32750, UNS32760



D.S. Willetts are based in Bilston. Wolverhampton (United Kingdom)

In 2023, Masteel successfully completed the acquisition of D.S. Willetts, who specialise in the supply of stainless steel plates and profiles. The acquisition has helped us broaden our stainless steel services, and highlights our on going commitment in the supply of stainless steels.

**D.S. Willetts Stocked Grades -** 304, 316, 310, 321, Duplex 1.4462

D.S. Willetts are also proud members of the BSSA (British Stainless Steel Association)





#### Scan/Click to find out more about our Offshore products

Masteel UK Limited is able to supply Structural steels for offshore applications according to the EN 10225 specification. With characteristics including high yield strength, excellent weldability, good resistance to brittle fracture (longitudinal and transverse), low phosphorus and sulphur content the steels listed on this page are best suited for offshore applications where there is high exposure to salt water corrosion. The offshore steels that Masteel UK Limited supply can be used in varying applications but most commonly can be used in the construction of Bridges, rigs and storage tanks.



## Grades we supply:

- API 2H Grade 50 • S355G7+M/S355MLO
- S355G7+N/S355NLO
- S355G8+M/S355MLO
- S355G8+N/S355NLO
- S355G9+M/S355MLO
- S355G9+N/S355NLO

- API 2W Grade 51
- S420G1+QT/S420QLO
- S420G1+M / S420MLO
- S420G2+QT/S420QLO
- S420G2+M / S420MLO
- S460G1+QT/S460QLO
- S460G1+M / S460MLO
- S355G10+M/S355MLO S460G2+QT/S460QLO
- S355G10+N/S355NLO
   S460G2+M/S460MLO



# 



We offer higher strength shipbuilding steels as standard. High strength steels offer significant cost advantages by reducing the weight of the structure in comparison to the steel used. The plates are suitable for use in the construction of container ships and large cargo freighters as well as commercial shipping lines such as luxury cruise ships and ferries. These high yield materials are commonly used in the construction of hulls and superstructures for large shipping vessels.

The grades are exclusively for shipbuilding use as set out in the standard. Grades are displayed in the below table.

Туре	Strength	Lloyd's	Bureau	American	Detnorske	USSR Register	Registad
of	(Minimum	Register of	Veritas BV	Bureau of	Vertias	of shipping	Italiano
Steel	Yield Point)	shipping LR		shipping ABS	DNV	SR	Vanvale
	N/mm²						Rina
MS	235	A, B, D,E	A, B, D,E	A, B, D,E	A, B, D,E	A, B, D,E	A, B, D,E
HTS	265				A 27S		
					D 27S		
					E 27S		
HTS	315	AH32	AH32 DH32 EH32	AH32	A 32	A 32	AH32
		DH32		DH32	D 32	D 32	DH32
		EH32		EH32	E 32	E 32	EH32
		FH32		FH32	F 32	F 32	FH32
		AH34S					
HTS	345	DH34S					
		EH34S					
нтѕ	355	AH36		AH36	A 36	A 36 D 36 E 36	AH36
		DH36		DH36	D 36		DH36
		EH36		EH36	E 36		EH36
		FH36		FH36	F 36		FH36
HTS	390	AH40		AH40	A 40		
		DH40		DH40	D 40		
		EH40		EH40	E 40		
		FH40		FH40	F 40		



Scan/Click to find out more about our Shipbulding products



Scan/Click to find out more about our Armour & High Yield

The steel industry is not by any means excluded from technological developments in the security sector with armour plated steel becoming a global consumable for protection against explosions or ballistic projectiles. Masteel UK Limited offer our own designation of armour steel plate which is available in two separate grades. Our material is of the highest quality and specification and displays excellent high yield and tensile strength.

Our ballistic resistant material conforms to the following specifications:



- MIL-DTL-12560(K)
- DEF-STAN 95-24
- PROTECTION 400/450/500/600

## <u>High Yield</u>

From heavy transporters, to steel structures and mobile cranes, our high yield steels are designed to work under incredible load stresses. Steels of this type are also supplied as special offshore grades to the offshore industry.

Our structural grade material provides maximum strength (a minimum tensile strength of up to 1300 MPa), with good welding and bending properties.

## Grades we supply:

- S500MC
- S550MC
- S700MC
- S960MC



Masteel UK Limited are Leading suppliers of structural steel sections, We are able to supply a wide range of grades and sizes. The most commonly used grades for sections are S235, S275 and or S355, the grade designation represents the nominal yield strength of the steel. We offer material in standard lengths, but can also offer a "Cut to size" service.

In addition to this and upon request from the customer we can supply a wider range of sizes on a mill rolling basis.

#### A BRIEF OVERVIEW OF STOCK AVAILABLE:

#### **Universal Columns (UC)**

Ranging from sizes: 152 x 152 x 23 to 356 x 406 x 634

#### **Universal Beams (UB)**

Available in sizes: 127 x 76 x 13 to 914 x 419 x 388

#### **Parallel Flange Channels (PFC)**

Ranging from sizes: 100 x 50 x 10 to 430 x 100 x 64

#### **RSA Equal Angles**

Available in sizes: 30 x 30 x 5 to 280 x 250 x 25

#### **RSA Unequal Angles**

Ranging from sizes: 65 x 50 x 5 to 200 x 150 x 18

#### **ALSO AVAILABLE IN S355J2H:**

#### **Circular Hollow Sections (CHS)**

Ranging from sizes: 21.3 x 3.2 up to 457.0 x 25

#### **Rectangular Hollow Sections (RHS)**

Available in sizes:  $50\,x\,30\,x\,2.5$  up to  $500\,x\,300\,x\,16$ 

#### **Square Hollow Sections (SHS)**

Ranging from sizes: 40 x 40 x 3 up to 400 x 400 x 16

#### **EUROPEAN SECTIONS AVAILABLE:**

HEA 100 - 1000

HEB 100 - 1000

HEM 100 - 1000

UPN 80 - 400

IPE 80 - 600

Ranging from sizes: 40 x 40 x 3

up to 400 x 400 x 16

#### **ADDITIONAL SERVICES:**

Masteel UK Limited can offer a comprehensive range of testing on the structural sections we supply.

Available to customers upon request.



Scan/Click to Find out more about our Sections

Masteel are a leading supplier of tubular steel, hollow sections, steel pipes and solid round bar products in carbon, alloy and stainless steel. These pipes can be welded or seamless and can be supplied with different properties for different purposes (e.g. anti-corrosive). Our tubular and steel pipes have wide ranging applications in numerous market sectors including oil & gas, petrochemical and the construction industry. We also specialise in large diameter pipes starting from 50mm diameter right up to 2500 meters.

## Key Features of our Pipes & Tubulars

- A large stock of pipes ready for call-off
- Pipes manufactured to specified dimensions on request
- Pipes can be produced in high quality alloys
- Pipes can be supplied in a variety of finishes
- Pipes can be cut to size on our premises ready for immediate supply



Scan/Click to find out more about our Pipes & Tubulars



#### Scan/Click to read more about Clad Plates



Clad steel plate offers a low cost and highly effective solution in industrial sectors such as construction, shipbuilding and the manufacture of certain types of industrial tanks including pressure vessels. Clad plates are classed as composite steel and are created by bonding stainless steel to a carbon steel or base metal plate. Whilst the clad plate offers a lower cost solution, the characteristics and performance of clad plate is still impressive with excellent strength, especially when compared with other structural materials and has impressive corrosive and heat resistant qualities.

The clad Composite steel cladding generally comprises a low alloy steel plate backing attached to a thin sheet of a more expensive grade. This enables engineers to build durable structures and components for demanding areas of application at lower costs. Composite clad plates are ideal solutions for markets dealing with hightemperature processes or corrosive materials, with few opportunities to maximize returns on investment.



Masteel UK Ltd offer in-house steel profiling services which include fully computerised multihead profiling machines. This, combined with our comprehensive stock of carbon steels up to 170mm thick means we can produce to your project requirements giving peace of mind with our single site solution. One-offs to thousands of profiles can be supplied and finished to your specifications and tolerances. We are also able to offer machining, grinding and drilling services. In house we provide Laser, Flame and Plasma machine cutting facilities.



## Flame Cutting Machine

Application: Carbon & Low Alloy Steels

• Cutting Range: 6mm - 300mm thick

Cutting Area: 12000 x 4000

Flame cutting is a popular 'added value' service of our business and we cut steel for clients both in the UK and for delivery internationally. We have our own computerised multihead profiling machines which directly link to Autocad – we can therefore take your drawing and use it as a working template to cut steel to your requirements.

## Plasma Cutting Machine

• Application: Carbon, Low & High Alloy Steels

 Cutting Range: Up to 50mm Cutting Area: 7000 x 3000

The equipment uses technology with a smaller nozzle and thinner plasma arc to offer sharp cut edges and high precision bolt holes with little or no finishing required. Plasma cutting is often used in fabrication and construction due to its high speed and precision cutting combined with relatively low cost.





## **Laser Cutting Machine**

• Application: Carbon, Alloy & Stainless Steels

• Cutting Range: Up to 30mm thick

• Cutting Area: 4000 x 2000

Cutting steel profiles using laser cutting techniques have numerous advantages. Although heat is generated during the cutting process, the heat affected zone is only very small due to the precise nature of the cutting tool. Another obvious benefit is the laser's capacity to cut complex and intricate shapes. As a result, laser cutting is an effective method for producing accurately cut steel profiles. This accuracy allows the profiles to be cut to very fine tolerances.



### **Profiling Services**

In addition to our Flame, Plasma and Laser services, we can now also add the services offered at D.S. Willetts.

D.S. Willetts specialise in the supply of stainless steel plates and profiles. In-house, D.S. Willetts offer the following profiling services on stainless steel material.



**PLASMA** 

**BED SIZE OF 6,000MM X 3,000M CUTTING CAPACITY OF UP TO 100MM THK** 



**WATERJET** 

**BED SIZE OF 6,000MM X 3,000M** 



**GUILLOTINE** 

4.000MM X 12MM THK



**PLATE SAW** 

PLATE SAW SIZE UP TO 4,000MM (LENGTH) AND UP TO 75MM THK



**BANDSAW** 

**BANDSAW LIMIT OF UP TO 250MM DIA** 



Established in 2012, Pressure Vessel Steels (UK) Ltd is a branch of Masteel UK Limited, that is based in South Africa. Pressure Vessel Steels (UK) Ltd is run by Carlos De Olivera, who has over 20 years experience within the steel industry. Pressure Vessel Steels (UK) Ltd supply steel to an array of companies in the South African market including engineering companies, vessel fabricators and various other companies involved in the Oil, Gas & Petrochemical industries. Details of the products offered by Pressure vessel Steels (UK) Ltd can be seen below.



Established in 1986, D.S. Willetts (Stainless) specialise in the supply of stainless steel plates and profiles. In 2023, D.S. Willetts (Stainless) became a division of Masteel UK Limited. Based in Bilston (Wolverhampton), D.S. Willetts (Stainless) also provide Laser, Plasma, Plate Saw, Band Saw, Guillotine and Water Jet cutting on a variety of stainless steel graded products. To see more about the profiling capabilities of D.S. Willetts (Stainless), please see page 16. The stainless grades that are stocked by D.S. Willetts (Stainless) can be seen below.

# **Grades Stocked**

- 304/304L (1.4301/1.4307)
- 316/316L (1.4401/1.4404)
- 310 (1.4845)
- 321 (1.4541)
- **DUPLEX 1.4462**



D.S. Willetts (Stainless) are based at Murdoch Road, Bilston, West Midlands WV14 7HG

## CONTACT







# **Boiler and Pressure Vessel**

SA/A516 Gr.60/P265GH SA/A516 Gr.65/P295GH SA/A516 Gr.70/P355NL2

## **Hic Resistant**

Masterhic Gr.5, Gr.10 & Gr.15

#### Chrome

SA/A387 Gr.5, Gr.9, Gr.11, Gr.12,Gr.22, Gr.91

#### Structural

S355NL & S355NL2+N

#### **Stainless**

304/304H, 316, 321, 347, 410, 904L. **Duplex and Super Duplex** 

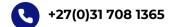
**Explosion Bonding Cladding** including Carbon, Stainless Nickel Alloys & Copper Alloys



Pressure Vessel Steels (UK) are based in Durban, South Africa

## CONTACT









## Contact Us







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