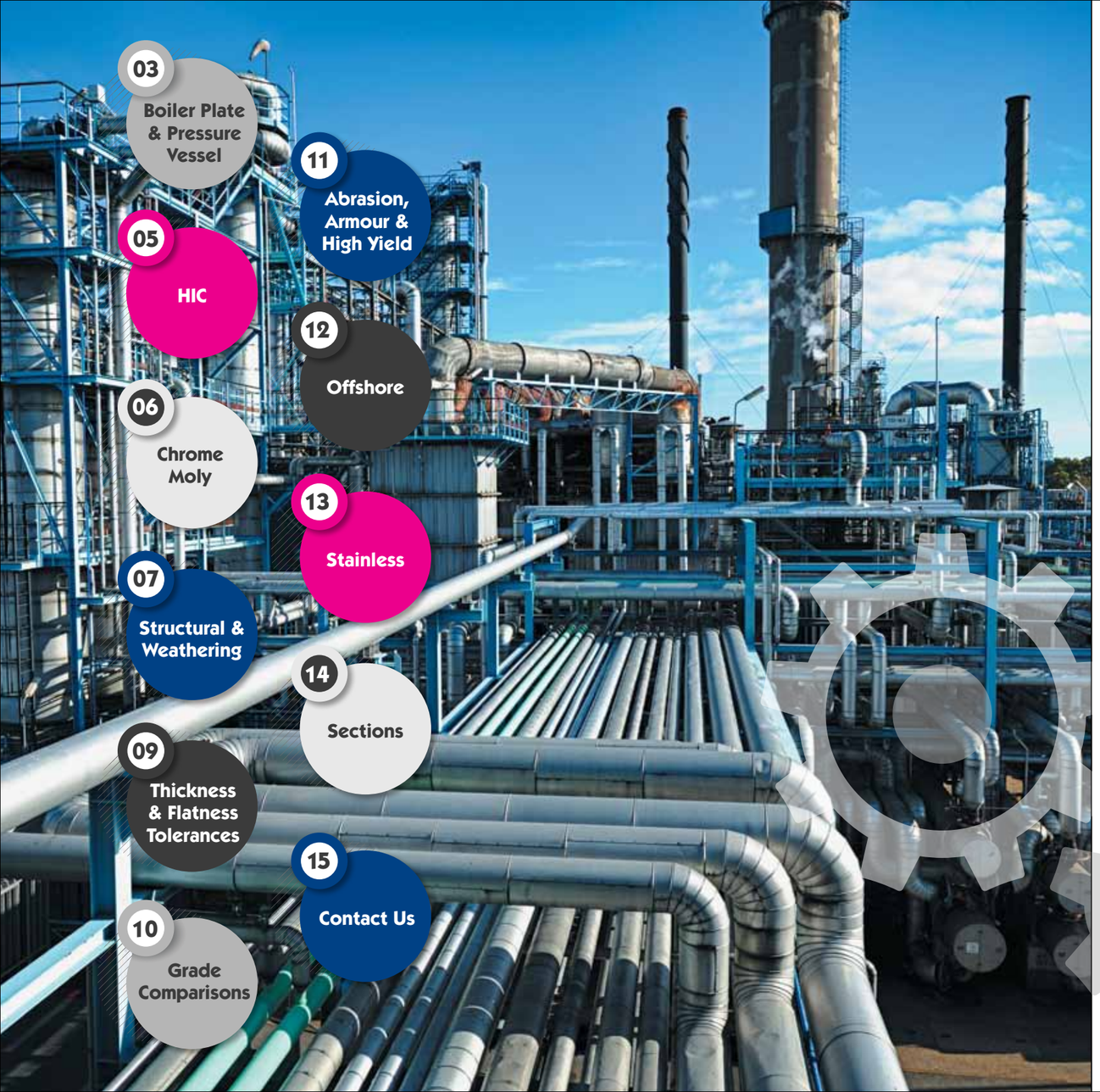

Masteel
the solution to your steel requirements



Founded in 2002, Masteel UK Limited has grown from a small privately owned steel trading company to a globally recognised steel stockholder. With satellite offices in Singapore and South Africa (Pressure Vessel Steels (UK) Ltd) which are all supported by our UK Headquarters Masteel UK Limited can offer customers global coverage to the world's largest and emerging economies.

Excellent standards of service are provided by our highly skilled and knowledgeable staff which provides our customers with a professional and dependable service.

At Masteel UK Limited we believe that flexibility is key to providing customers with the best possible service. Masteel UK Limited has supply arrangements with some of the highest quality Steel mills in Western Europe, South Korea, Japan, India and China. Unlike many of our competitors, we are not tied to any one mill, this gives our business the flexibility to source mill quantity steels for projects which are to our customer's exact requirements.

Masteel UK Limited's dedicated quality department works tirelessly to maintain the high standards that we are reknown for. Along with internal quality systems audits Masteel UK Limited has gained external accreditations for example, approval to supply material to the nuclear sector accredited by **Rolls-Royce**. All material supplied by Masteel UK Limited are fully certified with full traceability according to EN10204 3.1 minimum. Additional testing is also an option for clients as well with third party inspection available upon request.

Masteel UK Limited offers a range of added value services to complement our steel stockholding and supply business. At our UK warehouse we can offer an extensive flame cutting service. Customers can also utilise our fully computerised CAD-CAM System, we can therefore profile stock material to suit your specific needs. For other forms of cutting we also make use of third party companies and through them we can offer laser cutting, plasma cutting and water-jet cutting.

We at Masteel UK Limited know the importance of correct supply chain management that's why our export and logistics departments are dedicated to managing customer's orders. We are able to offer global supply from our stock locations in the UK, Malaysia and South Africa (through Pressure Vessel Steels (UK) Ltd, a Masteel UK Limited branch). All orders Masteel UK Limited undertake can be delivered direct to the customer's works with all duties paid.

- **2002** — Masteel Officially formed
- **2003** — Company commences trading
- **2004** — Export department established
- **2005** — Achieves Quality Assurance accreditation
- **2006** — Company moves to current UK location, Nether Whitacre near Birmingham
- **2007** — Masteel Asia Pacific Opens
- **2008** — Profiling services established at UK Warehouse
- **2008** — Masteel expands operation in the Middle East
- **2011** — Stocking facilities established at Antwerp, UAE and Singapore
- **2012** — Masteel expands operation in Brazil
- **2012** — New company Pressure Vessel Steels (UK) Ltd formed in Johannesburg, South Africa
- **2013**

03 Boiler Plate & Pressure Vessel

Masteel UK Limited has a global reputation for the supply of high quality Pressure Vessel Steel to some of the world's largest Boiler, Pressure Vessel and heat exchanger fabricators in the Oil, Gas and Petrochemical industry.

In addition to the stock we carry and as a result of our supply partnerships with some of Western Europe's finest mills we can provide our customers with an extensive support system with their orders regardless of whether it is for a minimum quantity or a mill tonnage.

RANGE OR SUPPLY	WIDTH			LENGTH					
THICKNESS	2000	2500	3000	4000	5000	6000	9000	10000	12000
6MM - 50MM	X	X	X			X	X	X	X
55MM - 70MM	X	X	X		X	X			
75MM - 100MM	X	X			X	X			
100MM - 200MM	X	X		X	X				

			CHEMICAL COMPOSITION												MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	Cr	Cu	Ni	Mo	Nb	Ti	Tensile Strength	Yield Stress
BS	161-360A	>3 <16	0.17	0.10 / 0.35	0.40 / 1.20	0.030	0.045	-	0.250	-	0.300	0.100	-	-	360/480	205
		>16 <40	0.17	0.10 / 0.35	0.40 / 1.20	0.030	0.045	-	0.250	-	0.300	0.100	-	-	360/480	195
		>40 <63	0.17	0.10 / 0.35	0.40 / 1.20	0.030	0.045	-	0.250	-	0.300	0.100	-	-	360/480	185
		>63 <100	0.17	0.10 / 0.35	0.40 / 1.20	0.030	0.045	-	0.250	-	0.300	0.100	-	-	360/480	175
	161-430A	>3 <16	0.25	0.10 / 0.35	0.60 / 1.40	0.030	0.030	-	0.250	-	0.300	0.100	-	-	430/550	250
		>16 <40	0.25	0.10 / 0.35	0.60 / 1.40	0.030	0.030	-	0.250	-	0.300	0.100	-	-	430/550	240
		>40 <63	0.25	0.10 / 0.35	0.60 / 1.40	0.030	0.030	-	0.250	-	0.300	0.100	-	-	430/550	230
		>63 <100	0.25	0.10 / 0.35	0.60 / 1.40	0.030	0.030	-	0.250	-	0.300	0.100	-	-	430/550	220
		>100 <150	0.25	0.10 / 0.35	0.60 / 1.40	0.030	0.030	-	0.250	-	0.300	0.100	-	-	430/550	210
	223-490A/B	>3 <16	0.20	0.10 / 0.50	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	355
		>16 <40	0.20	0.10 / 0.50	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	345
		>40 <63	0.20	0.10 / 0.50	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	340
		>63 <100	0.20	0.10 / 0.50	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	335
		>100 <150	0.20	0.10 / 0.50	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	330
	224-460A/B	>3 <16	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	460/580	325
		>16 <40	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	460/580	315
		>40 <63	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	460/580	305
		>63 <100	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	460/580	295
		>100 <150	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	460/580	285
	224-490A/B	>3 <16	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	325
		>16 <40	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	315
		>40 <63	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	305
		>63 <100	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	295
		>100 <150	0.22	0.10 / 0.40	0.90 / 1.60	0.030	0.030	-	0.250	-	0.750	0.100	-	-	490/610	285

			CHEMICAL COMPOSITION												MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	Cr	Cu	Ni	Mo	Nb	Ti	Tensile Strength	Yield Stress
EN 10028-2	P265GH	<16	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	410/530	265
		>16 <40	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	410/530	255
		>40 <60	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	410/530	245
		>60 <100	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	410/530	215
		>100 <150	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	400/530	200
		>150 <250	0.20	0.400	0.80 / 1.40	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	390/530	185
	P295GH	<16	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	460/580	295
		>16 <40	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	460/580	295
		>40 <60	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	460/580	285
		>60 <100	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	460/580	260
		>100 <150	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	440/570	235
		>150 <250	0.08 / 0.20	0.400	0.90 / 1.50	0.025	0.010	-	0.300	-	0.300	0.080	0.020	0.030	430/570	220
	P355GH	<16	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	510/650	355
		>16 <40	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	510/650	345
		>40 <60	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	510/650	335
		>60 <100	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	490/630	315
		>100 <150	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	480/630	295
		>150 <250	0.10 / 0.22	0.600	1.10 / 1.70	0.025	0.010	-	0.300	-	0.300	0.080	0.040	0.030	470/630	280
	P460NL2	<16	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	570/730	460
		>16 <40	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	570/720	445
		>40 <60	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	570/720	430
		>60 <100	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	540/710	400
		>100 <150	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	-	-
		>150 <250	0.200	0.600	1.10 / 1.70	0.025	0.005	-	0.300	-	0.800	0.100	0.050	0.030	-	-
ASTM/ASME	A/SA285 - C	<50	0.28	-	0.90	0.035	0.040	-	-	-	-	-	-	-	55/75	30
	A/SA516 - 60	<12	0.21	0.15 / 0.40	0.60 / 0.90	0.035	0.040	-	-	-	-	-	-	-	60/80	32
		>12 <50	0.23	0.15 / 0.40	0.85/ 1.20	0.035	0.040	-	-	-	-	-	-	-	60/80	32
		>12 <100	0.25	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	60/80	32
		>100 <200	0.27	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	60/80	32
		>200	0.27	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	60/80	32
	A/SA516 - 65	<12	0.24	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	65/85	35
		>12 <50	0.26	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	65/85	35
		>12 <100	0.28	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	65/85	35
		>100 <200	0.29	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	65/85	35
		>200	0.29	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	65/85	35
	A/SA516 - 70	<12	0.27	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	70/90	38
		>12 <50	0.28	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	70/90	38
		>12 <100	0.30	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	70/90	38
		>100 <200	0.31	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	70/90	38
		>200	0.31	0.15 / 0.40	0.85 / 1.20	0.035	0.040	-	-	-	-	-	-	-	70/90	38

TYPICAL VALUES, PLEASE CONTACT US FOR MORE INFORMATION

HIC

ASTM/ASME A/SA 516 Grade 60 / 65 / 70 in accordance with MASTERHIC 5 / 10 / 15
HIC Resistant steel for Pressure Equipment in Sour Service

MASTERHIC is Masteel UK Limited's designation for fine grain pressure vessel steels offering specific and superior properties for sour gas application. Manufactured via the basic oxygen or electric arc furnace with desulphurisation, dephosphorisation, ladle refining and vacuum degassing to provide ultra-clean and homogeneous steel. Particularly suited for pressure equipment where wet H2S corrosion can be a problem.

Product Description:
MASTERHIC 5/10/15 is tested in accordance with NACE TM 0284 with test solution A (pH = 3)

CHEMICAL ANALYSIS

	CLR (%)	CTR (%)	CSR (%)
MASTERHIC 5	< 5	< 1.5	< 0.5
MASTERHIC 10	< 10	< 3	< 1
MASTERHIC 15	< 15	< 5	< 2

C	Mn	Si	P	S	Ni	Cr	Mo	Cu
< 0.20	0.85 / 1.20	0.15 / 0.40	< 0.010	< 0.002	< 0.40	< 0.30	< 0.10	< 0.20

Key Features of MASTERHIC Products:

- Ultrasonic testing performed in accordance with ASTM A578 Level C
- Impact tested at -50 Deg C (Longitudinal)
- Supply Condition: Normalised
- Hardness tested according to NACE MR 0175 22HRC max
- Simulated Post Weld Heat Treatment
- Mill test certificates in accordance to EN10204 3.1, unless otherwise stated.
- Plate marking is carried out according to ASTM/ASME A/SA 20.

Masteel UK Limited are pleased to offer HIC Resistant steel plates from stock:

- Thicknesses 6mm to 100mm
- Full profiling facilities are also available
- Pre-allocated rolling schedules are available for projects based contracts.
- Maximum plate weight 15 tonnes

* Masteel reserve the right to amend MASTERHIC designations at any time and the above details should be rechecked at time of enquiry and in case of order.

Chrome Moly

ASTM A387 (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. From the UK we can offer from stock Chrome Moly steel grades such as ASTM/ASME A/SA387 5, 9, 11, 12, 22 (Grade 22 is also available from stock in Malaysia), 91" all in the class 2 (Class 1 possible upon application) in a comprehensive range of thicknesses.

The introduction of Chrome Molybdenum increases the materials temperature tensile strength making it an excellent choice for environments with an elevated temperature level. Chrome Moly steel also displays excellent corrosion resistant characteristics.

CHROME MOLY	WIDTH		LENGTH		
THICKNESS	2000	2500	4000	5000	10000
6MM - 50MM	X	X			X
50MM - 100MM	X	X		X	
100MM - 150MM	X	X	X		

			CHEMICAL COMPOSITION												MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	Cr	Cu	Ni	Mo	Nb	Ti	Tensile Strength	Yield Stress
BS 1501 Pt 2	243	>3 <16	0.12 / 0.20	0.15 / 0.35	0.40 / 0.90	0.025	0.015	-	0.250	-	0.300	0.025 / 0.35	-	-	440/590	275
		>16 <40	0.12 / 0.20	0.15 / 0.35	0.40 / 0.90	0.025	0.015	-	0.250	-	0.300	0.025 / 0.35	-	-	440/590	270
		>40 <60	0.12 / 0.20	0.15 / 0.35	0.40 / 0.90	0.025	0.015	-	0.250	-	0.300	0.025 / 0.35	-	-	440/590	260
		>60 <100	0.12 / 0.20	0.15 / 0.35	0.40 / 0.90	0.025	0.015	-	0.250	-	0.300	0.025 / 0.35	-	-	430/580	240
	620 B	<75	0.09 / 0.18	0.15 / 0.40	0.40 / 0.65	0.025	0.015	-	0.80 / 1.15	-	0.300	0.45 / 0.60	-	-	480/600	340
		>75 <100	0.09 / 0.18	0.15 / 0.40	0.40 / 0.65	0.025	0.015	-	0.80 / 1.15	-	0.300	0.45 / 0.60	-	-	450/570	280
		>100 <150	0.09 / 0.18	0.15 / 0.40	0.40 / 0.65	0.025	0.015	-	0.80 / 1.15	-	0.300	0.45 / 0.60	-	-	430/550	255
	621 B	<75	0.09 / 0.17	0.50 / 0.80	0.40 / 0.65	0.025	0.015	-	1.00 / 1.50	-	0.300	0.45 / 0.60	-	-	515/690	340
		>75 <100	0.09 / 0.18	0.15 / 0.40	0.40 / 0.65	0.025	0.015	-	0.80 / 1.15	-	0.300	0.45 / 0.60	-	-	500/670	320
		>100 <150	0.09 / 0.18	0.15 / 0.40	0.40 / 0.65	0.025	0.015	-	0.80 / 1.15	-	0.300	0.45 / 0.60	-	-	490/650	310
	622-515 B	<100	0.09 / 0.15	0.500	0.30 / 0.60	0.025	0.015	-	2.00 / 2.50	-	0.300	0.90 / 1.10	-	-	515/690	310
		>100 <150	0.09 / 0.15	0.500	0.30 / 0.60	0.025	0.015	-	2.00 / 2.50	-	0.300	0.90 / 1.10	-	-	500/670	285
EN 10028-2	16Mo3	<16	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	440/590	275
		>16 <40	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	440/590	270
		>40 <60	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	440/590	260
		>60 <100	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	430/580	240
		>100 <150	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	420/570	220
		>150 <250	0.12 / 0.20	0.350	0.40 / 0.90	0.025	0.010	-	0.300	0.300	0.300	0.25 / 0.35	0.020	0.030	410/570	210
	13CrMo45	<16	0.08 / 0.18	0.350	0.40 / 1.00	0.025	0.010	-	0.70 / 1.15	0.300	-	0.40 / 0.60	-	-	450/600	300
		>16 <60	0.08 / 0.18	0.350	0.40 / 1.00	0.025	0.010	-	0.70 / 1.15	0.300	-	0.40 / 0.60	-	-	450/600	255
		>60 <100	0.08 / 0.18	0.350	0.40 / 1.00	0.025	0.010	-	0.70 / 1.15	0.300	-	0.40 / 0.60	-	-	440/590	245
		>100 <150	0.08 / 0.18	0.350	0.40 / 1.00	0.025	0.010	-	0.70 / 1.15	0.300	-	0.40 / 0.60	-	-	430/580	215
		>150 <250	0.08 / 0.18	0.350	0.40 / 1.00	0.025	0.010	-	0.70 / 1.15	0.300	-	0.40 / 0.60	-	-	420/570	200
	10CrMo910	<16	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	480/630	310
		>16 <40	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	480/630	300
		>40 <60	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	480/630	290
		>60 <100	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	470/620	280
		>100 <150	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	460/610	260
		>150 <250	0.08 / 0.14	0.500	0.40 / 0.80	0.020	0.010	-	2.00 / 2.50	0.300	-	0.90 / 1.10	-	-	450/600	250
ASTM/ASME	A387-5-2	All	0.05 / 0.21	0.15 / 0.40	0.55 / 0.80	0.035	0.035	-	4.00 / 6.00	-	-	0.45 / 0.65	-	-	515/690	310
	A387-9-2	All	0.15	1.000	0.30 / 0.60	0.030	0.030	-	8.00 / 10.00	-	-	0.90 / 1.10	-	-	515/690	310
	A387-11-2	All	0.05 / 0.17	0.50 / 0.80	0.40 / 0.65	0.035	0.035	-	1.00 / 1.50	-	-	0.45 / 0.65	-	-	515/690	310
	A387-12-2	All	0.05 / 0.17	0.15 / 0.40	0.40 / 0.65	0.035	0.035	-	0.80 / 1.15	-	-	0.45 / 0.60	-	-	450/585	275
	A387-22-2	All	0.05 / 0.15	0.5	0.30 / 0.60	0.035	0.035	-	2.00 / 2.50	-	-	0.90 / 1.10	-	-	515/690	310

07 Structural & Weathering

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 particular 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.

CORTEN COIL	WIDTH		LENGTH
THICKNESS	1250	1500	2000
3MM - 12.5MM	X	X	X

STRUCTURAL	WIDTH		LENGTH	
	2000	2500	4000	5000
6MM - 100MM	X	X	X	
100MM - 3500MM	X	X		X

CORTEN DE-COILED	WIDTH			LENGTH			
THICKNESS	1250	1500	2000	2500	3000	4000	6000
3MM - 12.5MM	X	X	X	X	X	X	X

			CHEMICAL COMPOSITION													MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	Cr	Cu	Ni	N	Mo	Nb	Ti	Tensile Strength	Yield Stress
BS EN 10025-2	S235	All	0.16	0.350	1.20	0.030	0.025	-	-	-	-	-	-	-	-	360/500	235
	S235JR	<16	0.17	-	1.40	0.035	0.035	-	-	0.550	-	0.012	-	-	-	360/510	235
		>16 <40	0.17	-	1.40	0.035	0.035	-	-	0.550	-	0.012	-	-	-	360/510	225
		>40	0.20	-	1.40	0.035	0.035	-	-	0.550	-	0.012	-	-	-	360/510	215
	S235JO	<16	0.17	-	1.40	0.300	0.300	-	-	0.550	-	0.012	-	-	-	360/510	235
		>16 <40	0.17	-	1.40	0.035	0.035	-	-	0.550	-	0.012	-	-	-	360/510	235
		>40	0.17	-	1.40	0.035	0.035	-	-	0.550	-	0.012	-	-	-	360/510	235
	S275JR	<16	0.21	-	1.50	0.035	0.035	-	-	0.550	-	0.012	-	-	-	410/560	275
		>16 <40	0.21	-	1.50	0.035	0.035	-	-	0.550	-	0.012	-	-	-	410/560	265
		>40	0.22	-	1.50	0.035	0.035	-	-	0.550	-	0.012	-	-	-	410/560	255
	S275JO	<16	0.18	-	1.50	0.030	0.030	-	-	0.550	-	0.012	-	-	-	410/560	275
		>16 <40	0.18	-	1.50	0.030	0.030	-	-	0.550	-	0.012	-	-	-	410/560	265
		>40	0.18	-	1.50	0.030	0.030	-	-	0.550	-	0.012	-	-	-	410/560	255
	S275J2	<16	0.18	-	1.50	0.025	0.025	-	-	0.550	-	-	-	-	-	410/560	275
		>16 <40	0.18	-	1.50	0.025	0.025	-	-	0.550	-	-	-	-	-	410/560	265
		>40	0.18	-	1.50	0.025	0.025	-	-	0.550	-	-	-	-	-	410/560	255
	S355JR	<16	0.24	0.550	1.60	0.035	0.035	-	-	0.550	-	0.012	-	-	-	510/680	355
		>16 <40	0.24	0.550	1.60	0.035	0.035	-	-	0.550	-	0.012	-	-	-	510/680	345
		>40	0.24	0.550	1.60	0.035	0.035	-	-	0.550	-	0.012	-	-	-	510/680	335
	S355JO	<16	0.20	0.550	1.60	0.030	0.030	-	-	0.550	-	0.012	-	-	-	470/630	355
		>16 <40	0.20	0.550	1.60	0.030	0.030	-	-	0.550	-	0.012	-	-	-	470/630	345
		>40	0.20	0.550	1.60	0.030	0.030	-	-	0.550	-	0.012	-	-	-	470/630	335
	S355J2	<16	0.20	0.550	1.60	0.025	0.025	-	-	0.550	-	-	-	-	-	470/630	355
		>16 <40	0.20	0.550	1.60	0.025	0.025	-	-	0.550	-	-	-	-	-	470/630	345
		>40	0.20	0.550	1.60	0.025	0.025	-	-	0.550	-	-	-	-	-	470/630	335
BS EN 10025-4	S355ML	<16	0.14	0.500	1.60	0.025	0.020	-	0.300	0.550	0.500	0.015	0.100	0.050	0.050	470/630	355
		>16 <40	0.14	0.500	1.60	0.025	0.020	-	0.300	0.550	0.500	0.015	0.100	0.050	0.050	470/630	345
		>40	0.14	0.500	1.60	0.025	0.020	-	0.300	0.550	0.500	0.015	0.100	0.050	0.050	450/610	335
BS EN 10025-5	S355JOWP	<16	0.12	0.750	1.00	0.06 / 0.15	0.035	-	0.30 / 1.25	0.25 / 0.55	-	-	-	-	-	360/510	345
		>16 <40	0.12	0.750	1.00	0.06 / 0.15	0.035	-	0.30 / 1.25	0.25 / 0.55	-	-	-	-	-	360/510	335
		>40	0.12	0.750	1.00	0.06 / 0.15	0.035	-	0.30 / 1.25	0.25 / 0.55	-	-	-	-	-	360/510	325

Thickness & Flatness Tolerances

FLATNESS TOLERANCES FOR PLATES

DIMENSIONS IN MM

Nominal Thicknesses	Steel Type L		Steel Type H	
	Measuring Length			
	1000	2000	1000	2000
> 3 < 5	9	14	12	17
> 5 < 8	8	12	11	15
> 8 < 15	7	11	10	14
> 15 < 25	7	10	10	13
> 25 < 40	6	9	9	12
> 40 < 250	5	8	8	11

Pressure Vessel, Boiler, Structural, High Yield and CrMo plate meet steel type L with a specified yield of < 460 N/mm2.

Quench and Tempered plate meet steel type H and has a specified yield of > 460 < 700 N/mm2

THICKNESS TOLERANCES

DIMENSIONS IN MM

Nominal Thicknesses	Tolerance on the nominal thickness				Maximum thickness difference within a plate									
	Class A		Class B		Class C		Class D		Nominal plate width					
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	> 600 < 2000	> 2000 < 2500	> 2500 < 3000	> 3000 < 3500	> 3500 < 4000	> 4000
> 3 < 5	- 0.4	+ 0.8	- 0.3	+ 0.9	- 0	+ 1.2	- 0.6	+ 0.6	0.8	0.9	0.9	-	-	-
> 5 < 8	- 0.4	+ 1.1	- 0.3	+ 1.2	- 0	+ 1.5	- 0.75	+ 0.75	0.9	0.9	1.0	1.0	-	-
> 8 < 15	- 0.5	+ 1.2	- 0.3	+ 1.4	- 0	+ 1.7	- 0.85	+ 0.85	0.9	1.0	1.0	1.1	1.1	1.2
> 15 < 25	- 0.6	+ 1.3	- 0.3	+ 1.6	- 0	+ 1.9	- 0.95	+ 0.95	1.0	1.1	1.2	1.2	1.3	1.4
> 25 < 40	- 0.8	+ 1.4	- 0.3	+ 1.9	- 0	+ 2.2	- 1.1	+ 1.1	1.1	1.2	1.2	1.3	1.3	1.4
> 40 < 80	- 1.0	+ 1.8	- 0.3	+ 2.5	- 0	+ 2.8	- 1.4	+ 1.4	1.2	1.3	1.4	1.4	1.5	1.6
> 80 < 150	- 1.0	+ 2.2	- 0.3	+ 2.9	- 0	+ 3.2	- 1.6	+ 1.6	1.3	1.4	1.5	1.5	1.6	1.7
> 150 < 250	- 1.2	+ 2.4	- 0.3	+ 3.3	- 0	+ 3.6	- 1.8	+ 1.8	1.4	1.5	1.6	1.6	1.7	-

Grade Comparisons

PRESSURE VESSEL STEEL

BS	EN	ASTM/ASME	DIN
161-360A	P235GH	A285-C	H1
161-430A	P2665GH	A516-60	H11
223-490A/B	-	-	-
224-400A/B	P275N/NH	-	-
224-460A/B	P295GH	A516-65	-
224-490A/B	P355GH	A516-70	-
225-490A/B	P355N/NH	-	19Mn6

CHROME MOLYBDENUM

BS	EN	ASTM/ASME	DIN
243	16Mo3	A204-A	15Mo3
620B	13CrMo45	A387-12-2	13CrMo44
621B	-	A387-11-2	-
622-515B	10CrMo910	A387-22-2	10CrMo910
-	-	A387-5-2	-
-	-	A387-9-2	-

STRUCTURAL

EN	ASTM/ASME	UK BS4360
S235JR	A283-C	-
S235JO	-	40C
S275JR	-	43B
S275JO	-	43C
S355JO	A709-50	50C

Abrasion, Armour & High Yield

Masteel UK Limited's ranges of High Strength Low Alloy steel (HSLA) are engineered to promote excellent high strength characteristics which in turn provide an extremely cost effective option for buyers. Our HSLA Steels can be divided into three sub-categories "Abrasion Resistant Steel", "Armour Plate Steel" and "High Yield Steel".

Our products not only offer high strength but also excellent impact resistance with outstanding formability. Masteel UK Limited offers an extensive selection of high strength low alloy steel products which are available for shipping to our customers worldwide.

THICKNESS	WIDTH			LENGTH					
	2000	2500	3000	4000	5000	6000	9000	10000	12000
6mm - 50mm	X	X	X					X	X
55mm - 70mm	X	X	X	X	X	X			
75mm - 100mm	X	X		X	X				
100mm - 200mm	X			X	X	X			

FOR EXACT VALUES PLEASE CONTACT US

			CHEMICAL COMPOSITION																MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	N	Cr	Cu	Ni	Nb	Ti	V	Zr	Mo	B	Tensile Strength	Yield Stress
300 Brinell	MAS300AR	<8	0.18	0.800	1.70	0.025	0.015	-	-	1.500	-	1.000	-	-	-	-	0.500	0.005	1000	900
	MAS400AR	<80	0.25	0.800	1.70	0.025	0.015	-	-	1.500	-	1.000	-	-	-	-	0.500	0.005	1250	1000
	MAS450AR	<80	0.26	0.800	1.70	0.025	0.015	-	-	1.500	-	1.000	-	-	-	-	0.500	0.005	1450	1200
	MAS500AR	<80	0.30	0.800	1.70	0.025	0.015	-	-	1.500	-	1.000	-	-	-	-	0.500	0.005	1600	1250
	MASTERARM 400	<30	0.24	0.700	1.50	0.020	0.015	-	-	1.000	-	1.000	-	-	-	-	0.700	0.005	1300	1100
	MASTERARM 500	<30	0.32	0.700	1.50	0.020	0.015	-	-	1.000	-	2.000	-	-	-	-	0.700	0.005	1700	1450
EN 10025-6	S690QL	>3 <50	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	770/940	690
		>50 <100	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	760/930	650
		>100 < 150	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	710/900	630
	S890QL	>3 <50	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	940/1100	890
		>50 <100	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	880/1100	830
	S960QL	>3 <50	0.20	0.800	1.70	0.020	0.010	-	0.015	1.500	0.500	2.000	0.060	0.050	0.120	0.150	0.700	0.005	980/1150	960
EN 10149-2	S500MC	All	0.12	0.500	1.70	0.025	0.015	0.015	-	-	-	-	0.090	0.150	0.200	-	-	-	550/700	500
	S550MC	All	0.12	0.500	1.80	0.025	0.015	0.015	-	-	-	-	0.090	0.150	0.200	-	-	-	600/760	550
	S700MC	All	0.12	0.600	2.10	0.025	0.015	0.015	-	-	-	-	0.090	0.150	0.220	-	0.500	0.005	750/950	700

Offshore

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 weld ability, 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.

THICKNESS	WIDTH			LENGTH					
	2000	2500	3000	4000	5000	6000	9000	10000	12000
6MM - 50MM	X	X			X	X		X	X
55MM - 70MM	X	X	X	X	X	X			
75MM - 100MM	X	X	X	X	X				
100MM - 200MM	X	X			X	X			

FOR EXACT VALUES PLEASE CONTACT US

			CHEMICAL COMPOSITION															MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Al	Cr	Cu	Ni	N	Mo	Nb	Ti	V	Tensile Strength	Yield Stress
BS EN 10225	S355G7+M/N	<16	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	355
		>16 <40	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	345
		>40	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	335
	S355G8+M/N	<16	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	355
		>16 <40	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	345
		>40	0.14	0.15 / 0.55	1.00 / 1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.500	0.010	0.080	0.040	0.025	0.060	470/630	335
	S355G9+M/N	<16	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	355
		>16 <40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	345
		>40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	335
	S355G10+M/N	<16	0.12	0.15 / 0.55	1.65	0.015	0.005	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	355
		>16 <40	0.12	0.15 / 0.55	1.65	0.015	0.005	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	345
		>40	0.12	0.15 / 0.55	1.65	0.015	0.005	0.015 / 0.055	0.200	0.300	0.700	0.010	0.080	0.030	0.025	0.060	470/630	335
	S420G1+Q/M	<16	0.14	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.080	500/660	420
		>16 <40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	400
		>40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	390
	S420G2+Q/M	<16	0.14	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.080	500/660	420
		>16 <40	0.12	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	400
		>40	0.12	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	390
	S460G1+Q/M	<16	0.14	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.080	500/660	420
		>16 <40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	400
		>40	0.12	0.15 / 0.55	1.65	0.020	0.010	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	390
	S460G2+Q/M	<16	0.14	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.080	500/660	420
		>16 <40	0.12	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	400
		>40	0.12	0.15 / 0.55	1.65	0.020	0.007	0.015 / 0.055	0.250	0.300	0.700	0.010	0.250	0.040	0.025	0.060	500/660	390

Stainless

Stainless material has excellent commercial value due to characteristics such as heat and corrosion resistance, an additional advantage is the fabrication properties the material has. Stainless material 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 moisture in the atmosphere.

Masteel UK Limited supplies stainless steel in flat and tubular products, in a wide variety of grades and aesthetic finishes. There are a wealth of options available to customers in the production process, for example adding carbon during the forming process will make the stainless steel more durable and stronger too.

	WIDTH			LENGTH					
THICKNESS	2000	2500	3000	4000	5000	6000	9000	10000	12000
6MM - 50MM	X	X	X		X	X		X	X
55MM - 70MM	X	X		X	X	X	X	X	X
75MM - 100MM	X	X		X	X	X	X	X	X
100MM - 200MM	X	X			X	X	X	X	X

FOR EXACT VALUES PLEASE CONTACT US

			CHEMICAL COMPOSITION										MECHANICAL VALUES	
	Plates	Size mm	C	Si	Mn	P	S	Cr	Ni	Mo	B	N	Tensile Strength	Yield Stress
AISI	304	All	0.08	1.000	2.00	0.045	0.030	18.0 / 20.0	8.00 / 10.5	-	0.005	0.005	515	205
	304L	All	0.03	1.000	2.00	0.045	0.030	18.0 / 20.0	8.00 / 12.0	-	0.005	0.005	586	241
	304H	All	0.04 / 0.10	0.750	2.00	0.045	0.030	18.0 / 20.0	8.00 / 10.50	-	-	0.100	515	205
	316	All	0.08	0.750	2.00	0.045	0.030	16.0 / 18.0	10.0 / 14.0	2.00 / 3.00	-	0.100	515	205
	316L	All	0.03	0.750	2.00	0.045	0.030	16.0 / 18.0	10.0 / 14.0	2.00 / 3.00	-	0.100	485	170
	316H	All	0.04 / 0.10	0.750	0.04 / 0.10	0.045	0.030	16.0 / 18.0	10.0 / 14.0	2.00 / 3.00	-	-	515	205
	321	All	0.08	0.750	2.00	0.045	0.030	17.0 / 19.0	9.0 / 12.0	-	-	0.100	515	205
	347	All	0.08	0.750	2.00	0.045	0.030	17.0 / 19.0	9.0 / 13.0	-	-	-	515	205
	410	All	0.15	1.000	1.00	0.040	0.030	11.5 / 13.5	0.750	-	-	-	450	205
	UNS S32205 Duplex	All	0.03	1.000	2.00	0.030	0.020	22.0 / 23.0	4.5 / 6.5	3.0 / 3.5	-	0.14 / 0.20	620	450
	UNS S32750 SuperDuplex	All	0.03	0.800	1.20	0.035	0.020	24.0 / 26.0	6.0 / 8.0	3.0 / 5.0	-	0.24 / 0.32	795	500
	UNS S32760 SuperDuplex	All	0.03	1.000	1.00	0.030	0.010	24.0 / 26.0	6.0 / 8.0	3.0 / 4.0	-	0.20 / 0.30	750	550

Leading suppliers of structural steel sections, Masteel UK Limited 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.

PLEASE SEE BELOW 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

WE ALSO HAVE A WIDE RANGE OF EUROPEAN SECTIONS AVAILABLE:

HEA 100 – 1000
HEB 100 - 1000
HEM 100 - 1000
UPN 80 - 400
IPE 80 – 600

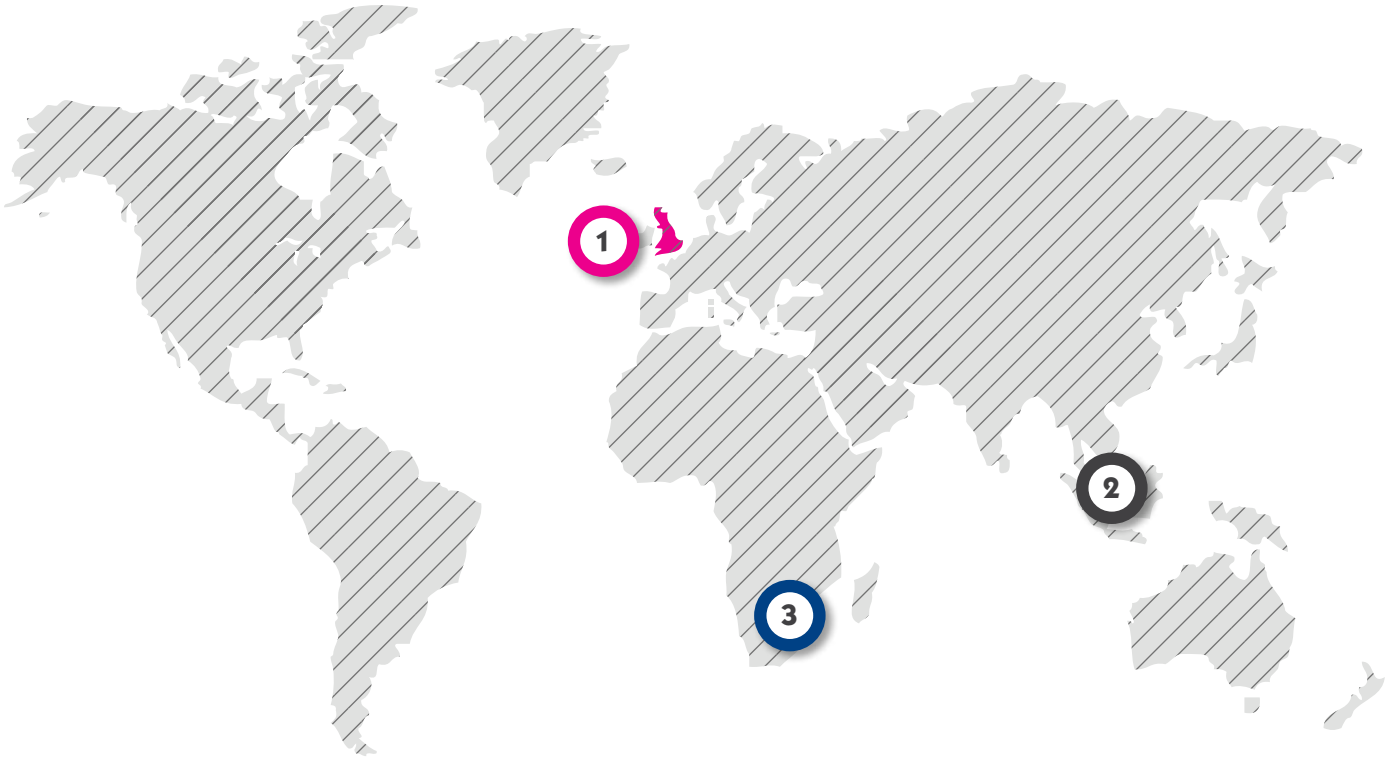
Ranging from sizes: 40 x 40 x 3 up to 400 x 400 x 16

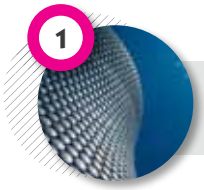
ADDITIONAL SERVICES:

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

Available to customers upon request.

Contact Us





UK HEADQUARTERS

Including stockingholding, profiling & processing facility

Masteel UK Limited
The Cedars . Coton Road . Nether Whitacre . Coleshill
Birmingham . West Midlands . B46 2HH . United Kingdom

Phone: +44 (0)1675 437733 Fax: +44 (0)1675 437744
E-Mail: enquiries@masteel.co.uk Web: www.masteel.co.uk

MIDDLE ASIA PACIFIC

Masteel Asia Pacific
Singapore

Phone: +65 9656 5945
E-Mail: enquiries@masteel.co.uk Web: www.masteel.co.uk

PRESSURE VESSEL STEELS (UK) LTD

Pressure Vessel Steels (UK) Ltd
PO Box 1568 . Hillcrest
South Africa

Phone: +27 (0)31 765 3316 Fax: +27 (0)31 765 3316
E-Mail: enquiries@pressure-vessel-steels.co.za