



MARCEGAGLIA
STAINLESS SHEFFIELD

**STAINLESS STEEL
SEMI-FINISHED PRODUCTS**



Marcegaglia Stainless Sheffield - SMACC Meltshop

Marcegaglia Stainless Sheffield produces consistently high quality billets, blooms and slabs in an industry-leading variety of shapes and grades for use in forging, rolling and further processing.

We also offer billets and blooms in Prodec® enhanced machinability grades for use in downstream applications where high efficiency machining is important.

Marcegaglia Stainless Sheffield has years of experience supplying quality critical industries and understanding customer requirements.

Key benefits

- European melt - in Austenitic, Ferritic, Duplex and Precipitation hardening grades, including Prodec® for improved machinability properties
- Exceptional range of semi-finished products, also in tailored chemical compositions
- Stainless steel production for over a century
- Low Carbon footprint
- Consistent products
- Good overall cost of quality
- Easy to do Business with

Marcegaglia's SMACC operation in Sheffield represents both a proud legacy and a clear vision. Committed to being the leader in stainless steel long products, SMACC produces continuously cast semi-finished stainless steel to the most demanding customer applications.

With a proud tradition of steelmaking – the world's first martensitic stainless steel was invented here more than 100 years ago – Sheffield is home to SMACC (Stainless Melting and Continuous Casting), wire rod mill ASR (Alloy Steel Rods) and bar finishing facility SSB (Sheffield Stainless Bar).

SMACC produces semi-finished products: slabs, blooms and billets in an extremely wide selection of grades and an industry-leading range of shapes and sizes, including our 300 mm slab.

The exceptional flexibility of our meltshop means we can quickly adjust production schedules to provide flexible lead times.

Continuously cast billets and blooms are typically used as feedstock for rolling wire rod or bar and can be used in certain forging applications. Continuously cast slabs are typically hot and cold rolled into coil and sheet plate or used in the forging industry.

Marcegaglia Stainless Sheffield has been producing stainless steel for more than a century. Our legacy of innovation and quality means that we have the right product for every application.

Contact sales at
smacc.sales@stainless-marcegaglia.com

Continuously cast billets and blooms

Continuously cast billets and blooms are typically used as feedstock for rolling wire rod or bar and can be used in certain forging applications. We provide a wide range of ferritic, austenitic, duplex, heat resistant, and precipitation hardening stainless steels with consistently high quality and delivery reliability.

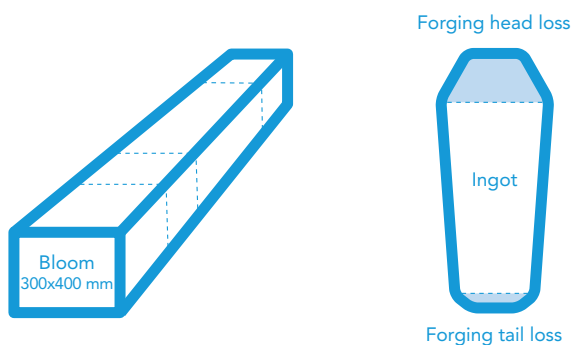
Benefits

- Consistent surface, center line, and cast quality
- Expert technical support for customer processing
- Industry-leading variety of grades (including tailored grades)
- Full product traceability
- Reliable delivery performance

Applications

- Rerolling into billet, bar, and wire rod
- Forging applications

>10% yield benefit by using blooms in forging



Using bloom:

- Cut precise lengths to minimize wastage
- Optimize length of bloom to your needs

Using ingot:

- Removing head and tail results in waste
- Tapered sides require more processing

Continuously cast billet

Billets can be supplied in the ground or unground condition.



Cross-section		Length	
mm	in	m	ft
127 x 127*	5 x 5	3.8-12	12-39
140 x 140	5.5 x 5.5	3.8-12	12-39
150 x 150	5.9 x 5.9	3.8-12	12-39
180 x 180	7 x 7	3.8-12	12-39
200 x 200*	7.9 x 7.9	3.8-12	12-39

* only by confirmation from the mill

Continuously cast bloom

Blooms are delivered in the unground condition. Continuously cast blooms can replace ingots in certain forging applications.



Cross-section		Length	
mm	in	m	ft
300 x 400	12 x 16	2-12	7-39
260 x 462	10.2 x 18.2	2-12	7-39

Continuously cast slabs

Continuously cast slabs are typically hot and cold rolled into coil and sheet plate or used in the forging industry. We provide a wide range of ferritic, austenitic, duplex, heat resistant, and precipitation hardening stainless steels with consistently high quality and delivery reliability.

Benefits

- Consistent surface, center line, and cast quality
- Expert support for processing
- 300 mm slab reduces material wastage and costs while forging
- Reliable delivery performance

Applications

- Rerolling into plate and coil
- Certain forging applications

Thickness		Width		Length	
mm	in	mm	in	m	ft
170	7	960-1575	38-62	4-12	13-39
200	8	960-1575	38-62	4-12	13-39
300	12	700-1575	28-62	3-6.6	11-22

Continuously cast slab

Slabs can be delivered in the ground or unground condition with a maximum weight of 30 tonnes.



An industry-leading range of grades

We produce our semi-finished stainless steel long products in a wide variety of grades.
Contact sales at smacc.sales@stainless-marcegaglia.com

Grade family	Marcegaglia name	EN	ASTM			Typical chemical composition, % by mass					
			TYPE	UNS	A182	C	Cr	Ni	Mo	N	Others
F	410S/4000	1.4000	410S	S41008	-	0.03	12.5	-	-	-	-
F	430/4016	1.4016	430	S43000	F 430	0.05	16.2	-	-	-	-
F	430F/4105	1.4105	430F	S43020	F 430	0.08	16.5	-	-	-	S
F	4511	1.4511	430Nb/430Cb	-	-	0.02	16.2	-	-	-	Nb
A	304/4301	1.4301	304	S30400	F 304	0.04	18.1	8.1	-	-	-
A	305/4303	1.4303	305	S30500	-	0.04	17.7	12.5	-	-	-
A	Prodec® 303/4305	1.4305	303	S30300	-	0.05	17.2	8.1	-	-	0.3S
A	304L/4306	1.4306	304L	S30403	-	0.02	18.2	10.1	-	-	-
A	304L/4307	1.4307	304L	S30403	F 304L	0.02	18.1	8.1	-	-	-
A	Prodec® 304L/4307	1.4307	304L	S30403	-	0.02	18.1	8.1	-	-	-
A	301/4310	1.4310	301	S30100	-	0.10	17.0	7.0	-	-	-
A	304LN/4311	1.4311	304LN	S30453	F 304LN	0.02	18.5	9.2	-	0.14	-
A	308L/4316	1.4316	308	S30800	-	0.05	19.5	10.0	-	-	-
A	201/4372	1.4372	201	S20100	-	0.05	17.0	4.0	-	0.02	7Mn
A	316/4401	1.4401	316	S31600	F 316	0.04	17.2	10.1	2.1	-	-
A	316L/4404	1.4404	316L	S31603	F 316L	0.02	17.2	10.1	2.1	-	-
A	Prodec® 316L/4404	1.4404	316L	S31603	-	0.02	17.2	10.1	2.1	-	-
A	316L/4432	1.4432	316L	S31600	F 316L	0.02	16.9	10.7	2.6	-	-
A	316/4435	1.4435	316L	-	-	0.02	17.3	12.6	2.6	-	-
A	316L/4436	1.4436	316	-	F 316	0.04	16.9	10.7	2.6	-	-
A	317L	1.4438	317L	S31703	F 317L	0.02	18.2	13.7	3.1	-	-
A	317LM	-	317LM	S31725	F 47	0.03	19.0	15.0	4.5	-	-
A	904L	1.4539	904L	N08904	F 904L	0.01	19.8	24.2	4.3	-	1.4Cu
A	321/4541	1.4541	321	S32100	-	0.04	17.3	9.1	-	-	Ti
A	4547	1.4547	-	S31254	F 44	0.01	20.0	18.0	6.1	0.2	Cu
A	347/4550	1.4550	347	S34700	F 347	0.05	17.5	9.5	-	-	Nb
A	304Cu/4567	1.4567	(304Cu)	S30430	-	0.01	17.7	9.7	-	-	3Cu
A	316Ti/4571	1.4571	316Ti	S31635	F 316Ti	0.04	16.8	10.9	2.1	-	Ti
A	316Cu/4578	1.4578	(316Cu)	-	-	0.02	16.9	10.7	2.1	-	Cu
A	4828	1.4828	-	-	-	0.04	19.3	11.2	-	-	Si
A	309/4829	1.4829	309	S30900	-	0.03	23.5	13.0	-	-	-
A	309S/4833	1.4833	309S	S30908	-	0.06	22.3	12.3	-	-	-
A	253MA	1.4835	-	S30815	F 45	0.09	21.0	11.0	-	0.17	Si, Ce
A	314/4841	1.4841	314	S31400	-	0.06	24.3	19.2	-	-	Si
A	310S/4845	1.4845	310S	S31008	F 310	0.05	25.5	19.1	-	-	-
A	321H/4878	1.4878	321H	S32109	F 321H	0.05	17.3	9.1	-	-	Ti
A	304H/4948	1.4948	304H	S30409	F 304H	0.05	18.1	8.3	-	-	-
D	4162	1.4162	-	S32101	-	0.03	21.5	1.5	0.3	0.22	5Mn, Cu
D	2209	-	-	S39209	-	0.03	22.0	8.0	3.0	0.15	-
D	2205	1.4462	-	S32205	F 60	0.02	22.4	5.7	3.1	0.17	-
D	2304	1.4362	-	S32304	F 68	0.02	23.0	4.8	0.3	0.1	Cu
D	2507	1.4410	-	S32750	F 53	0.02	25.0	7.0	4.0	0.27	-
D	4460	1.4460	-	S32950	F 52	0.02	25.2	5.6	1.4	0.09	-
D	3RE60	-	-	S31500	-	0.02	18.5	5.0	2.7	0.08	-
D	SDX 100	1.4501	-	S32760	F 55	0.02	25.4	6.9	3.8	0.27	W, Cu
M	416/4005	1.4005	416	S41600	-	0.1	13.0	-	-	-	S
M	410/4006	1.4006	410	S41000	F 6a	0.12	12.0	-	-	-	-
M	420/4021	1.4021	420	S42000	-	0.2	13.0	-	-	-	-
M	420/4028	1.4028	420	S42000	-	0.3	12.5	-	-	-	-
M	431/4057	1.4057	431	S43100	-	0.2	16.0	1.75	-	-	-
M	4313	1.4313	-	S41500	F 6NM	0.03	12.5	4.1	-	0.6	-
M	248SV/4418	1.4418	-	-	-	0.03	16.0	5.0	1.0	-	-
PH	Prodec® 17-4PH	1.4542	630	S17400	-	0.02	16.3	4.7	-	-	Nb, 3.5Cu
PH	17-4PH	1.4542	630	S17400	-	0.02	15.5	4.8	-	-	Nb, Cu
PH	17-7PH	1.4568	631	S17700	-	0.08	17.0	7.0	-	-	Al
-	F91/4903	1.4903	-	K90901	F 91	0.08	9.0	-	1.0	-	Nb, V
-	F92/4901	1.4901	-	K92460	F 92	0.08	9.0	-	0.45	-	1.75W, Nb, V

F = Ferritic, A = Austenitic, D = Duplex, M = Martensitic, PH = Precipitation Hardening

Chemical compositions given as % by mass. Table uses Marcegaglia typical values.

For full grade offering per product type the required standard will be fully met as specified in the order.

Prodec® grades are only available in the form of long products.

Ensuring quality with end-to-end production

SMACC



Raw materials

Marcegaglia stainless steel contains a very high proportion of recycled materials.



Electric arc furnace

The 130 tonne, 90 MVA furnace melts the stainless scrap into a liquid feedstock.



AOD

In the argon oxygen decarburization vessel the melt is decarburized and chemical composition adjusted.



Ladle arc furnace

In the LAF, final chemical composition and temperature are adjusted and homogenized.



Casting

We use a combination casting machine for slab or bloom, or a six-strand billet casting machine.



Grinding

If required, top and bottom surface grinding is applied to slabs, and full or corner grinding to billets.



Labelling & inspection

Metal tags are attached to each cast item with a unique identity to allow full product traceability.



Packing and shipping

Items may receive additional customer-specific marking before being packed and shipped.

High quality according to international standards

Our manufacturing programs are supported by in-house product inspection and testing, and the extensive experience of our technical team. SMACC is accredited to recognized international standards, including:

- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018
- ABS Foundry Approval
- AD 2000 MERKBLATT W0
- DNV rules for classification DNV-CP-0242 Semi-finished steel products
- Lloyd's Register Approved Manufacturer of Steel Plates, Strip, Sections & Bars
- PED 2014/68/EU



MARCEGAGLIA STAINLESS SHEFFIELD

SMACC MELTSHP

Europa Link, S9 1TZ, Sheffield – United Kingdom

phone +44 114 261 6190

smacc.sales@stainless-marcegaglia.com