

MARCEGAGLIA STAINLESS SHEFFIELD
STAINLESS STEEL WIRE RODS



ASR wire rod mill UK

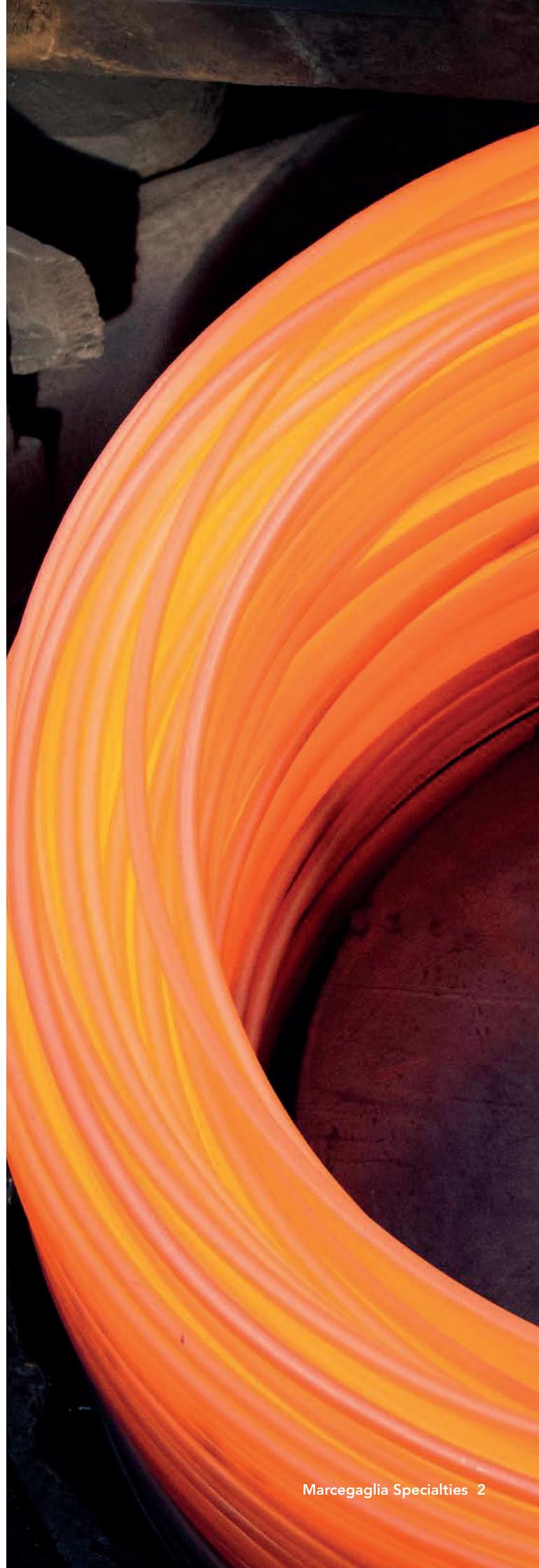
Sheffield Stainless ASR Rod mill started operations in Sheffield in 1965, a short distance from the meltshop SMACC where billet feedstock is produced for our wire rod production. The manufacturing program consists of a wide range of grades and sizes of which significant proportion are “niche” products. ASR produces wire rod in a large range of sizes suitable for downstream bar and wire production. Rebar is produced in duplex grades when required in construction projects where high integrity, long life solutions are required. ASR can provide shaped wire rod in hexagon and square forms. Key end-use applications include springs, fasteners, welding wire, machined components and bridge structures with rebar. ASR looks to develop close partnerships with its customers to offer technical solutions to assist them in become the leaders in their field and thus giving them a competitive advantage.

Key benefits

- European melt
- Integrated production
- Low Carbon footprint
- Consistent products
- Good overall cost of quality

The customer is always in focus, so that we can fulfill each customers unique needs. Our goal is to be recognized in the market as the most responsive specialist rod supplier with industry-leading customer service backed by a flexible, high quality manufacturing program.

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

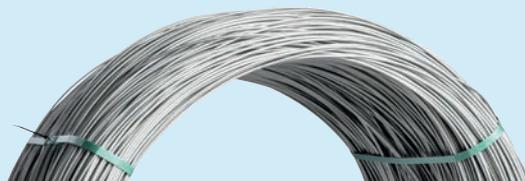




Wire rod dimensions



Round
5–27 mm



Hexagon
9–27 mm



Square
9–24 mm

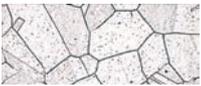


To get best possible properties for bar wire rod, following parameters are important:

- Tight chemistry control for consistent properties
- Mechanical properties and deformation hardening
- Corrosion properties
- Surface finish
- Dimension tolerances



Conditions



Batch Annealed
(ASTM 4-6)

Grades

- Austenitic
- Duplex
- PH
- Nickel alloys

Heat sizes

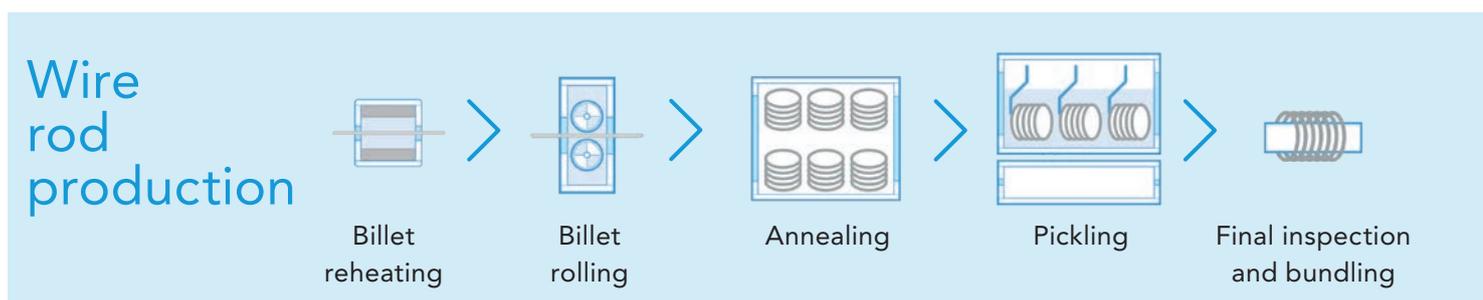
Depending on grade, our heat sizes are:

- Appr. 60 tonnes (132 000 lbs)
- Appr. 120 tonnes (265 000 lbs)

Coil sizes and weights

Dimensions	Inside diameter (min)	Outside diameter (max)	Coil weight
5.0–9.5 mm Round	850 mm	1.250 mm	750–1.000 kg (grade dependent)
10.0–27 mm Round, Hexagon, Square Rebar	980 mm	1.320 mm	750–1.000 kg (grade dependent)

Production platform and certificates



ASR wire rod are suitable for a variety of applications. These include the likes of flanges, valves, fittings, couplings, seals, shafts, bolts and nuts, pumps shafts and hydraulic cylinder parts.

We have a wide range of grades used for bar, but can also make customized chemistries to meet your unique needs. Below you can see a selection of grades within our standard range:

Grade family	Marcegaglia name	ASR Melt Code	EN	ASTM			Typical chemical composition, % by mass						Application						
				TYPE	UNS	PRE	C	Cr	Ni	Mo	N	Others	Cold heading	Springs	Welding	High temper.	Bright bar	Rebar	
PH	17-4PH	174XC	1.4542	630	S17400	17	0.01	15.2	4.6	0.2	0.03	3.2 Cu, Nb						X	
PH	17-7PH	177XA	1.4568	631	S17700	18	0.08	16.7	7.6	0.2	0.02	0.9 Al		X					
D	Lean duplex 4162	210XB	1.4162		S32101	26	0.02	21.4	1.5	0.2	0.22	5.0 Mn						X	
D	Duplex 2304	234XB	1.4362		S32304	26	0.02	22.3	4.8	0.3	0.13								X
A	253 MA	253XA	1.4835		S30815	24	0.07	21.0	10.3	0.1	0.17						X		
A	254 SMO	254XA	1.4547		S31254	43	0.01	20.1	18.0	6.1	0.20	3.0 Mn					X		
A	302/4310	302XB	1.4310	302H	S30200	19	0.08	17.5	8.1	0.4	0.04			X					
A	302/4310	302XD	1.4310	302	S30200	19	0.05	17.8	8.1	0.3	0.04			X					
A	Prodec® 303/4305	303PR	1.4305	303	S30300	17	0.05	17.2	8.2	0.5	0.04	0.30 S						X	
A	303/4305	303LS	1.4305	303	S30300	17	0.05	17.2	8.2	0.4	0.05	0.28 S						X	
A	Prodec® 303/4305 (Shapes)	303PS	1.4305	303	S30300	17	0.05	17.2	8.7	0.5	0.03	0.30 S						X	
A	303/4305 (Shapes)	303XI	1.4305	303	S30300	17	0.05	17.2	8.7	0.4	0.03	0.30 S						X	
A	Prodec® 304L/4307	304PR	1.4307	304L	S30403	18	0.02	18.2	8.1	0.4	0.07							X	
A	304L/4307	304UA	1.4307	304L	S30403	18	0.02	18.1	8.1	0.4	0.07							X	
A	304L/4306	304UD	1.4306	304L	S30403	18	0.02	18.5	10.1	0.3	0.03							X	
A	304/4301	304UE	1.4301	304	S30400	20	0.05	18.2	9.1	0.3	0.03							X	
A	304L/4307	304UF	1.4307	304L	S30403	20	0.02	18.2	8.1	0.4	0.06							X	
A	304L/4307	304UN	1.4307	304L	S30403	20	0.02	18.2	8.2	0.4	0.06							X	
A	304L/4307	304XR	1.4307	304L	S30403	20	0.02	18.3	9.1	0.4	0.04							X	
A	304/4310	304XY	1.4310 / 1.4301	304 / 302	S30400 / S30200	20	0.07	18.3	8.3	0.3	0.04							X	
A	304LN	304XZ	1.4311	304LN	S30453	21	0.02	17.9	8.6	0.3	0.14							X	
A	305	305XA	1.4303	305	S30500	20	0.02	18.3	11.3	0.3	0.04							X	
A	307	307XA	1.4370	307		20	0.07	18.0	7.9	0.2	0.05	7 Mn			X				
A	307	307XF	1.4370	307		20	0.05	17.8	8.1	0.2	0.05	7 Mn			X				
A	308LSi/4316	308XJ	1.4316	308L	S30888	21	0.01	19.9	10.6	0.1	0.06	0.8 Si			X				
A	308L/4316	308XL	1.4316	308L	S30883	21	0.01	19.7	10.1	0.3	0.06	0.4 Si			X				
A	309LSi/4332	309XA	1.4332	309L	S30988	25	0.01	23.3	13.8	0.1	0.06	0.8 Si			X				



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

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				TYPE	UNS			C	Cr	Ni	Mo	N	Others	Cold heading	Springs	Welding	High temper.	Bright bar	Rebar
A	309L/4332	309XC	1.4332	309L	S30983		25	0.01	23.4	13.6	0.1	0.05	0.4 Si			X			
A	309L/4332	309XH	1.4332	309L	S30983		25	0.06	22.4	12.2	0.3	0.07				X			
A	310S/4845	310XC	1.4845	310S	S31008		26	0.05	24.8	19.1	0.2	0.04					X		
A	314/4841	314XC	1.4841	314	S31400		25	0.04	23.2	19.1	0.3	0.04	2.2 Si				X		
A	314/4841	314XF	1.4841				25	0.02	24.2	20.6	0.2	0.04	2.2 Si				X		
A	Prodec® 316L/4404	316PR	1.4404	316L	S31603		24	0.02	16.7	10.1	2.1	0.05							X
A	316L/4404	316UI	1.4404	316L	S31603		24	0.01	17.1	11.1	2.1	0.03							X
A	316L/4404	316UK	1.4404	316L	S31603		24	0.02	16.8	11.1	2.1	0.03							X
A	316L/4404	316UL	1.4404	316L	S31603		25	0.01	17.2	12.1	2.1	0.02							X
A	316L/4404	316UM	1.4404	316L	S31603		24	0.02	16.7	10.1	2.1	0.03							X
A	316L/4432	316UN	1.4432	316L	S31683		24	0.01	18.4	11.6	2.2	0.07							X
A	316L/4432	316XE	1.4432		S31683		26	0.01	18.3	12.2	2.1	0.03	0.4 Si			X			
A	316L/4436	316XL	1.4436	316	S31600		25	0.04	17.3	11.1	2.6	0.03							X
A	316Cu/4578	316XW	1.4578	316Cu	-		23	0.02	16.8	10.7	2.0	0.02	3.2 Cu	X					
A	Prodec® 316L/4404	316XX	1.4404	316L	S31603		24	0.02	16.8	10.1	2.0	0.05							X
A	316Ti/4571	320XA	1.4571	316Ti	S31635		24	0.04	16.6	11.3	2.0	0.01	Ti						X
A	316Ti/4571	320XD	1.4571	316Ti	S31635		24	0.01	16.8	10.8	2.1	0.02	Ti						X
A	316Ti/4571	320XE	1.4571	316Ti	S31635		24	0.01	16.6	10.6	2.0	0.02	Ti						X
A	321H	321XB	1.4878	321H			18	0.05	17.2	9.1	0.4	0.01	Ti						X
A	321	321XG	1.4541	321			18	0.01	17.2	9.1	0.4	0.02	Ti						X
A	347	347XA	1.4550	347	S34788		19	0.05	17.3	9.1	0.3	0.04	Nb						X
A	304Cu/4567	399XB	1.4567	304Cu	S30433		19	0.01	17.7	9.5	0.2	0.02	3.1 Cu	X					
A	304Cu/4567	399XE	1.4567	304Cu	S30430		19	0.01	17.7	9.6	0.2	0.02	3.4 Cu	X					
A	304Cu/4567	399XG	1.4567	304Cu	S30430		18	0.01	17.3	8.6	0.2	0.02	3.6 Cu	X					
A-Ni	825	825XA	1.4858				27	0.20	20.0	40.0	2.0	0.01	1.5 Cu					X	
A	904L	904XA	1.4539	904L	N08904		34	0.01	19.9	24.2	4.3	0.05	1.5 Cu					X	

Grade families: F = ferritic, A = austenitic, PH = precipitation hardening



Ensuring quality with end-to-end production



Melting shop

Consistently produced high quality semis are made at SMACC in 130-tonne melts.



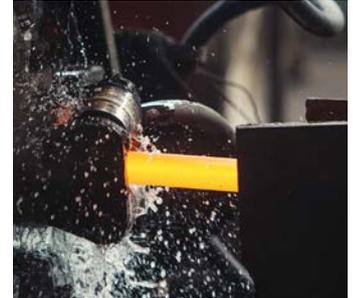
Billet feedstock

The majority of the feedstock comes from our own melting shop.



Reheating furnace

Accurately controlled, two-stage reheating minimizes surface scaling.



Rolling

A highly responsive digital control system tracks the rod through the mill to ensure quality.



Coil forming

Wire rod of up to 10 mm is coiled on a laying head. Rod in larger diameters is coiled in garret coilers.



Annealing

The rotary annealing furnace softens the rod to increase its ductility for further processing.



Pickling

Scale is removed from the hot rolled surface using salt bath and acid treatment.



Testing

Samples from production stages are tested for surface defects, grain size, and tensile strength.

ASR wire rod mill

Quality assurances

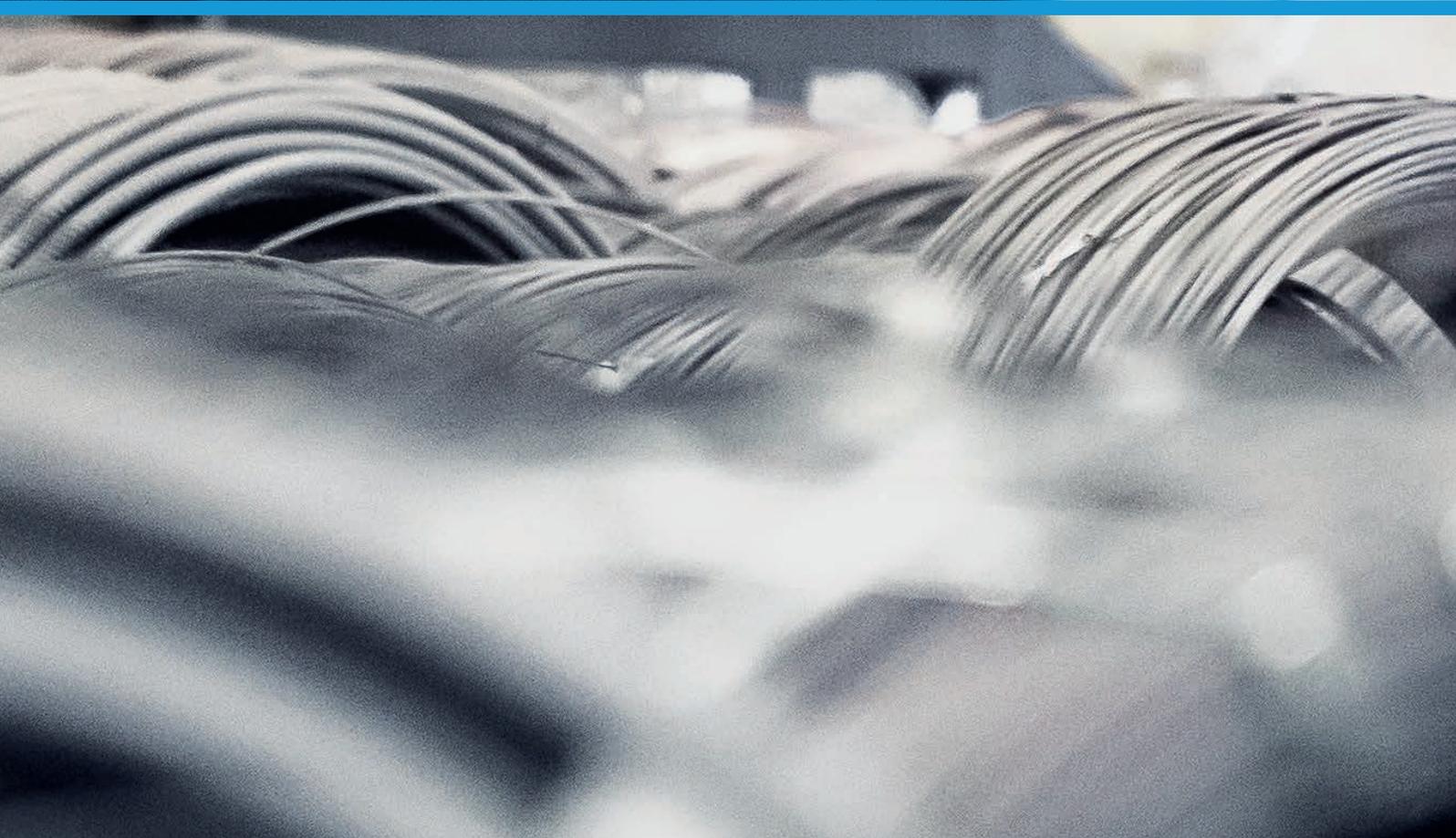
Our manufacturing programme is supported by an in-house product inspection and testing programme in addition to a technical team with extensive experience. Our rod and stainless rebar production is accredited to recognized international standards, including:

- ISO 9001
- ISO 14001
- ISO 45001
- AD 2000 MERKBLATT W 0 / TRD 100

Rebar product assurance

Approval is gained by a manufacturer only after demonstrating that their quality systems meet the requirements of ISO 9001, and the additional product-specific CARES requirements. An extensive programme of witness and independent testing also has to be passed, with independent testing being conducted by UKAS accredited laboratories to ensure integrity and competence.

- CARES Product Type Approval to BS 6744
- CARES Product Type Approval to BS 8666
- Certificate of conformity of the factory production control 1608 CPR P222



MARCEGAGLIA

STAINLESS SHEFFIELD

HEADQUARTERS

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