



Specialist

CASTINGS LIMITED

SILICON IRON SOLID ANODES

T: +44 191 510 8843

E: chris@specialistcastings.com

The advantages of using Silicon Iron impressed current Anodes have been widely known throughout the Cathodic Protection industry for over 30 years. Their low specific resistance, their suitability for fresh water, sea water and deep ground bed installations added to their proven low consumption rate and dependability have enhanced their position as the number one choice available to Cathodic Engineers. However, the dependability of these Silicon Iron Anodes is obviously dictated by the manufacturing methods and quality controls that are enforced by the foundry responsible for the anode's manufacture.

“Investment in technology and individual expertise has resulted in an anode production facility that surpasses all previous capabilities in terms of productivity, quality and hence product reliability.”



TOTAL QUALITY CONTROL

With over 30 years of experience in manufacturing Silicon Iron Anodes, the Specialist Castings team are able to provide anodes to a quality level that is unsurpassed throughout the globe. In our facility we have XRF Chemical Spectrometers, all calibrated to Certified FeSi Samples. Our anodes can pass X-Ray testing to a level not matched by other suppliers and no other supplier has this level of NDT.

DESIGN CRITERIA

Composition

Stick anodes are available with or without a chrome additive. This chrome additive enhances the performance of the anode system and is usually accepted as standard.

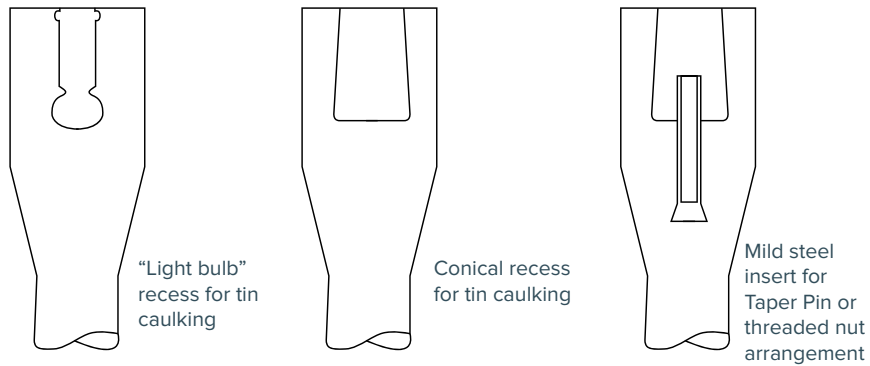
Nominal Analysis

	Normal	Chrome
Silicon	14.5%	14.5%
Manganese	0.75%	0.75%
Carbon	0.85%	0.85%
Chromium	-	4.5%
Iron	Balance	Balance

Connection

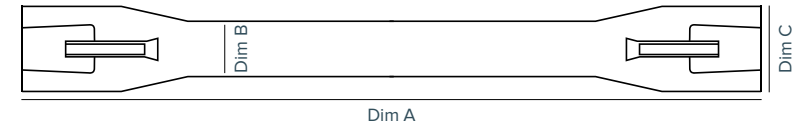
Cables are connected to anodes in one of three ways. Either a standard taper pin connector is used, or a lightbulb recess is incorporated into the head of the anode. Both connection processes have proved themselves equally reliable over many years.

A further connection process that is similar to the taper pin connector, replaces the taper pin with a threaded nut and bolt arrangement. This has also proved itself as a most reliable connection process. Specialist Castings can manufacture anodes to individual customer requests concerning the choice of connector.



Sizes Available

The following sizes are available as standard:



A	B	C	SURFACE AREA		APPROX WT IN	
			Sq. Mtr	Sq. Ft	Kgs	Lbs
36"	1	2	0.08	0.9	3.2	7
	1 ½	2 ½	0.12	1.3	8.6	19
	2	3	0.16	1.7	14.5	32
	2 ½	3 ½	0.20	2.1	22.3	49
	3	4	0.23	2.5	31.4	69
48"	1	2	0.11	1.2	5.5	12
	1 ½	2 ½	0.16	1.7	10.0	22
	2	3	0.20	2.2	19.1	42
	2 ½	3 ½	0.25	2.7	28.6	63
	3	4	0.30	3.3	40.9	90
60"	1	2	0.13	1.4	6.8	15
	1 ½	2 ½	0.20	2.1	13.2	29
	2	3	0.25	2.7	22.7	50
	** 2	2	0.24	2.6	20.0	44
	2 ½	3 ½	0.32	3.4	35.9	79
	3	4	0.38	4.0	50.0	110
	4 ½	4 ½	0.55	5.9	99.1	218

* Above weights and dimensions are Nominal ($\pm 5\%$)

** Parallel Anode with no expanded head specifically manufactured for Durichlor 51 Company USA

Consumption Rates

For design purposes, a current density of not more than 30 amperes per square metre of anode surface is advised, although consumption rate of the anode is very low.

Typical rates are:

Normal – 0.5 kg / ampere year

Chrome – 0.2 kg / ampere year

ADDITIONAL SERVICES

Specialist Castings can also supply the following materials with our anodes:

- Metallurgical Coke Backfill
- Calcinated Petroleum Coke Backfill
- Steel Canisters
- Complete Range of Anode Cables



For Further Information, Contact Chris Jennings at:

Specialist Castings Ltd, Tatham Street, Sunderland,
SR1 2AG, United Kingdom

T: +44 191 510 8843 | E: chris@specialistcastings.com