



HIGH SILICON CAST IRON TUBULAR ANODES



50 YEARS EXPERIENCE IN CATHODIC PROTECTION



JENNINGS ANODES

HIGH SILICON CAST IRON TUBULAR ANODES

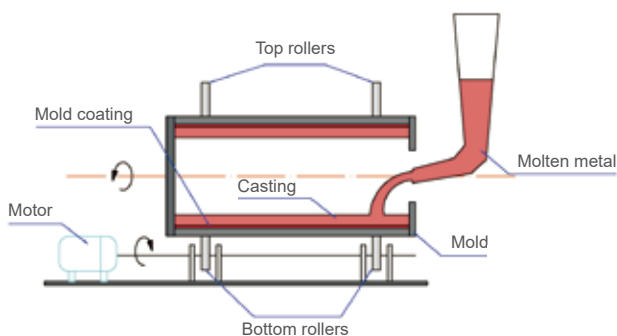
DATA SHEET

Having previously manufactured Durichlor-51 anodes in vast quantities, we have been supplying high silicon cast iron anodes for over 50 years. Our high silicon cast iron anode is manufactured by "chill" casting method using gravity to feed the metal mold, which guarantees a rapid solidification of the molten metal.

Tubular high silicon cast iron anode is popular for its centered cable connection and enhance sealing properties due to the additional sealing materials used inside the anode. After the connection is made, it can be sealed with polyurethane or a combination of polyurethane and Novoid A electrical sealant.

■ Centrifugal Casting Process

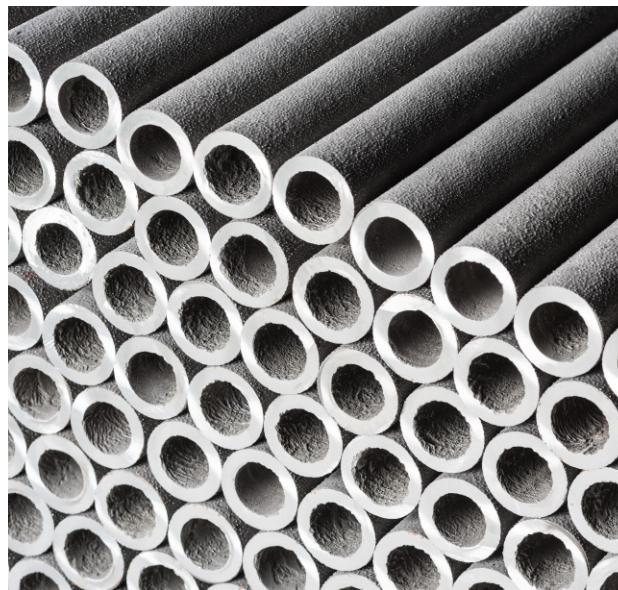
Our tubular HSCI anodes are centrifugal chill cast. The casting mold rotates at over 1000rpm producing a g-force that eliminates any trapped gas from silicon iron and throws any impurities to the inside bore of the anode where they do not hinder anode performance. Hence, the metal matrix is tight and dense, increasing the life of the anode.



The centrifugal casting in a chill or steel mold ensures greater density and integrity resulting in a stronger anode with improved impact resistance helping to avoid anode breakage during handling and installation.



Image Above Shows Fine Graphite Area of Centrifugal HSCI (Magnification x 50)



HIGH SILICON CAST IRON TUBULAR ANODES

DATA SHEET

■ Low Connection Resistance

With zinc wedge-lock or bolt connectors at the mid-point of the anode, our center connection structure ensures a low resistivity — less than 0.001 ohms. The balanced spread of current throughout the overall length extends the anode lifespan and results in a reliable current discharge to the surrounding environment.

Moreover, the connection component is resin encapsulated using a high-quality epoxy resin to ensure the eradication of moisture ingress.

■ Low Consumption Rate

Coarse stippled surface texture enlarges the surface area to weight ratio, thus reducing the anode current density, giving 30% more amp-years than conventional stick anodes.

■ Easy Installation

A unique cable connection device can be provided for a rapid installation. On average, more than 200 anodes can be connected by two workers in less than eight hours.



APPLICATIONS

Our high silicon cast iron stick anodes are widely used in the impressed current cathodic protection in a variety of environments.

- Conventional grounding bed
- Vertical deepwell
- Shallow installation
- Offshore application

CHEMICAL COMPOSITION

Element	Standard	ASTM A518/A518M Grade 1	ASTM A518 / A518M Grade 3	BS 1591 1975
Silicon (Si)		14.2% ~ 14.75%	14.2% ~ 14.75%	14.25% ~ 15.25%
Chromium (Cr)		0.5% max.	3.25% ~ 5%	0.5% max.
Manganese (Mn)		1.5% max.	1.5% max.	0.5% max.
Copper (Cu)		0.5% max.	0.5% max.	—
Molybdenum (Mo)		0.5% max.	0.2% max.	—
Carbon (C)		0.65% ~ 1.1%	0.7% ~ 1.1%	1.4% max.
Phosphorus (P)		—	—	0.25% max.
Sulphur (S)		—	—	0.1% max.
Iron (Fe)		Remainder	Remainder	Remainder

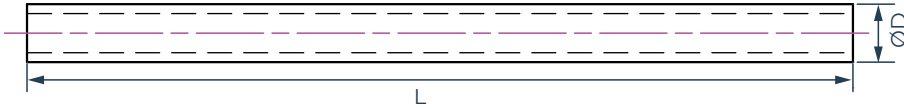
ELECTROCHEMICAL PROPERTIES

Technical Measurement	In Soil	In Coke Breeze	In Seawater
Current Density	0.2 ~ 0.5 A/ft ² (2 ~ 5 A/m ²)	0.5 ~ 1 A/ft ² (5 ~ 10 A/m ²)	1 ~ 5 A/ft ² (10 ~ 50 A/m ²)
Consumption Rate	0.2 ~ 1.2 lbs/A.y (0.1 ~ 0.5 kg/A.y)	0.1 ~ 0.7 lbs/A.y (0.05 ~ 0.3 kg/A.y)	0.7 ~ 1 lbs/A.y (0.3 ~ 0.5 kg/A.y)

HIGH SILICON CAST IRON TUBULAR ANODES

DATA SHEET

SPECIFICATIONS



Item No.	Anode Dimensions		Surface Area	Weight
	ØD	L		
JA-42-TA2 XS	2.3" (58 mm)	42" (1067mm)	2.1 ft ² (0.193 m ²)	23 lbs (10.5 kg)
JA-42-TA3 XS	2.8" (71 mm)	42" (1067mm)	2.4 ft ² (0.25 m ²)	31 lbs (14.1 kg)
JA-42-TA4 XS	3.8" (96 mm)	42" (1067mm)	3.5 ft ² (0.3 m ²)	43.2 lbs (19.6 kg)
JA-60-TA2S	2.3" (58 mm)	60" (1524 mm)	3.0 ft ² (0.28 m ²)	32.8 lbs (14.9 kg)
JA-60-TA3S	2.8" (71 mm)	60" (1524 mm)	3.6 ft ² (0.34 m ²)	45.0 lbs (20.4 kg)
JA-60-TA4S	3.8" (97 mm)	60" (1524 mm)	5.0 ft ² (0.46 m ²)	61.7 lbs (28.0 kg)
JA-60-TA5S	4.8" (122 mm)	60" (1524 mm)	6.3 ft ² (0.59 m ²)	125 lbs (56.7 kg)
JA-84-TA2	2.3" (58 mm)	84" (2134 mm)	4.2 ft ² (0.39 m ²)	46.1 lbs (20.9 kg)
JA-84-TA3	2.8" (71 mm)	84" (2134 mm)	5.1 ft ² (0.48 m ²)	63.1 lbs (28.6 kg)
JA-84-TA4	3.8" (96 mm)	84" (2134 mm)	6.9 ft ² (0.64 m ²)	86.4 lbs (39.2 kg)
JA-84-TA5	4.8" (122 mm)	84" (2134 mm)	8.9 ft ² (0.83 m ²)	110.0 lbs (49.9 kg)
JA-84-TA5A	4.8" (122 mm)	84" (2134 mm)	8.9 ft ² (0.83 m ²)	175.3 lbs (79.5 kg)

Notes: All dimensions and weights are nominal. The parameter provided is subject to variation in material compositions and Jennings Anodes foundry tolerance.

HIGH SILICON CAST IRON TUBULAR ANODES

DATA SHEET



TESTING DETAILS

We employ ISO 9001:2015 quality management system and rigorous internal testing standards to ensure the optimum lifespan and performance of our anodes. Each anode is labelled with a unique serial number for quality tracking.

Technical Measurement	Chemical Composition	Electrochemical Performance	Physical Properties
Testing Standard	ASTM E350	ASTM E186/E446	Foundry ITP
Testing Content	Chemical Analysis	Current Efficiency Connection Resistance	Dimension & Weight Surface Finish Cable Connection Epoxy Resin Sealing
Equipment	Optical Emission Spectrometer Labspark 750A / Thermoscientific Niton XL2-980	Electrochemical Analyzer EPI 200	Calibrated Digital Measuring Devices

* Third party testing is conducted by customer's special request at extra charge.

PACKAGING INFORMATION

We have strict packing protocols to guarantee safe delivery of our products. Clear shipping marks and documentation make delivery acceptance straightforward and simple.

Item No.	Anode Qty (per pallet/crate)	Pallet/Crate Dimensions (L x W x H)	Weight		Pallet/Crate Qty (per 20ft. container)
			N.W.	G.W.	
JA-60-TA2S	63	63" x 26" x 27.5" (1600 x 650 x 700mm)	2072 lbs (945 kg)	2194 lbs (995 kg)	21
JA-60-TA3S	48	63" x 27" x 27.5" (1600 x 690 x 700mm)	2161 lbs (985 kg)	2304 lbs (1050 kg)	20
JA-48-SA4S	36	63" x 27" x 33" (1600 x 690 x 850mm)	2227 lbs (1008 kg)	2370 lbs (1075 kg)	20
JA-60-TA5AS	16	63" x 24" x 29" (1600 x 600 x 730mm)	2006 lbs (910 kg)	2127 lbs (965 kg)	22
JA-84-TA2	63	87" x 26" x 27.5" (2210 x 650 x 700mm)	2910 lbs (1323 kg)	3075 lbs (1395 kg)	15
JA-84-TA3	48	87" x 27" x 27.5" (2210 x 690 x 700mm)	3031 lbs (1390 kg)	3197 lbs (1465 kg)	15
JA-84-TA4	34	87" x 27" x 33" (2210 x 690 x 850mm)	2954 lbs (1340 kg)	3120 lbs (1415 kg)	15
JA-84-TA5A	25	87" x 24" x 29" (2210 x 600 x 730mm)	2822 lbs (1280 kg)	2998 lbs (1360 kg)	16

Remarks: Custom packing is available upon request.



Worldwide Service Network

Our worldwide network of sales and service centers can provide immediate advice and assistance on the complete range of products.

Global Headquarter

3115 Fry Road Ste 303, Katy, Texas 77449, United States

Email: sales@jenningsanodes.com
Tel: +1 (281) 501 8398 / +1 (713) 799 3884

www.jenningsanodes.com

UK Office

Tatham Street, Hendon, Sunderland SR1 2AG, United Kingdom

Email: sales@jenningsanodes.co.uk
Tel: +44 (0) 191 510 8843
Fax: +44 (0) 191 514 7749

www.jenningsanodes.co.uk

Asia Pacific Office

120 Lower Delta Road, #07-13 Cendex Centre, Singapore 169208

Email: inquiries@jenningsanodes.com
Tel: +65 6715 1514



View Our Website



Follow Us On LinkedIn