



HIGH SILICON CAST IRON STICK ANODES

PRODUCT DATA SHEET

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High silicon cast iron anodes are amongst the most widely used anodes for impressed current cathodic protection systems. Due to its high content of silicon, the anode surface is readily and continually oxidized with a thin film of hydrated silicon oxides, which protects the anode from metal pitting. Our high silicon cast iron stick anodes exhibit extraordinary corrosion resistance and low consumption rate in low-pH environment.

We developed rigid controls for the chill casting process in accordance with the highest standards — meeting X-Ray Level 1 as per ASTM E186/E446, chemistry to either ASTM A518-99 Gr 1 or 3. ASTM A518 Grade 3 chemistry is particularly suited for more severe environments (such as brackish water or saltwater), where the level of chromium is elevated to enhance anode performance.

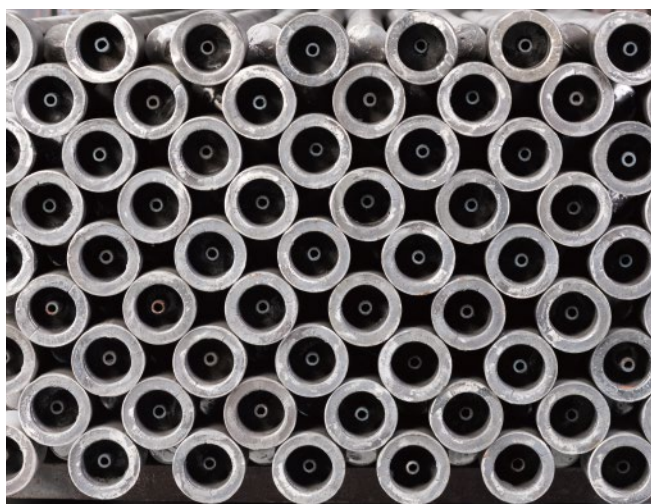
CHEMICAL COMPOSITION

■ ASTM A518/A518M Grade 1 (Si-Fe)

Element		Content (%)
Silicon	(Si)	14.20 ~ 14.75
Chromium	(Cr)	0.500 max.
Manganese	(Mn)	1.500 max.
Copper	(Cu)	0.500 max.
Molybdenum	(Mo)	0.500 max.
Carbon	(C)	0.650 ~ 1.100
Phosphorus	(P)	—
Sulphur	(S)	—
Iron	(Fe)	Remainder

■ ASTM A518 / A518M Grade 3 (Si-Fe-Cr)

Element		Content (%)
Silicon	(Si)	14.20 ~ 14.75
Chromium	(Cr)	3.250 ~ 5.000
Manganese	(Mn)	1.500 max.
Copper	(Cu)	0.500 max.
Molybdenum	(Mo)	0.200 max.
Carbon	(C)	0.700 ~ 1.100
Phosphorus	(P)	—
Sulphur	(S)	—
Iron	(Fe)	Remainder



■ BS 1591 1975

Element		Content (%)
Silicon	(Si)	14.25 ~ 15.25
Chromium	(Cr)	0.500 max.
Manganese	(Mn)	0.500 max.
Copper	(Cu)	—
Molybdenum	(Mo)	—
Carbon	(C)	1.400 max.
Phosphorus	(P)	0.250 max.
Sulphur	(S)	0.100 max.
Iron	(Fe)	Remainder



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ELECTROCHEMICAL PROPERTIES

■ Soil

Technical Measurement	Performance
Current Density (A/m ²)	2 ~ 5
Consumption Rate (kg/A.y)	0.1 ~ 0.5

■ Coke Breeze

Technical Measurement	Performance
Current Density (A/m ²)	5 ~ 10
Consumption Rate (kg/A.y)	0.05 ~ 0.3

■ Seawater

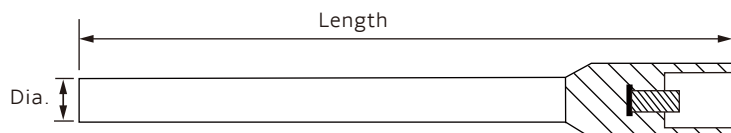
Technical Measurement	Performance
Current Density (A/m ²)	10 ~ 50
Consumption Rate (kg/A.y)	0.3 ~ 0.5

PRACTICAL APPLICATION

Our high silicon cast iron stick anodes are widely used in vertical deepwell and horizontal groundbed trench to protect buried structures from corrosion. High utilization of the anode weight (60% ~ 70%) results in an economic cathodic protection solution.



SPECIFICATIONS



Cast in taper pin or bolt connection with high quality epoxy resin encapsulation and heat shrink sleeve ensures superior cable connection at the anode head

Item No.	Diameter	Length	Surface Area	Weight
YX-48-SA2S	Φ38mm (Φ1.5")	1220mm (48")	0.15m ² (1.61 ft ²)	10.5kg (23.1 lbs)
YX-48-SA3S	Φ51mm (Φ2.0")	1220mm (48")	0.20m ² (2.15 ft ²)	18.0kg (39.7 lbs)
YX-48-SA4S	Φ76mm (Φ3.0")	1220mm (48")	0.30m ² (3.23 ft ²)	40.0kg (88.2 lbs)
YX-60-SA2	Φ38mm (Φ1.5")	1524mm (60")	0.19m ² (2.10 ft ²)	13.0kg (28.7 lbs)
YX-60-SA3	Φ51mm (Φ2.0")	1524mm (60")	0.25 m ² (2.70 ft ²)	22.0kg (48.5 lbs)
YX-60-SA4	Φ76mm (Φ3.0")	1524mm (60")	0.37 m ² (4.00 ft ²)	49.0kg (108.0 lbs)

Note: All dimensions and weights shown above are nominal. The information provided is subject to change without notice.





Industrial Corrosion Control Solutions Provider

Established in 2003, YUXI has over a 20-year heritage of innovation in corrosion control science and technology. We're a spirited team of ambitious thinkers and pioneer sheep with a common goal in mind: protect our clients' assets from corrosion with cost-saving measures.

We have the most comprehensive catalog of cathodic protection materials including anodes, transformer rectifiers, backfills, coatings, etc. Our anodes and supplies are manufactured to strict quality standards through an ISO 9001 quality management system and are guaranteed to offer excellent performance in the industry.



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