



INCORR ENGINEERING & TRADING

* Cathodic Protection Materials Manufacturer/Stockist

61 KAKI BUKIT AVENUE 1 #03-18

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INCORR SILICON IRON ANODES

INCORR High Silicon / Chromium / Cast Iron Anodes are suitable for applications in aggressive acidic or alkaline soils and seawater environment. They are highly used in place of high silicon / iron.

For Si/Cr/Fe anode, a layer of oxide film by Si & Cr will form when the anode is used anodically. This oxide layer makes Si/Cr/Fe anode corrode very slowly and also make it suitable for use in seawater, soil of acidic and alkaline environment. If no chromium is added to the silicon / iron anode, the silicon oxide layer formed is porous (50% approx.) and wastage of the anode materials due to pitting when used in seawater will occur.

The disadvantages of Si/Cr/Fe anode is that it is brittle and should be handled with care during installation.

In order to reduce the Si/Cr/Fe anode to field resistance, and the consumption rate, etc., the Si/Cr/Fe anode is usually prepacked in coke breeze. Again, many types of carbonaceous backfill materials may be used such as coke breeze backfill, calcined petroleum coke breeze and natural or man made graphite particles.

In some occasions, the coke breeze are backfilled in trench or in deep hole such as deepwell groundbed.

MATERIAL COMPOSITION

Element	Composition (Weight %)
Silicon	14.25 to 15.25
Manganese	1.0 max.
Carbon	1.4 max.
Chromium	4.0 to 5.0
Iron	Balance



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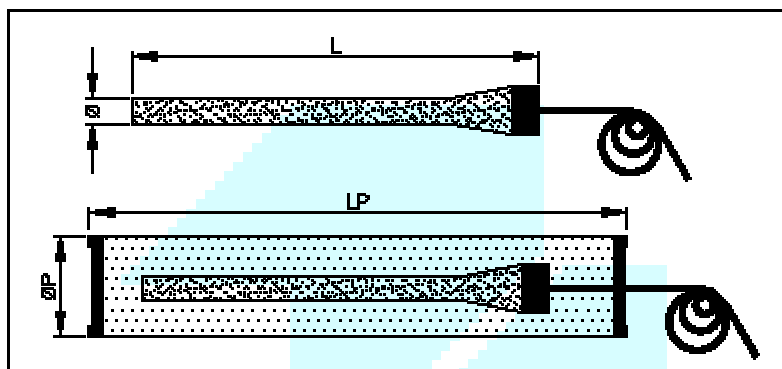
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ANODE DIMENSIONS



Anode Type	Packing	Nett anode weight (kg)	Prepackaged weight (kg)	Anode length L (mm)	Anode diameter Ø (mm)	Canister length LP (mm)	Canister diameter ØP (mm)
IS-23	Bare	23	-	1524	50	-	-
IS-50	Bare	50	-	1524	75	-	-
ISP-23	Prepackaged	23	75	1524	50	2000	203
ISP-50	Prepackaged	50	100	1524	75	2000	203

Note: Weight and dimensions are nominal. All anodes fitted with standard 6m x 16mm² XLPE/PVC copper cable. Other cables and sizes are available on request.

ANODE PERFORMANCE

Environment	Current density (Amps/m ²)	Consumption rate (kg/Amp-yr)
Fresh water	10	0.11
Sea water	15	0.31
	50	0.47
Sea water 200F	10	0.41
Buried sea water / sand	8	0.68
Carbonaceous backfill	15	0.10