

SACRIFICIAL ANODES

Bracelet anodes

Document No.: 05-500-R2

Sheet: 1 of 1

German Cathodic Protection



Bracelet anodes for submarine pipelines

For submarine pipeline protection, both half shell and segmented bracelet anodes can be used.

Available in a range of standard sizes from 4 inches to 48 inches diameter with weights from 10 kg to 1000 kg. Sufficient standard moulds are always available to guarantee short lead time production. Bracelet anodes can also be manufactured to any practical design.

It is our recommended practice that the adequate steelwork forms part of any pipeline design to ensure that the anodic material is well supported in later life, so ensuring continued protection of the pipeline.

The outer diameter of the bracelet is specially designed to coincide with the outer diameter of the pipeline coating.

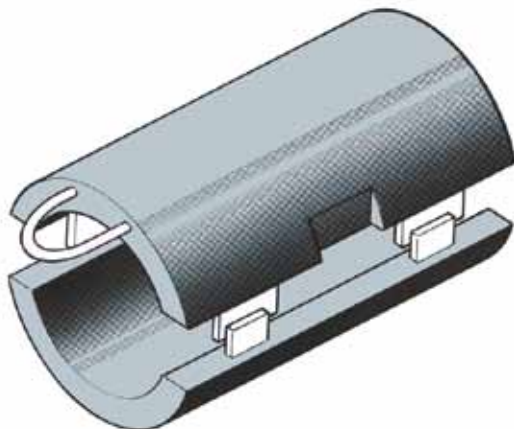
The choice of anode material depends on a number of parameters such as:

- coating material
- current requirements
- seabed resistivity
- temperature

ALUMINIUM - GALVALUM III ALLOY	
Composition	%
Fe	0.12 max.
Si	0.08 - 0.21
Zn	2.00 - 4.00
In	0.01 - 0.02
Cu	0.006 max.
Others (each)	0.02 max.
Al	remainder
Potential Cu/CuSO ₄	-1.15 V
Capacity (Sea-water)	2700 Ah / kg
Capacity (Mud)	1800 Ah / kg

ZINC - US MIL SPEC 18001J	
Composition	%
Cu	0.005 max.
Al	0.10 - 0.50
Fe	0.005 max.
Cd	0.025 - 0.070
Pb	0.006 max.
Others (total)	0.10 max.
Zn	remainder
Potential Cu/CuSO ₄	-1.05 V
Capacity (Sea-water)	780 Ah / kg
Capacity (Mud)	730 Ah / kg

SEMI-CYLINDRICAL BRACELET ANODE



MULTISEGMENTED BRACELET ANODE

