



MAGNESIUM PIPELINE ANODES


REVISION 1

APPLICATION

Temporary protection of buried pipelines, protection of well coated buried pipelines, internal protection of water tanks, and protection of small marine structures, "Hot spot" locations for buried & submerged steel structures. Suitable for use in soils, mud, fresh water, brackish water and sea water.

MAGNESIUM ANODE DATA



MAGNESIUM ALLOY SPECIFICATIONS

| | Standard | High Potential |
|---|------------------|------------------|
| Aluminium | 5.30-6.70% | 0.01% max |
| Zinc | 2.50-3.50% | - |
| Manganese | 0.15-0.70% | 0.50-1.30% |
| Silicon | 0.10% max | 0.05% max |
| Copper | 0.02% max | 0.02% max |
| Nickel | 0.002% max | 0.001% max |
| Iron | 0.003% max | 0.03% max |
| Other impurities Each | - | 0.05% max |
| Total | 0.30% max | 0.30% max |
| Magnesium | Balance | Balance |
| | | |
| Open Circuit Potential wrt Cu/CuSO ₄ | 1.57-1.60 -Volts | 1.77-1.82 -Volts |
| Closed Circuit Potential wrt Cu/CuSO ₄ | 1.52-1.57 -Volts | 1.64-1.69 -Volts |
| Output Capacity | 1200 A/hr/kg | 1100 A/hr/kg |
| Current Efficiency | 50% | 50% |

ANODE CABLE

Anodes are supplied with 5m of 1Cx6mm² XLPE/PVC cable (red outer sheath) as standard. Other sizes and lengths of cable can be fitted to suit customer requirements.



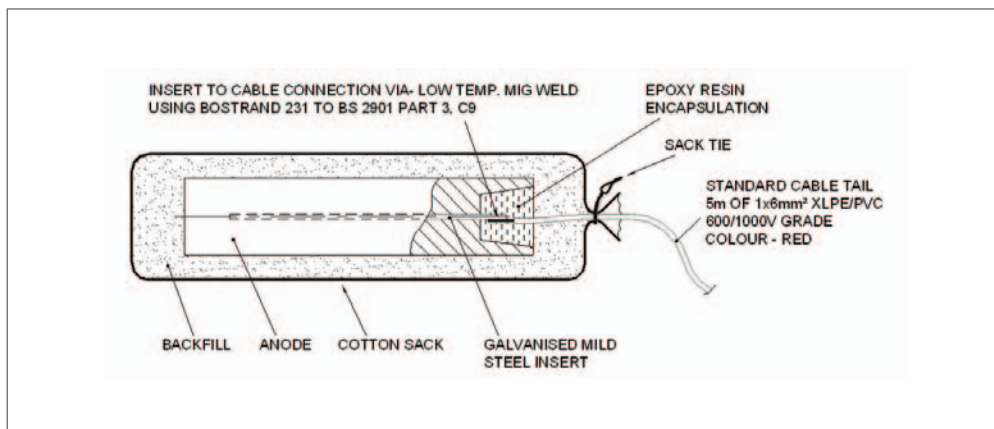
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STANDARD ANODE TYPES AND WEIGHTS

| Type | Nominal Weight (lbs) | Nominal Weight (lbs) | Approx Width (mm) | Approx Height (mm) | Approx Length (mm) |
|---------------|----------------------|----------------------|-------------------|--------------------|--------------------|
| OPTIMA 9 | 9 | 4.1 | 69.85 | 76.20 | 685.80 |
| OPTIMA 17 | 17 | 7.7 | 88.90 | 95.25 | 641.35 |
| OPTIMA 20 | 20 | 9.1 | 69.85 | 76.20 | 1,517.65 |
| OPTIMA 32 | 32 | 14.5 | 139.70 | 146.05 | 504.82 |
| OPTIMA 48 | 48 | 22.7 | 139.70 | 146.05 | 765.18 |
| OPTIMA 9P(*) | 16.5 | 7.5 | 140 | 140 | 740 |
| OPTIMA 17P(*) | 37.4 | 17 | 150 | 150 | 740 |
| OPTIMA 22P(*) | 46.2 | 21 | 150 | 150 | 1700 |
| OPTIMA 32P(*) | 70.4 | 32 | 195 | 195 | 640 |
| OPTIMA 48P(*) | 96.8 | 44 | 195 | 195 | 900 |

(*) Packaged Anodes



STANDARD BACKFILL

| | |
|-----------------|-----|
| Gypsum | 75% |
| Bentonite | 20% |
| Sodium Sulphate | 5% |