CORROSION SERVICE

Tank Bottoms

SITE SPECIFIC AST CORROSION CONTROL

SYSTEM SELECTION GRID

NEW TANKS	EXISTING TANKS			DESCRIPTION	ADVANTAGES
	Existing Floor	New Floor			
		Single Floor	Double Floor		
Under-Floor Continuous				▪ Wire or ribbon anodes (typically MMO or platinum clad) laid out in a continuous pattern ▪ Min. 150mm (6") clearance required ▪ For use with or without a liner	▪ Close, distributed anode array ensures that current reaches the entire tank floor ▪ Long service life
●		●	●		
Under-Floor Coke Disk				▪ Small dia. platinum clad or MMO anodes in a secondary layer of coke ▪ Min. 300mm (12") clearance required ▪ For use with or without a liner	▪ Primary anodes with surrounding coke breeze ensure long anode life & low driving voltage ▪ 1:1 proportioned anode floor array ensures even current distribution to entire tank floor ▪ May be used on either ambient temp. or heated tanks
●		●			
Under-Floor Scattered				▪ Small dia. platinum clad or MMO anodes packaged in calcined petroleum coke breeze ▪ Min. 450mm (18") clearance required ▪ For use with or without a liner	▪ Packaged anodes with surrounding coke ensure long anode life and low driving voltage ▪ Distributed anode array ensures that current reaches the entire tank floor uniformly
●		●			
Under-Floor "Old Floor" (Patented)				▪ The old floor is used as the anode during tank floor replacement ▪ Min. 100mm (4") clearance required ▪ For use with or without a liner	▪ Using old floor as an anode minimizes cost ▪ Very uniform current density ▪ Very long life ▪ Ideal for use where original tank floor was installed with a liner thus precluding typical CP applications
		●			
Under-Floor Galvanic				▪ Typ. high purity zinc anodes in a select backfill of gypsum, bentonite & sodium sulphate ▪ Magnesium anodes may be substituted in higher resistivity soils ▪ For use with or without a liner	▪ No external power supply required ▪ Very low maintenance & long service life ▪ Ideal for smaller diameter pre-fab tanks or for tank floors that have been externally coated
●		●	●		
Under-Floor Directional Boring				▪ Wire or ribbon anodes (typically MMO or platinum clad) surrounded by coke breeze columns, installed in horizontal boreholes, directionally bored under the tank ▪ For use without a liner	▪ Distributed anode array ensures that current reaches the entire tank floor uniformly ▪ Ideal for protecting the entire floor on existing tanks
	●				
Under-Floor Slope-Drilled				▪ Small dia. platinum clad or MMO anodes pkgd. in calcined petroleum coke breeze installed in sloped boreholes augered beneath the tank ▪ Anodes installed under the periphery of the tank floor ▪ For use without a liner	▪ Design flexibility accommodates congested areas ▪ Ideal for protecting extended areas of tank floor
	●				
Peripheral				▪ Tubular type HSCI anodes installed around the tank periphery ▪ A variety of other anode materials & styles are also available ▪ Min. soil cover of 3m (10') required ▪ For use without a liner	▪ Design flexibility accommodates various tank sizes, congestion & current requirements ▪ Provides low circuit resistance & more uniform anode current discharge ▪ Ideal for areas with a large overburden of clay, silt, or sandy soil over bedrock
	●				
Remote Semi-Deep				▪ Tubular type HSCI anodes are typical and have a proven track record in this service ▪ A variety of other anode materials & styles are also available ▪ Requires vent pipes or covers at grade ▪ For use without a liner	▪ Design flexibility accommodates various tank sizes, congestion & current requirements ▪ Minimal excavation ▪ Ideal for areas with clay, silt, or sandy soil that is relatively free of rock
	●				

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