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RIGHT AS BAHRAIN

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Right as Bahrain

Madison and Mannai Trading

Madison is currently celebrating two decades of success in the Arab gulf countries and is now using that success to expand its network of alliances in the area.

It is exactly twenty years ago that Madison coatings were first chosen to line potable water tanks in Abu Dhabi totaling over 300 million litres of capacity. In the ensuing years, this led to number of interesting infrastructure applications in neighbouring countries. One intriguing challenge was to provide a protective coating system for the steel pilings supporting an offshore mosque with a design life of more than 200 years.

The six countries of the Gulf Co-Operation Council (GCC) include Saudi Arabia, United Arab Emirates (UAE), Kuwait, Qatar, Oman, and Bahrain. They are home to some of the best oil fields on the planet, and, as a result, some of the most ambitious infrastructure development projects. A white paper published by the Economist Intelligence Unit in September 2009 calls the GCC region one of the world's fastest growing populations and estimates the population will expand to 53 million by 2020. As cities grow, the demand for more and greater infrastructure follows. Estimates of the value of the coming infrastructure boom vary, but somewhere between \$1 and \$2 trillion will be spent over the next several years.

The Al-Mannai Group, located in Bahrain, is an example of Madison's alliances in the area. Based on a number of successful projects in the early 2000's, Madison appointed Mannai Trading, one of the Group's four divisions, as a distributor in 2007. Mannai Trading has deep roots, starting with trading in pearls in 1824. The other three divisions in the Group are Al-Mannai Jewellery, Mannai Motors, and Universal Enterprises. Within the Mannai



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Who Needs Standards?

Meeting the new standard for wind towers

A significant shift has occurred in the wind tower industry, and Madison was ready for it. The industry's adoption of the rigorous ISO 12944 performance standard for protective coatings will ensure that wind tower coatings meet an exacting standard.



As late as 2007, technical requirements on wind towers were often overly accommodating to a range of protective coatings that didn't deliver the performance required for such a demanding application. Long-term performance would often take a back seat to cost effectiveness and ease of use. ISO 12944 changes that.

A Benchmark for Performance

How do you measure and predict the design life of infrastructure projects that will be built from various materials

and will be located in different geographies? This is a question that Madison has been focused at for its 35+ year history. Whether it was our involvement with the American Water Works Association's (AWWA) C222 specification, or the Steel tank Institute's (STI) P3 and ACT-100 specifications or the National Sanitation Foundation's (NSF) Standard 61 for potable water contact, Madison understands the importance and the role of objective standards. So when the 2007 version of the International Organization for Standardization's (ISO) 12944 specification was adopted by the growing global market for wind towers, Madison understood the opportunity and importance. This is the new benchmark for performance.

The new standard, ISO 12944-Corrosion Protection of Steel Structures by Protective Paint Systems was written as both an informational and instructional guide for the use of paint and coating systems on steel substrates.

First published in 1998, the ISO 12944 standard consists of eight separate parts in which the various aspects of corrosion protection and coating systems, such as environment, design, surface preparation, various types of protective coatings and tests are reviewed.

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Right as Bahrain, continued

Trading Division itself there are a total of eight main businesses including construction materials distribution. In general, Mannai Trading focuses on the infrastructure and energy construction sectors of the economy. The Madison and Mannai partnership focuses on coatings for the infrastructure, such as coatings and linings for storage tanks and pipelines.

There is a high regard throughout the area for leading edge technology, making this a perfect fit for the many advances made by Madison's research team in recent years. Mannai's role, with support from Madison VP Blair Russell, will be to show its customers how to protect and preserve new infrastructure projects with polymer coatings designed to last throughout the 21st century and beyond. ■



Who Needs Standards?

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The standard categorizes six environments of increasing corrosivity from both an outdoor and indoor exposure perspective. These are labelled C1 to C5. See Table 1 for an overview for exterior environments.

The wind tower industry in North America has now adopted the ISO 12944 standard as its objective performance criteria. Madison has embraced this new protocol. We now have several systems, both plural component and mix and apply products approved to each level and regime including the challenging C5I regime 2 testing. Table 2 shows our approved systems.

Table 1

Environment category		Corrosion risk	Typical steelwork location
C3		Medium	Most rural and urban areas with low sulphur dioxide, acid, alkali, and salt protection
C4		High	Urban and industrial atmospheres with moderate sulphur dioxide pollution and/or coastal areas with low salinity
C5	C5I	Very high	Industrial areas with high humidity and aggressive atmospheres
	C5M		Coastal and offshore areas with salinity

ISO 12944 is an international corrosion standard that has applications for all steel structures including wind towers and one we believe will grow in acceptance and use. It is designed to assist specification writers

Table 2

Application	System	Design Life (years)	ISO 12944 Category (dry mils)			Comments
			C3	C4	C5	
Interior	Alumizinc 'S' (1 coat)	15+	8	8	8	Mix and apply; cost effective
	CorroCote Plus (1 coat)	25+	18	25	25	Plural component; rapid throughput; longer design life
Exterior	AlumiZinc 'S' (1 coat) AcrylaThane (1 coat)	15+	8+5	8+5	8+5	Mix and apply; cost effective
	CorroCote Plus (1 coat) AcrylaThane (1 coat)	25+	18+5	25+5	25+5	Plural component; rapid throughput; longer design life

and engineers in creating appropriate and objective criteria by which to decide on coating systems suitable for different environments. Let Madison help you find the right coating system for your wind tower, or any other application that uses ISO 12944 as its standard. ■

