

## F130-10 New 28E ARCTEC Coating

### **Metallisation Has Launched a New Durable Non-slip Coating**

Metallisation Ltd has launched a new durable non-slip coating. 28E ARCTEC coating is ideal for use on steel floors, decks and panels across diverse industries, from train steps to oil platforms.

Untreated these steel surfaces can become very slippery, especially in wet conditions, and are prone to corrosion. To ensure safe walking and industrial operating conditions, vital to personal safety and corporate productivity, 28E ARCTEC coating provides a durable non-slip anti corrosion coating.



Traditionally, steel structures are hot dip galvanised, or painted, to protect against corrosion. The disadvantage of hot dip galvanising is that the surface can become slippery and it does not easily accept paint without the need for special primers. Painting this type of surface, which is sometimes applied with grit inclusions, also has its disadvantages. The surfaces can degrade quickly in heavy use, resulting in corrosion and an increased slip hazard.

Many large steel structures, including oil platforms, refineries and bridges, have been routinely protected against corrosion by thermal spray aluminium (TSA), zinc or an alloy of the two. While providing unrivalled corrosion protection in very aggressive corrosive environments, pure TSA is not durable enough to prevent long term wear on floor plates. Ideally, steel structures need a durable coating that protects against both slip and corrosion and that's exactly what the new Metallisation 28E ARCTEC coating does.

28E ARCTEC coating is a thermally sprayed coating that can be applied with a rough texture and has excellent non-slip properties, while being extremely hard and resistant to wear. The new coating provides:

- A suitable level of grip, to avoid personal slips or industrial skidding
- Comparable corrosion protection to aluminium, as used in aggressive environments
- Easy application by a long-standing process, covered by international standards

The resultant coating is corrosion resistant and because of its durability, site owners can be confident that once applied, they can forget rust or slipping for many years. To prove the durability of this heavy duty coating, Metallisation has completed many tests in the development of 28E ARCTEC wire and coating. These included non-slip, durability and corrosion testing.

28E ARCTEC coatings have been tested for non-slip and durability using a Pendulum Coefficient of Friction (CoF) tester, in accordance with independent British Standards and UK Health and Safety Executive (HSE) guidelines. These guidelines suggest that a floor coating with a



Pendulum Test Value (PTV) greater than 36 will have a low slip potential in pedestrian areas. To test the coatings the plates were sprayed to produce a surface texture that would wear well, but not too rough for pedestrian surfaces. If the surface has too much grip in pedestrian areas it can cause a trip hazard.

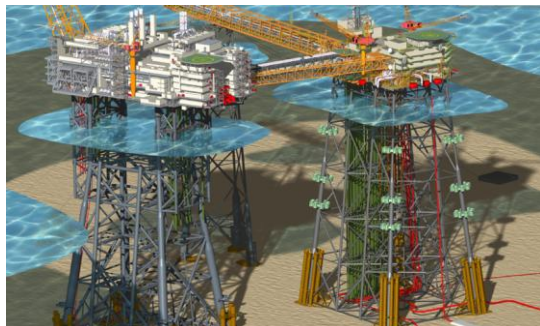
To prove the durability of the coating, the coated plates were walked on by a standard shoe on a robotic walking machine. The plate was rotated after each step to simulate walking in a straight line and around corners. The PTV was checked before walking and again after 250,000, 500,000, 750,000 and 1 million steps. Both sealed and unsealed plates were tested in wet and dry conditions.

The Pendulum Test Values obtained in accordance with BS7976-2:2002, highlighted significant results. The unsealed plates initial wet PTV was 75 and after 1 million steps it had reduced to 41. Whereas the sealed plate's initial wet PTV was 66 and after 1 million steps it had only reduced to 58. Testing in dry conditions achieved similar results, with a dry PTV of 80 down to 64 for unsealed plates and 72 down to just 68 on the sealed plates.

Cycles Completed	Un-sealed sample		Sealed sample (epoxy)	
	Pendulum Test Value Dry	Pendulum Test Value Wet	Pendulum Test Value Dry	Pendulum Test Value Wet
<b>Initial</b>	80	75	72	66
<b>250,000</b>	66	50	70	63
<b>500,000</b>	65	49	71	61
<b>750,000</b>	64	43	69	60
<b>1,000,000</b>	64	41	68	58

The 28E ARCTEC coating has also undergone a range of accelerated corrosion testing. This offers a comparison of the performance between the new coating and 99.5% aluminium. An independent research laboratory undertook two tests: Galvanic corrosion tests for one week and neutral salt spray corrosion tests for 1,000 hours.

The salt spray tests were performed in accordance with ASTM B117. The test results confirmed that the corrosion protection offered by 28E ARCTEC coating was comparable to 99.5% aluminium. These results give the confidence that the new coating will provide the same high standard of corrosion protection that aluminium has been doing around the world for several decades.



A recent example of the 28E ARCTEC coating in use can be seen on a twin-platform, offshore LNG platform installation, which has an inter-connecting bridge. Following extensive evaluation of non-slip coatings, 28E ARCTEC wire was chosen as the preferred coating to be applied to the bridge deck surface, because of its non-slip durability and corrosion protection.

28E ARCTEC coating was also chosen to treat the ramps used by forklift trucks to load and unload containers. The ramps can be very slippery in wet conditions and are often salt treated in winter. After one year there has been no visible rusting of the steel substrate. Feedback from the forklift operators report a higher level of confidence when climbing the ramp and confirmation that they managed to safely and successfully load all lorries in wet conditions.



In addition to supplying the new 28E ARCTEC wire, Metallisation offers a complete range of thermal spray equipment to apply the finished coating. For more information on the new 28E ARCTEC wire and coating contact Stuart Milton, Sales and Marketing Manager, +44 (0) 1384 252 464 or visit [www.metallisation.com](http://www.metallisation.com)