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Gemini Expands Metal Spraying Services With Metallisation Equipment

Gemini Corrosion Services Ltd is a world leader in protecting steel structures, pipework and subsea pipelines against corrosion. Gemini, a long term customer of Metallisation, is committed to the Metallisation ARC528E system for the effective and efficient application of protective coatings.



Gemini, based in the north east of Scotland, has been providing high quality, cost effective surface preparation and protective coatings to the oil and gas industry for nearly 30 years. Gemini first used the Metallisation ARC528E equipment back in 2005, when the company purchased an automated pipe spraying machine. Since that time, Gemini has continually expanded its use with more and more of its customers.

A recent contract win by Gemini requires the company to metal spray 7 kilometres of subsea oil industry tubulars with aluminium.

Ian Guthrie, Managing Director at Gemini, says: “Gemini’s reputation is built on delivering quality, value and integrity to its customers, which is clearly demonstrated by our loyal and extensive client base. By utilising professional, efficient metal spraying equipment, as supplied by Metallisation, we have grown our client base to embrace a wide range of industries. Metallisation is one of the leading manufacturers of metal spray equipment and its is a pleasure working with them.”



Gemini has a purpose built, fully automated, computerised metal spray facility at its Montrose base, which was designed and installed by Metallisation. The pipe manipulation system is flexible and can cater for different pipe sizes, enabling a full range of pipes to be sprayed using just one machine.

The equipment can be used to spray pipes varying from 4 inches to 48 inches (102mm to 1.22m) in diameter and from 6.6 feet up to 50 feet (2m to 15.24m) in length.

The automated process is operated through the control box, which allows up to 20 preset programmes, including pipe rotational speed and carriage traverse rates, to ensure an even coating thickness. The pipes are loaded onto the carriages of the metal spray system and move through the facility, while rotating, to enable the Arc spray pistols to coat every inch of the pipe. The automated process reduces coating times, increases material efficiency and eliminates operator fatigue.

A video showing subsea pipes being metal sprayed, at Gemini's automated metal spraying process facility, can be seen on Metallisation's website www.metallisation.com/videos/library

In line with standard practice, the surface of the pipes is prepared by grit blasting to industry standard cleanliness SA3, prior to metal spraying to ensure effective coating adhesion. Every pipe is checked for profile and cleanliness. Using two ARC528E systems, the external surfaces of the pipes are metal sprayed with aluminium to a typical thickness of 250 µm, although this can be varied to suit the customer's specification. Finally the pipes are sealed to the individual customer's specification.



During the spraying operations, various quality checks are performed and recorded. Sample plates are sprayed under identical conditions to the pipes and tested to check they meet the coating adhesion requirements. Many specifications require 9 - 12 Mpa, with Gemini coatings exceeding 18MPa, proving that the preparation and application of the coating is second to none. The coating thickness of the pipes is routinely checked as the spraying is performed and the coating is visually inspected at random under 10x magnification.



The Metallisation ARC528E system consists of an ARC528E servo driven pistol, 5m supply package and a 450 amp switched voltage energizer with inbuilt closed loop wire speed control unit. The aluminium wire is dispensed from production packs, which reduces downtime for wire changes, and is also supplied by Metallisation.

Stuart Milton, Sales and Marketing Manager, Metallisation Ltd, says: "We have been working with Gemini for many years and are very proud of the feedback we receive from them regarding our service, prompt response and working relationship. Metallisation is committed to excellent customer support through the delivery of effective surface protection solutions and equipment. We are pleased to see that this recent contract win for Gemini clearly demonstrates the flexibility, capability and reliability of our metal spray systems and equipment."

For more information please contact Stuart Milton, Sales and Marketing Manager, +44 (0) 1384 252 464 or visit www.metallisation.com