



HOW TO SAVE Paint and solvent

XM Protective Coating Sprayers

By using Graco's XM plural-component sprayers to paint its steel wind-turbine towers, a Spanish manufacturer made significant savings in both paint and solvent.

Manually mixing paint to coat its steel wind turbine towers was wasting both paint and solvent. What was the solution implemented by this Spanish manufacturer of tubular steel structures?

MAKING STEEL STRUCTURES FOR SIX DECADES

This Spanish company has more than 60 years of experience in the design, manufacture and delivery of tubular steel structures such as offshore and onshore wind-turbine towers and offshore turbine foundations. They also make pressure vessels and large metal structures for the petrochemical, energy and marine industries.

The company has comprehensive and sophisticated in-house processes for the treatment of steel, including cutting, forming, welding, shot blasting and painting. It also provides logistics management and storage services of end products.

In Spain, two strategically located facilities with a total surface area of 115,000 m2 are equipped with state-of-the-art high-technology machinery to enable a production capacity of more than 300,000 tons per year.



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INVESTMENTS IN PAINT MIXING

When it came to painting their steel wind turbine towers, the appropriate paints were mixed manually and applied with conventional airless equipment. However, the company realized that they were wasting money with this process. This was through the discarded paint as well as the solvent used to clean the equipment. They therefore decided to make an investment in a new paint mixing facility. **At the heart of their new paint room are five Graco XM plural-component sprayers. These were installed by local Graco distributor Clemco International.** Each XM is connected to a 200-litre paint drum.

The XM consists of two piston pumps – **one for the base and one for the hardener** – which feed the two paint components into a mixing vessel. The two components are conveyed and mixed in the correct mixing ratio. The mixing manifold and the static mixer assembly ensure that the base paint and hardener are homogeneously mixed. The mixed material is then fed to the spray gun through an integrator hose and atomized at the nozzle. Advanced sensors allow the pumps to compensate for pressure fluctuations, resulting in accurate, on-ratio mixing for better coating quality and less waste.

In fact, the XM provides precise ratio control with a margin of error of only +/-5%. It handles a wide range of the twocomponent materials used by the company to spray the steel wind turbine towers. Moreover, accurate proportioning, even at high flow rates, leads to increased productivity and profitability.

An additional feature of the XM that operators appreciate is the user interface, which monitors and controls pressure, temperature and flow, and also allows maintenance to be scheduled. The USB ports enable easy access to the history of the paint application and enable the data to be downloaded.

SAVING PAINT

The use of the Graco XM sprayers has resulted in significant savings for the company in terms of paint. This is because the XM results in less waste as it only mixes what it sprays. There is therefore no need for operators to throw away unused mixed material at the end of each day, simply because there is no unmixed material to throw away! Nor do they have to discard off-spec, inconsistently mixed material because the XM ensures optimal consistency of mixing, day in, day out. And of course, less waste equates to cost savings.



USING LESS SOLVENT

The XM also saves solvent for the company. This is because only the parts that come in contact with mixed material need to be cleaned during the job. Instead of flushing out an entire pump system that contains mixed material, operators now only need to flush the static mix tube and hose to the gun. In addition, reduced cleaning time saves labour costs and increases uptime.

"The company is very satisfied with Graco's XM pluralcomponent sprayers," says Itziar Usategui Guillerna, Managing Director of Clemco International S.A.

"They have led to significant savings in paint and cleaning solvent, and have allowed the company to keep more strict control of the painting process."

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