

LBL FINISHERS case study

LBL have installed an Envirometal Technologies **Toran 3** treatment Plant for high quality steel products with extended corrosion-proofing of over 1000 hours salt spray tolerance.

LBL FINISHERS, based in Portsmouth, is A DIVISION OF Tomburn Ltd who are specialist powder coaters. LBL FINISHERS serves a wide range of customers across a large area of the country. Included in LBL Tomburn's impressive customer list is STANNAH STAIRLIFTS, COLT INTERNATIONAL, HWA and RED ARCHITECTURAL.

The innovative Management Team at Tomburn have long pursued environmentally friendly practices, not least because they are simply more efficient and save cost. In 2011 they approached Envirometal Technologies with a view to explore their NO Heat, NO Water, No Waste systems of degreasing and corrosion-proofing metal for painting.

Trials were successfully carried out and an off-line **Toran 3** treatment system was prescribed as most suitable. Additionally, LBL FINISHERS wished to completely update their conveyerised handling system, dip tanks and ovens and a scheme was devised.

As Envirometal Technologies' system uses NO GAS and just a small electric pump the gross energy savings obtained resulted in the Carbon Trust funding the entire project.

The system is innovative, providing all the benefits of a dip tank (with top loading via flight bars) but providing low-pressure spray application which provides efficient cleaning with some impact effect for fast processing, (normally only 90 seconds) while using a minimal volume of product, giving quick draining and economy. After the ninety second spray treatment, almost all of the chemical drains back into the small supply tank leaving the products clean and polymerised with just a 1-2 micron coating. Products are immediately protected against flash rust.

The flight bar is then moved on and lowered into a well oven for 10 minutes at 140°C before being powder coated or stored without painting (for up to six months) giving flexibility in responding to customer requirements quickly when needed.

The benefits of the de-greasing and polymer process are that it is carried out at ambient temperature with no release of any noxious by-product. No carbon dioxide, nitrous oxide, sulphur dioxide; no VOC, no CFC or HCFC. There are no notifiable emissions and no requirements for any Local Authority licences or even notification. No biocide is required as no water or heat is used.

There is no rinse so there is no water to dispose of, there is no sludge as the oil and grease is dissolved off of the metal and re-integrated as part of the polymer; dust, metal filings and other solids are washed off and filtered out. The product is never disposed of – just topped up as the small amount for each product is used.

Carbon Trust funding of this type is no longer available but the energy, water, labour and other cost savings which this system provide, together with environmental

benefits, attract many other types of funding, including Government schemes, which Envirometal Technologies can assist with.