



Marine Finishing



MARINE FINISHING - THE CHALLENGES

Marine coatings clearly provide a unique set of challenges for any spray technology. Typically containing very high solids content, these extreme anticorrosive coatings can be difficult to atomize. Traditionally, this meant the operator was forced to use very high air pressures, or settle for poor finish quality. Unfortunately, while high-pressure spray systems allow for sufficient break-up of these thick materials, they also tend to result in contamination of the surrounding environment. Given the fact that many marine coating operations are performed either on the water or in open-air dry docks, unintended environmental damage can occur. Consequently regulators have disallowed certain types of spray equipment for many operations, or have required extremely expensive protective measures.

DUX technology solves this problem. The lack of overspray, bounce-back and fog al-lows operators to work in sensitive environments where brush and roll coating had previously been required. The ability to apply extremely thick coating layers in a single pass, without dripping or sagging, also improves productivity since operators are not forced to wait for drying between multiple coats.

Finally, the same DUX gun that sprays other marine coatings can also spray the newer silicone and ceramic based anti-fouling materials. Designed as a replacement for copper based bottom paints, these coatings are extremely difficult to atomize without creating significant overspray and wasted material. The DUX gun simply does not have this problem, making the use of these environmentally friendly materials more viable than ever.

THE DUX TECHNOLOGY

Efficient air transfer is the key to the Dux Technology. Conventional spray guns of both standard and HVLP types suffer from a considerable reduction of air pressure through their guns. Losses of greater than 80% are not uncommon. The HVLP gun has a very large clearance between the air cap and fluid tip. These guns require very large volumes of air to maintain an acceptable atomization. The result is atomized paint that is blown in all directions due to the expansion of air. The HVLP type of spray gun is limited by a lack of internal airflow efficiency.

The Dux airflow pattern and efficiency are patent-protected and, along with the air cap, are key to the performance of the Dux gun. Dux achieves an optimal 90% spray efficiency during the air and fluid movement through its gun.

REGULATORY AND ENVIRONMENTAL ISSUES

Looking at the big picture of the coating industry, regulators, health and safety managers, and environmentalists have two overriding concerns. The first issue is the level of Volatile Organic Compounds (VOCs) that are released into the workplace. This is due to the composition or ingredients of the coating materials used throughout the industry. The second key issue is the level of VOCs that are released because of the low transfer efficiency of the spray guns used to apply the coatings. From an environmental and health and safety perspective, Dux solves this second issue. The Dux Technology has achieved a transfer efficiency rating greater than 90% at less than 10psi. Lower pressure means less overspray. Better design means: higher transfer efficiency; less wasted material; and a reduction of VOC's. That's a win for any operator.

• IMMEDIATE ROI

- Reduced coating usage
- Decreased cleanup costs
- Faster production speed
- Energy savings

• EASY TO USE

- Ergonomic design
- Lightweight and balanced
- Reduced booth fog and overspray

• AIR QUALITY & SAFETY COMPLIANCE

- Drastic reductions in VOC emissions
- Reduced HazMat clean-up and disposal
- AQMD compliant by definition
- Fully CE marked & ATEX approved

• ADVANCED TECHNOLOGY

- Laminar airflow
- Low pressure with high velocity
- Exceptional atomization
- Outstanding utility across coatings and applications