

## **Additional Dust Test Migatronic Omega Yard 300**

Additional tests have been conducted on the Omega Yard 300 welding machine for the purpose of verifying resistance to dry and wet dust and ensuring durability of construction and topology during operation in shipbuilding/outdoor environments. The welding machine was subjected to stress in excess of EN 60974-1 requirements, which specifically address safety in power sources according to CE requirements.

We know from experience that the ingress of dust and moisture into welding machines cannot be prevented, regardless of use of filters etc. However, special construction and component techniques make the Omega Yard 300 sustainable/resistant to the ingress of dust. Filters will just reduce the duty cycle factor without significant benefits.

In addition to welding performance, we focused on the following when constructing the Omega Yard 300:

- Lacquered PCBs
- Separating primary and secondary high-voltage and low-voltage power components
- Cooling air bypassing control components
- Vertically mounted PCBs
- Extra-long creep distances
- Testing with 3-hour forced cycle time with on/off load
- Injecting dry and wet metal powder via cooling flow
- Bump testing during resistive load
- Field-testing in maritime environment
- EN 60974-1-5-7-10

Product Manager Torben Henriksen  
Fjerritslev, May 2016