

# CHESTERTON®

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Dick Rieley  
Sponge-Jet, Inc.

Regarding: **Cleaning and Roughening Capabilities of Sponge-Jet® Sponge Blasting System**

Dear Sir,

We are a manufacturer and supplier of high performance coating and linings for a worldwide selection of industrial consumers in various markets. Often we are requested to specify not only suitable coating materials but surface preparation requirements as well. In many cases this involves high pressure abrasive grit blasting in order to achieve a level of cleanliness and surface roughness or "profile" acceptable for our materials.

However in certain applications it is either not possible or practical to allow open air sandblasting or the cost of containing such a blasting operations airborne dust is cost prohibitive as well as potentially damaging to nearby rotating equipment, electrical motors and the such. In these circumstances we have been recommending the Sponge-Jet® Sponge Blasting System with the Silver Media as a suitable alternative to abrasive grit blasting. Our testing has found that your system, properly operated, cleans contaminated metal at an acceptable rate and yields a surface well within acceptable limits. In one test we ran metal panels contaminated with sodium chloride at levels approaching  $400\mu\text{g}/\text{cm}^2$  were blast cleaned by conventional means, washed in demineralized water, allowed to flash rust and then subsequently blast cleaned again. Duplicate panels were cleaned using the Sponge-Jet system with Silver Media. Chloride testing was completed using a Bressle® Sampler to determine chloride levels. Abrasive grit blasting required two (2) phases of water washing followed by abrasive grit blasting, to achieve a level below  $10\mu\text{g}/\text{cm}^2$ . We were able to achieve the same level with one cycle of the Sponge-Jet system. We then applied one of our Composite linings at equivalent film thickness' to both sets of panels and they were subjected to the ATLAS Closed Cell Test per ASTM C868 using  $50^\circ\text{C}$  demineralized water for a period of 6 months.

At the conclusion of the test the cells were disassembled and the coated face of the panels was inspected for evidence of attack. The results were that the Sponge-Jet System provided equivalent cleaning and abrading capability such that there were no blisters evident on the film. Under these controlled conditions we have satisfied ourselves that the Sponge-Jet System can clean and profile metal at an acceptable rate and that the quality of cleaning yielded a surface as good as conventional abrasive grit blasting without the additional steps involved in water washing.

In addition I believe many applications, where dust generation during cleaning and profiling is unacceptable, will find Sponge-Jet beneficial.

Sincerely,

Steve Bowditch  
ARC Technical Manager