

“I couldn't believe my eyes”

In 2004 Sponge-Jets President Michael Merrit came to the Maintenance Fair to talk about how good his blasting method was. “With our method you use only tenth as much blasting material and you not only get a better result; the cost is notably reused.. I believe that the European industry will see the advantages with Sponge-Jet very soon.”

Give us some evidence, the Magazine U&D demanded in an article.

This resulted in that many power plants, paper mills, hydroelectric plants and other factories in Sweden, Norway and Finland tested the method and found that the saving potentials are great if the method is used at the right place.

Roger Carlsson, SwedPower:

“Sponge-Jet is definitely an interesting method for hydroelectric power plants; we recently tested blasting with Sponge-Jet at the second largest hydroelectric power plant, Stornorrfor, which produces 581MW. Only “Harsprånget” is larger with 820 MW. At the same time as we tested the blasting we also repaired a stator above the blasting area approximately ten meters away. Work continued in the machine hall nearby and it would have been a disaster if the dust penetrated this area.

Usually it would have cost a lot of money to cover the machinery and lift out the stator while the blaster process was in use. Simply moving and lifting out the stator

would have cost us three weeks work with five men. Reassembling the stator would have taken about the same time. By keeping the stator in place, we managed to save around 1 200 working hours or €63,000. Using conventional blasting would have meant two additional costs, as we would have had to cover the blasting area and all parts and provide the machine hall with some extra ventilation. This would have cost about €21,000. According to our calculations this project will save us approximately € 79 000 - 84 000.

I am surprised by the result. The method was utterly successful as we were blasting without getting dust particles in sensitive equipment and areas such as con-

trol rooms, control equipment and electrical boxes, etcetera.”

Kent Nilsson, Nuclear plant:

“We heard about Sponge-Jet at a demonstration of the equipment. I couldn't believe my eyes, we could stand right beside the blasting area without protective clothing.

Now we have used the equipment on isolated pipes where the area under the isolation had rusted, with a diameter of 100 and 150 mm. This environment requires everything to be very clean. Normally we use hand tools such as scrapes, steel brushes, needle guns and grinders; methods that are time consuming, make the area dirty and give a deteriorated surface to work on.

Treating only one meter with a hand tool takes approximately three hours, which means 300 hours per 100 meters. With Sponge-Jet we were able to blast 100 meters in four days. Straight after the blasting the surface was wrought enough for painting.

We saved a lot of time and did not have a notable problem with dirt; we simply protected the surrounding equipments by covering the Sponge-Jet area. The biggest

advantages for us were that the quality of the preparation work was enhanced and that we saved a lot of time. The blast media did not bring about any dust; the particles fell more or less straight down towards the ground and were easy to get rid of. The scrap was separated from the blast media so that it could be reused. I believe we can use the same blast media up to five times.”

Tomas Juthe, Swedish Tissue, Kisa:

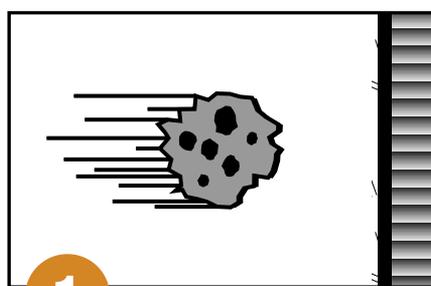
“We have looked at several other methods but none of those were suitable.

Using a needle gun takes a lot longer and does not give a good enough surface profile, which makes the material less adhesive.

Water blasting as a method requires dry and polished machine parts; otherwise the rust on the surface will come back immediately. It is also a very time consuming method which gives the surface less cohesion.

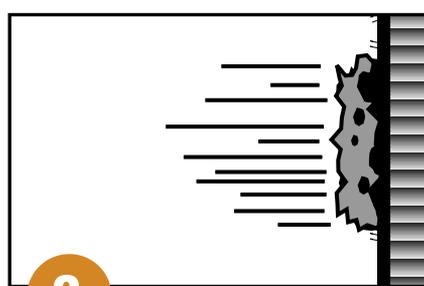
The optimal method is blasting. It is a much quicker method and you can start painting straight away. The gain in time makes it possible to abbreviate the shut down time.

Conventional Abrasive Bonded Into Sponge Media™



1

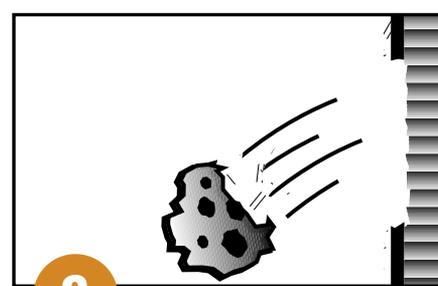
Dual-component, Sponge Media abrasives are propelled to the surface using an air-driven system



2

Upon impact Sponge Media abrasives...

- Absorb collision energy
- Flatten and suppress the release of loosened surface contaminants
- Expose its abrasives with little abrasive fracturing and remove contaminants
- Selectively or completely strip the coating system and profile the substrate



3

Sponge Media abrasives entrap most of what would normally have become airborne dust

Downtime reduced by one week – 1.5 million saved

The rust is a big problem simply because it is so difficult to get rid of. Rust and dirt on roller shafts, machine elements, machine constructions, etcetera, do not only affect the life of the machine; they also reduce the quality. Flakes of rust and dirt can destroy both wire and machine felts which can result in poorer paper quality.

The first time we used Sponge-Jet we blasted parts and machine constructions on almost the whole machine. During the second time of shutdown we blasted and painted half of the other machine.

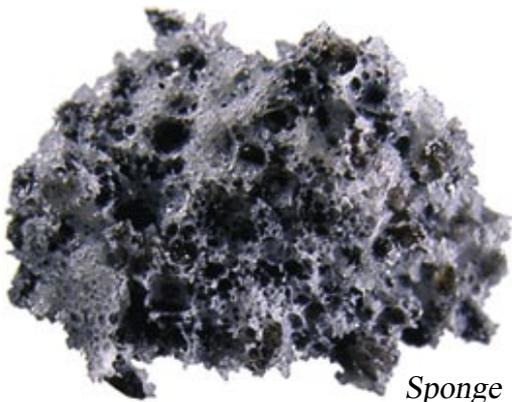
We hoped that we would be able to increase the quality level by painting our machinery and making it almost rust free. It lengthened the life cycle, despite the damp and even more aggressive environment in the paper machinery. The whole trend is now heading towards closed systems with more added chemicals, which requires more maintenance.”

Peter Närkfors, SCA Lilla Edet
”We tested Sponge-Jet for the first time in autumn 2004 by

blasting a part of the machine construction, which is an old cast iron machine from 1967. We obtained such a good result that we decided to use the whole support throughout the shutdown process. Before we started there was a large amount of rust and our only alternative would have been to use water blasting. However, this is a more time consuming method and would have made it difficult to protect the surrounding equipments.

We noticed that the Sponge-Jet method required far less cov-

ering protection of stock rooms and other critical equipment than other methods. Furthermore, less blast media was required as it could be reused up to five times. Sponge-Jet is a more expensive method than conventional blasting and water blasting. However, the benefits are that the work could be done in half the time, thus one week instead of two. This is extremely valuable with regards to the requirement for higher availability. The reduced resources in terms of time will save us € 150 000.



The new Sponge-Jet method was used for the first time in hydro electrical power plants such as Stornorrfor, which is Sweden's second largest power plant. The guide rails and bar columns were blasted, saving the power plant nearly €84000.

