



Let's share our ambitions



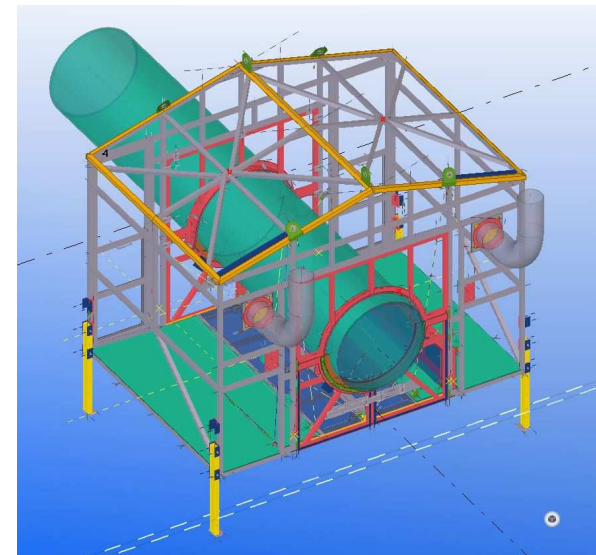
ISAC: Installation de Sablage à Aspiration Contrôlée *or* Vacuum Sandblasting Controlled System

FIRST STEPS

Always focused on innovation, SPAC wanted to lessen the impact of the sandblasting operations on the environment. The existing process had an impact on Nature, as the sand and dust generated by sandblasting were not wholly collected and left onsite. Moreover, the objective was also for the sandblasters to work in a healthier and safer environment and to have a better visibility while working, space around pipes being very confined. On-site operators and management asked for a system which can work, improving those aspects.

Faced with such a situation, SPAC decided to develop a system with a more positive impact on the environment ; a system which would also be more environmentally friendly. Automatic sandblasting could have been a good solution, but such a system is not totally successful, in particular to cover all joint length, and we would not have been ready to begin working on the Val-de-Saône (VDS) site in 2017.

So we went ahead with the cabin design, keeping the possible future incorporation of an automatic system in mind. A French Engineering school proposes an « Eleven-week Project »: During eleven weeks, a group of students works on a company topic, with the help of their school and professor. Several concepts of a new cabin system were developed for SPAC by the students. One of those students even stayed at SPAC for an additional six-month internship, to continue his mission, i.e. to focus on designing the new system.



SOLUTIONS

SPAC launched this innovation with an objective of zero impact of sandblasting operations on the environment.

The new system, ISAC (Installation de Sablage à Aspiration Contrôlée or Vacuum Sandblasting Controlled System), consists in a vacuum cartridge filter system set up on the track carrier which is lifting the sandblasting cabin. Vacuum hoses are set up along the crane arm between the cabin and the Vacuum system. We were inspired by industrial sandblasting systems used in automobile plants. The vacuum system provided by CAMFIL is used for those industrial processes, we chose it for his reason.

This system is respectful of French and work legacy. We also worked with a Prevention and Safety organisation to help us in designing it.

ISAC provides a solution to our sandblasting environmental issue: The dust and sand are now wholly collected.

Other benefits are H&S: A better visibility and more comfort for the operator.

IMPLEMENTATION

Early in the thinking process, operators have been involved in the cabin manufacturing, as well as in its size or design. This picture below shows one of the tests done before the final manufacturing. Those tests were opportunities to try different kinds of sands that we could use to optimize the system's (cabin + vacuum system) efficiency for operator safety. Managed by SPAC's Equipment Direction, the design and production of ISAC involved several SPAC services: Onsite teams, HSE team, in-house workshop and engineers, all committed to develop a device to improve our environmental impact.

The resulting prototype totally was achieved and made possible thanks to our onsite people experience, in accordance with our HSE team. In May 2017, ISAC was successfully tested on Val-de-Saône (VDS), a major French pipeline project. After a few minor modifications provided by the field operators, the system is now working effectively every day on the RGM (Renforcement Gascogne Midi) site, regardless the weather conditions.

A video was made to share this achievement with the rest of our company:

<https://www.youtube.com/watch?v=Fpi8q30oWtY>



LONG-TERM PLANNING

SPAC's innovation ISAC is now totally efficient for main line operations. The next step is for SPAC to duplicate and adapt this system for tie-in operations. It involves dimensions review and probably needs another work session with onsite operators.

ISAC was tested on 36" and 48" pipes. We now have to work on smaller diameters and to manufacture a new floor closing, because the height between the pipe and the ground will be narrower.

After the end of RGM (Renforcement Gascogne Midi) works, we will get back to our workshop to work and share site experience in order to develop those two aspects.

Antoine de la Touche, SPAC Equipment Director : *" Thanks to ISAC, the dust and sand generated by sandblasting operations do not impact the environment. This is part of SPAC's ongoing effort to protect fauna and flora on every site where we operate. "*