

ELIOS IN ACTION | PAPER INDUSTRY

INSPECTION OF TANKS IN A PULP AND PAPER MILL

INTRODUCTION

Pulp, which is the raw material used in the manufacture of paper, is prepared by chemically or mechanically separating cellulose fibers from wood, fiber crops or waste paper. At an industrial scale, this process is performed in large tanks that need recurrent inspections. Inspection? That sounds like Elios' specialty.



CUSTOMER NEEDS

One of Europe's leading manufacturer of pulp and paper possesses a large paper mill in the north of Poland. The plant counts more than 50 chemical tanks used for the production of pulp and paper. Every year, the company proceeds to a plant shutdown in order to perform a thorough inspection of all infrastructures. This operation includes the inspection of the 50 chemical tanks. Part of the method consists of a general visual inspection of the assets as well as an integrity check of the welding. To perform these inspections the company uses traditional methods such as the use of rope accesses and scaffoldings. Motivated by the potential gain relative to the rapidity of execution but as well the potential benefit of not having to send people inside the tanks to do the job, the company requested the intervention of Flyability, and its polish partner Inspectios, to perform a pilot project with Elios.

SOLUTION AND PROCESS

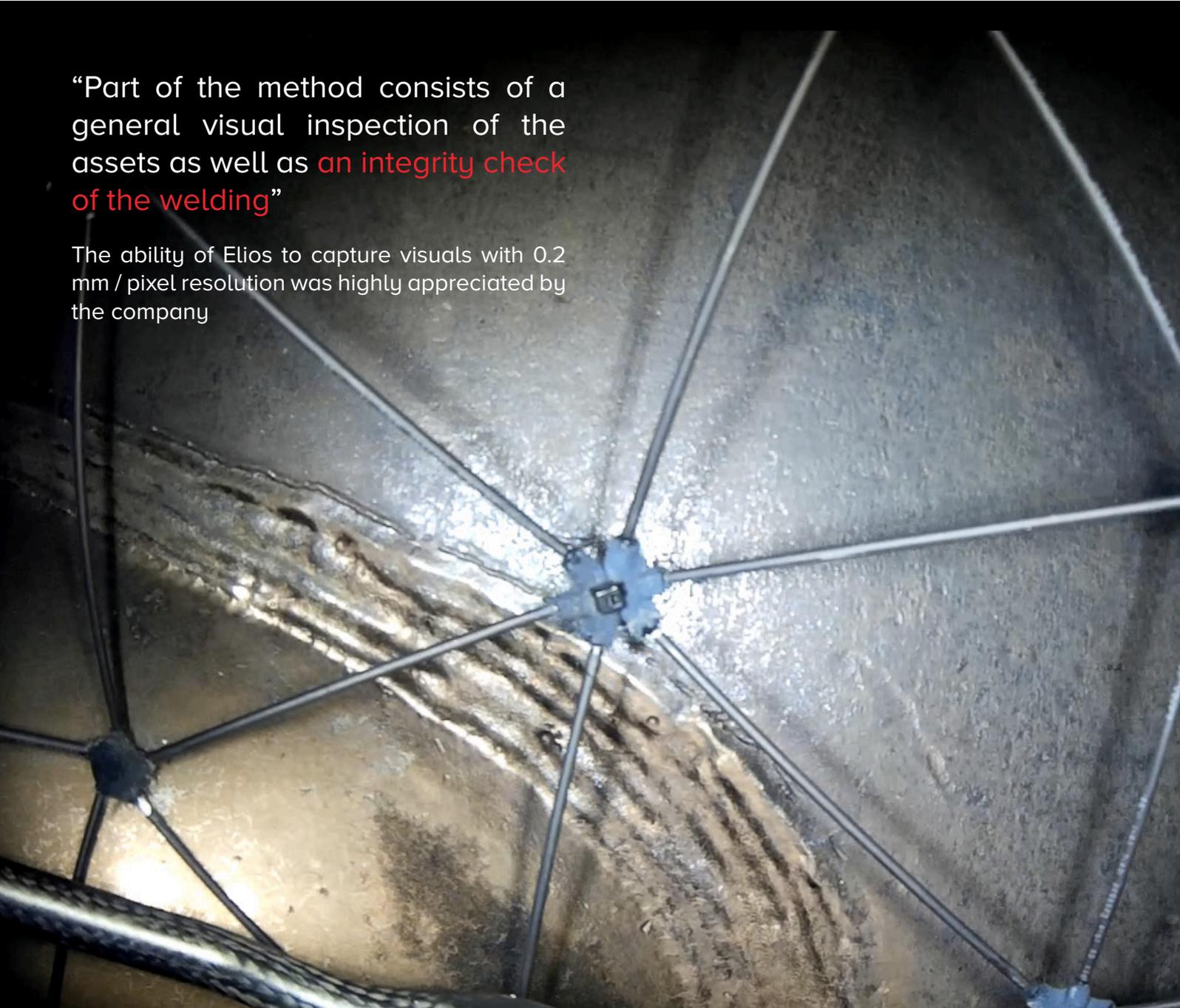
For this pilot project, it was decided to limit the intervention to 2 tanks, each having a diameter of 6 meters for a height of 25 meters. The inspection was also limited to the inside part of the tanks. Prior to deploying Elios, the tanks had been properly cleaned and degassed. 3 flights of 10 minutes each were necessary to perform the complete inspection of one tank, making the overall inspection worth 60 minutes of flight. Elios was piloted by a Flyability employee who was supported by inspection engineers to help conduct the inspection according to their

expectations. Between each flight, the team gathered in a meeting room to check the videos produced by Elios and debrief on the best way to proceed.

The 5 first flights were conducted from the inside of the tank giving time to the team to getting used to the technology and reaching the appropriate level of confidence to finally perform the last flight directly from the outside of the tank.

“Part of the method consists of a general visual inspection of the assets as well as **an integrity check of the welding**”

The ability of Elios to capture visuals with 0.2 mm / pixel resolution was highly appreciated by the company



RESULTS

All the point of interest were inspected over a very short period of time without having to expose anyone to risk. The quality of the images, the rapidity of the inspection and the substantial benefits of not having to do the job using rope access or scaffolding were all points that made the team that had requested the inspection extremely satisfied by the use of Elios.



Once the inspection was completed and while the whole team was debriefing, an interesting point was raised relatively to the possibility to provide quick a response for emergency cases. The team that had requested the inspection foresees Elios as a quick-to-deploy solution in the case of unexpected situations; for example when a problem is suspected or detected within a tank. Indeed, not having to fully clean the tank before proceeding to an inspection, with possibly some non-explosive gas remaining inside, would provide considerable time savings.

TIME

The 50 tanks can be inspected in a single day with the help of 2 Elios.

COSTS

No need for any additional equipment such as scaffolding or rope access.

SAFETY

The entire inspection can be safely performed from the outside of the tanks.

MISSION PICTURES TAKEN BY ELIOS



FLYABILITY SA

Av. de Sévelin 18
CH-1004 Lausanne
+41 21 311 55 00
sales@flyability.com

TIME – COSTS – SAFETY

Flyability builds **safe drones for the inspection of inaccessible, confined, and complex places**. Focusing on the Energy, Oil & Gas, Chemicals & Maritime industries, Flyability enables end-users to save time, costs and reduce risks during visual inspections.