



**Drone inspection of
confined spaces
@Indaver Antwerp,
a leader in
sustainable
industrial waste
management**

INTRODUCTION

Indaver Antwerp, a leader in sustainable industrial waste management, is looking for solutions improving the quality and efficiency of its infrastructure maintenance process while reducing cost and downtime due to inspection. They requested Medexon to perform a proof of concept.



CUSTOMER NEEDS

Indaver Antwerp, a leader in sustainable industrial waste management, has 3 production lines. During the yearly shutdowns, multiple confined spaces are not part of the regular inspection procedures due to difficult or dangerous access. Unrevealed damages can as such lead to unscheduled emergency shutdowns seriously impacting the daily revenue streams. An efficient and safe inspection method can help.

SOLUTION AND PROCESS

The proof of concept took place at the premises of Indaver Antwerp during the shutdown of production line 2. The mission was divided in several sections including dioxin filter tanks, ducts and chimneys. Multiple flights of eight minutes each were necessary to inspect the infrastructure. Several anomalies were detected which resulted in immediate repair.

In two cases we were not able to perform the inspection. One because the access port was too small and the other one because of an excessive amount of dust that was present at the entry of the duct to be inspected. All flights were conducted by the pilot beyond line of sight, from the outside of the infrastructure, preventing anyone from entering. Medexon used the Elios 2 caged drone from Flyability.



RESULTS

Indaver Antwerp was really pleased by the results of the proof of concept and definitely confirmed the added value of this innovative drone inspection method. During a debriefing, solutions and improvements were defined to inspect the two failed locations in the future and other areas of interest were confirmed (boiler room, e-filter, ...). In such a way, part of the inspections could be done at an earlier stage during the shutdown procedure as a pre-inspection before maintenance teams enter the confined spaces. As a result, the overall shutdown time can be reduced considerably. I would like to thank the Indaver maintenance team for the preparation of the missions and the support during the inspection flights!

MISSION PICTURES TAKEN BY THE ELIOS 2

