

TotalEnergies Belgium

A collaboration of more than 20 years in fugitive emission management and energy saving programs

TotalEnergies in the Port of Antwerp, Belgium, has been a loyal customer of Intero - The Sniffers for over 20 years. Why do they rely on our services and what are the results after all the LDAR campaigns, steam loss monitoring as well as vent and flare loss monitoring projects?

“The first contract with TotalEnergies was signed in 1997 to manage fugitive emissions for Total Olefins Antwerp (TOA). Leak detection at TOA was already well established in the nineties”, says Mark Pauwels, Environmental Manager.

“The collaboration with Intero - The Sniffers for the Total Refinery Antwerp (TRA) started in 2002 after a specific permit license for the refinery demanded the execution of fugitive emission measurements and leak detection. Intero - The Sniffers was market leader at that time. Since the collaboration for Total Olefins Antwerp was going smoothly, we reached out to them to also execute measurements at the refinery.”

Addition of energy saving programs

Mark adds that *“due to the execution of accurate and effective LDAR (Leak Detection And Repair) programs for Total Refinery Antwerp and the expertise of the operators about our installations, we decided to also add energy saving programs to the scope of work.”*

“Intero - The Sniffers has therefore been executing steam loss monitoring as well as vent and flare loss monitoring since the early 2000s.”

Due to the execution of successful LDAR programs as well as the expertise about our installations, we decided to also add energy saving programs to the scope of work.



Emission Division Operations Director of Intero - The Sniffers, Bas Hermans, adds that “monitoring steam traps was unheard of 15 years ago when I joined Intero - The Sniffers. TotalEnergies was the first customer we ever executed steam loss monitoring for. All these years later; the results say it all.”

“We now have a clear overview of our steam traps and passing valves and we can act faster when a leak is found with the clear repair orders. Having our installations checked has resulted in important Return On Investments for TotalEnergies in Antwerp” says Mark.

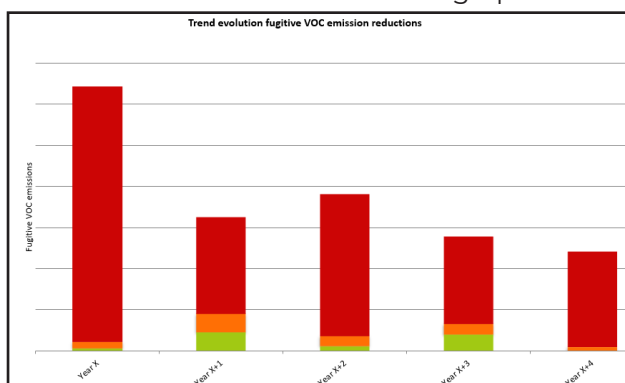
Emission management software for full insight in emission management performance

“In order for customers to have easy access to emission data and export reports of the different campaigns, we developed our emission management software SFEMP. The software allows them to consult their databases and export repair orders so their maintenance team has clear priorities for repair activities.” reports Bas.

“First, the software was limited to capturing only fugitive emissions. With the recent launch of the updated software - Sniffers Full Emission Management Platform - both unintended or fugitive emissions and intended emissions can be captured and reported. Our customers, such as TotalEnergies in Antwerp, will also be able to compare the emission performance over the different sites and benchmark themselves against other oil & gas peers.”

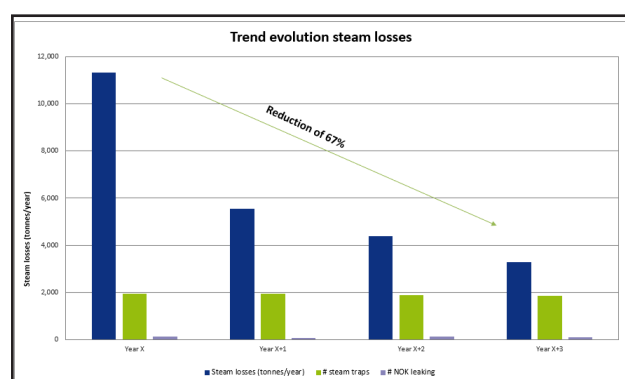
The proof is in the pudding

We see a significant reduction in fugitive VOC emissions as shown in the below graph.



“During the most recent LDAR campaigns, almost no leaks above repair definition were found. This indicates the effectiveness of LDAR and also confirms TotalEnergies’ efforts to continuously reduce fugitive emissions” says Bas.

“Consistent steam loss monitoring has resulted in a reduction of steam losses of almost 70% as indicated below. This shows that executing energy saving programs such as steam loss monitoring is definitely worthwhile for the customer. Besides the reduction of energy consumption, TotalEnergies saves costs and reduces repair activities.” Bas adds.



“To demonstrate the results of flare loss monitoring campaigns, we compared the first monitoring round with the second monitoring round 2 years later. During year 1, only 11 hand valves represented 80% of the product loss.”

“During the monitoring round 2 years later, flare losses had dropped significantly. TotalEnergies achieved a product saving of 1.405.171 kg per year. Our experience in flare loss monitoring tells us that repairing a small number of large leaks results in a fast return on investment” Bas concludes.

First monitoring round

Source	#US points	#US leaks	Losses in %
Relief valves (RV)	442	17	5%
Hand valve (HV)	645	11	80%
Control valve (CV)	68	12	15%
Normally open (NO)	97	0	0%
Total	1252	40	100%

Second monitoring round 2 years later

Source	#US points	#US leaks	Losses in %
Relief valves (RV)	542	10	17%
Hand valve (HV)	821	11	46%
Control valve (CV)	90	10	37%
Normally open (NO)	98	0	0
Total	1551	31	100%

Product saving of 1.405.171 kg/year

Our collaboration of more than 20 years is based on working with trustworthy experts who master the best available techniques to manage fugitive emissions and save energy.



Working together before the legislation entered into force

“Even before the Flemish environmental legislation VLAREM was effective, we developed a professional and thorough follow-up system with Intero - The Sniffers to manage our fugitive emissions.” says Mark Pauwels.

Continued collaboration

The Environmental Manager of TotalEnergies emphasizes that *“our collaboration with Intero - The Sniffers of more than 20 years is based on working with trustworthy experts who master the best available techniques to manage fugitive emissions and achieve energy savings. They anticipate to changes in legislation and update us accordingly.”*

“Moreover, they keep track of new measurement devices or techniques and test new technologies thoroughly - also in operating conditions - before using them in their day-to-day activities. I look forward to continue working with them.”

“I want to thank TotalEnergies for their trust in our team and our services. After all these years, TotalEnergies has become the second home of our project leaders and operators. Together, we realize TotalEnergies' environmental and sustainability ambitions.” concludes Bas from The Sniffers.

About TotalEnergies in Antwerp

In the Port of Antwerp, TotalEnergies employs 1700 people in 3 large production sites. They have been focusing on the production of fuel and base products for both the chemical and plastics industry for over 70 years.

Totalenergies Refinery Antwerp is one of the most advanced and diversified refineries in Europe and is the largest in Belgium. The refinery delivers international diverse petroleum products (fuel oil, gasoil, LPG, kerosine,...) and base products including nafta, butane and aromates for the petrochemical industry. Each year, around 16 million tonnes of crude oil is processed.

The nafta and butane are then processed at TotalEnergies Olefins Antwerp in thermal crackers to light components such as ethylene and propylene. Ethylene and propylene are base products for the plastics industry. The products are sold or are then processed at other TotalEnergies facilities.

However, a large amount of the ethylene stays within the cluster in Antwerp and is processed at TotalEnergies Polymers Antwerp to high density polyethylene (HDPE). This product is then transported to plastic processing companies.

Ever-evolving solutions

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