MAGAZINE

NIVELCO

SPRING/SUMMER // 2025/1

NIVELCO

NEW

MonoCONT

SMART FIELD DISPLAY & DATA LOGGER

FEATURES

- Provides a flexible solution to commissioning process control systems containing HART®-compatible intelligent *(level, temperature or pressure)* transmitters
- 4-key interface
- Process controller for transmitters
- Field loop display and controller module
- Ex variant

CERTIFICATES

- ATEX (Ex ia G), (Ex d G), (Ex d ia G)
- INMETRO (Ex ia G), (Ex d G), (Ex d ia G)

APPLICATIONS

- Remote programming, displaying of transmitter's data
- Process controller for transmitters
- Displaying measured data in numerical and bargraph mode
- Data transmission via RS485 *(via Modbus protocol)*
- Simple data-logging function
- Trend or flow-measurement logging
- Data logging to internal memory

5 YEARS WARRANTY

INMETRO

NIVELCO.COM

Contents

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TAMÁS SZŐLLŐS
CEO

NIVELCO Co.

Dear Readers,

Despite the challenges ahead, we can look back on 2024 with pride. Although NIVELCO Group sales fell short of the record set in 2023, we still achieved the second highest sales in our history. The successful sales of our own manufactured instruments continued to grow, and our financial position remained stable, with sufficient reserves to meet future challenges.

Among our ongoing developments, the launch of the PiloTREK W–200 80 GHz radar level transmitter family and the MonoCONT PDF–410 smart display and data logger stand out. I am proud of the fact that our products have proven themselves in applications around the world, from nuclear medicine to agriculture and pharmaceuticals.

What I appreciate most are our loyal colleagues, many of whom have been part of the NIVELCO family for decades. Their expertise and dedication ensure that we continue to provide the right answers in an increasingly uncertain global economic environment.

I am also proud of the NIVELCO Racing Team's successes, which have further enhanced our reputation in the world of skiing. Preparations for the Olympic Games are already underway.

The main challenge for 2025 will be the continuous improvement of manufacturing and operational efficiency. I would like to thank all our colleagues and partners for their trust and support so far!

Finally, I would like to emphasize that the case studies and partner success stories presented in this magazine also demonstrate that NIVELCO products provide reliable solutions for a wide range of industries worldwide. Whether in the chemical, pharmaceutical, food, or water management industries, we are proud to provide our customers with the highest level of technology and support. I am confident that our joint development and cooperation will continue in the future!

Financial Management of the NIVELCO Group in 2024

GÁBOR MERKEL
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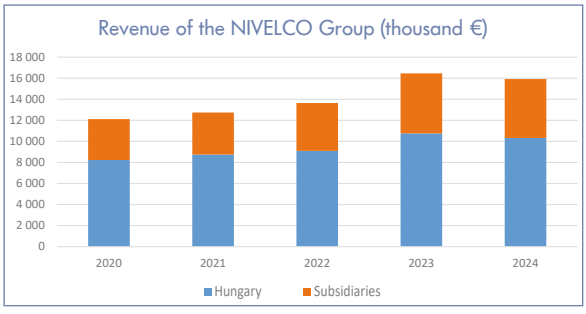
The year 2023 marked a record high for NIVELCO, setting a benchmark that we anticipated would be challenging to exceed in the following year. Nonetheless, we can express overall satisfaction with the performance of the Group in 2024.

Although sales revenue was slightly below the previous year's level, the Group achieved the second-highest revenue in its history. The performance remains remarkable when compared to the years preceding 2023. Furthermore, it is important to note that the weakening of the EUR/HUF exchange rate by over 7% in 2024 negatively impacted the euro-denominated revenue in Hungary. Taking this into account, it can be concluded that the company successfully maintained its sales performance.

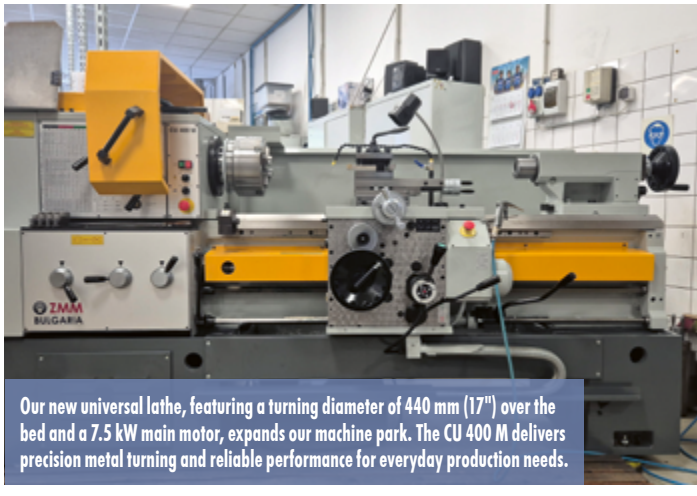


In terms of domestic operations, the composition of sales in Hungary continued to be dominated by NIVELCO's in-house manufactured instruments. In 2024, this segment grew by 2% in HUF terms. However, this growth was offset by a decrease in revenues from traded goods and office rental activities. Consequently, total sales revenue for NIVELCO Co. in HUF matched the 2023 level, while in EUR terms it was 4% lower. Our subsidiaries continue to represent a substantial share of the Group's revenues, contributing over 35% to the total. In 2024, the combined revenue of the subsidiaries declined by a modest 1.8% year-on-year, primarily due to reduced sales of traded goods. In Romania, revenues had seen an exceptional surge of 84% in 2023, largely driven by the sale of traded goods. This figure naturally normalized in 2024, resulting in a 29% year-on-year decrease in revenue at our Romanian subsidiary. Conversely, significant revenue growth at NIVELCO USA *(+42%)* and NIVELCO India *(+37%)* offset the decline in Romania. Our Greek subsidiary also returned to a growth trajectory in terms of commercial sales. Beyond our subsidiaries, export activities outside the Group expanded to 73 countries in 2024. Altogether, NIVELCO products were sold in 81 countries over the year.

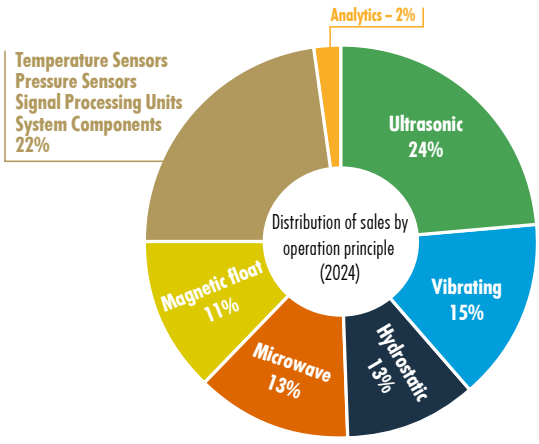
A consistent majority of the Group's revenue—approximately 82%—continues to originate from our own developed and manufactured products, a ratio that has remained stable in recent years. The market share of our PiloTREK W–200 80 GHz radar level transmitters continues to grow steadily. Product innovations implemented in previous years have further strengthened customer trust and industry recognition of NIVELCO's quality standards.

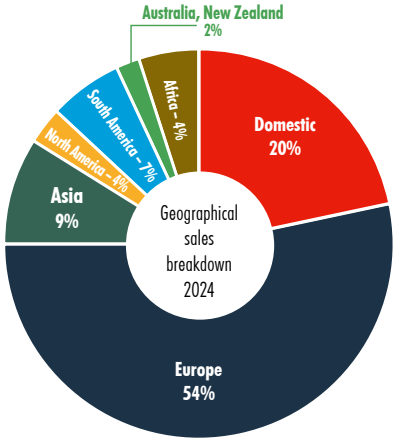
The remaining share of revenue, approximately 18%, is attributable to the sale of traded goods and the rental of office space at the NIVELCO headquarters. In 2024, the performance of both these supplementary revenue streams experienced a decline. Sales of traded goods decreased both at the individual country level and in the aggregate, while rental income from office leasing remained flat—despite maintaining an above-industry-average occupancy rate. As such, these ancillary activities had no significant impact on overall revenue performance.

As in previous years, 2024 proved to be an active year in the area of finance. Capitalizing on favorable EUR/HUF exchange rate movements, we secured foreign exchange hedging contracts covering the majority of the year. These transactions not only resulted in a net financial gain but also ensured



Our new universal lathe, featuring a turning diameter of 440 mm (17") over the bed and a 7.5 kW main motor, expands our machine park. The CU 400 M delivers precision metal turning and reliable performance for everyday production needs.





predictable EUR conversions required for salary payments. Towards the end of 2024, we successfully took advantage of another episode of currency market volatility, securing the necessary EUR conversions for monthly wage payments in the first half of 2025 at an average exchange rate of 419 HUF/EUR.

This has provided the company with additional profit while maintaining fixed-rate coverage. In the first half of the year, we refinanced our maturing loans under favorable terms, supporting the company's plans for stable and predictable operations in the coming years.

In September, we concluded our three-year R&D project, which received a total of ~EUR 370,000 *(HUF 150 million)* in government funding over its full duration.

Following the final settlement, the full amount of the approved funding was disbursed, confirming that the Hungarian government recognized the professional and appropriate use of the project resources. At the end of 2024, a new investment support opportunity became available. As part of this initiative, we plan to implement technological and energy efficiency upgrades—specifically including solar battery systems—amounting to ~EUR 542,000 *(HUF 220 million)*, with a funding intensity of 50%. The signing of the grant agreement is expected in the first half of 2025.

Taking a comprehensive view, the financial position of our company remains stable, supported by sufficient reserves to manage both foreseeable and unexpected challenges.

Although our financial results in 2024 did not reach the record levels of the previous year, the company remained profitable, and in HUF terms, performance was in line with the levels achieved in 2020/21.

Looking ahead, the primary challenge for 2025 and the years to come will be the continuous improvement of manufacturing and operational efficiency. Meeting the demands of an increasingly competitive market environment is essential to ensuring NIVELCO's continued growth and long-term success.

The total headcount of the Group's employees did not change significantly compared to the previous year. As of June 1, 2024, the *"NIVELCO Minimum Wage"* was introduced at the Hungarian headquarters. When combined with performance-based bonuses and other non-wage benefits, this minimum level of compensation has approached the national median income in Hungary.

As a result, even the lowest-paid employees at NIVELCO belong to the upper half of the income distribution in the country. Providing competitive compensation remains a key pillar in maintaining employee engagement, which is essential for efficient operations and ongoing development.

MonoCONT PDF–410: Our Latest Innovation Is Now Available

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In the previous issue of this NIVELCO Magazine, we provided an initial introduction to the **MonoCONT PDF–410**, a single-channel HART®-enabled smart field display & data logger, presenting it as a planned new product. I am delighted to share that since then, the MonoCONT has received manufacturing approval and is now available for order.

However, there have been some significant updates to the final product design compared to what we first showcased. With this in mind, I would like to take the opportunity to reintroduce our new MonoCONT. The range of MonoCONT variants has slightly shifted, so we will begin by examining it from that perspective.

The 2-wire version serves as an intelligent current-loop HART® data display. This loop-powered model boasts a voltage drop of less than 5 V across the full 4…20 mA current range, including the integrated HART® resistor. It is designed to seamlessly replace the older 2-wire UNICONT PDF–401 loop display, offering a modern upgrade for those familiar with the previous model.

PDF–410–2

Every MonoCONT variant comes equipped with a standard pulse output, which is galvanically isolated, polarity-independent, and capable of handling a load of 0.2 A at 30 V DC. This feature is especially useful for volume quantity counting in open channel flow measurement applications, for example, when using a **NICOUNT PCM–316** counter. However, the pulse output's versatility does not end there; it can also be configured for error signaling or to deliver control signals based on transmitted values, making it a flexible tool for various needs.

Moving up to the 3-wire version, you will find it takes functionality a step further with an advanced optional RS485 Modbus output, enabling seamless digital data transmission to PLCs *(programmable logic controllers)* or SCADA *(supervisory control and data acquisition)* systems. Through this Modbus interface, users can access not only the data sent by the transmitter but also read and program the MonoCONT's settings. For those using NIVELCO transmitters, there is an added benefit: the transmitter settings themselves become accessible via Modbus. It is worth mentioning that while many of the MonoCONT's functions work with transmitters from other manufacturers, the ability to program a transmitter through the MonoCONT remotely is exclusive to NIVELCO models.

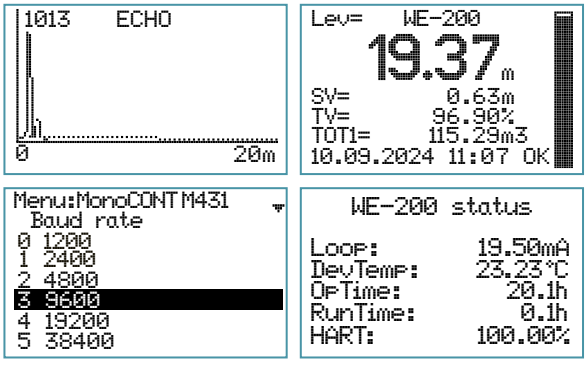
For those looking to capture and store data, an optional integrated data logger is available across all variants, complete with 4 MB of integrated flash memory. Depending on how it is configured, this memory can hold several months' worth of data, or even up to a year. Users have the freedom to decide which data points to log and how frequently, tailoring it to their specific needs. Two options are available for retrieving that data. Wired reading is possible via USB using the **SAT–506–1** eLink module, paired with the freely available **EView2** software. At the time of readout, you can choose to download the entire memory or just the new data accumulated since the last reading.

For the data logger-equipped variants, there is an extra perk included in the option package: a built-in Bluetooth® interface. This means the data logger memory can also be accessed wirelessly via Bluetooth®. Looking ahead, both **MobileEView** and **EView2** will support Bluetooth® reading, though this wireless capability is still in development and is planned to roll out later this year.

Meanwhile, the 4-wire 24 V DC version is still in development and will build on the features of the 3-wire version by adding a galvanically isolated DC power supply for the transmitter and an additional relay output to the standard pulse output. This second relay output will be fully programmable to perform control or fault signaling functions as required.Beyond that, a 100…240 V AC version of the 4-wire variant is also in development. This model will power the MonoCONT while also providing a galvanically isolated 24 V DC supply for the transmitter, and of course, it will include that extra relay output as well. Once complete, it will deliver a comprehensive solution for single transmitter-based applications.

Configure the perfect device for your application and request a quote today.

The MonoCONT truly shines as a local display for open channel flow measurements, thanks to its ability to show both the current flow rate *(FLOW)* and the totalized volume *(TOT)* simultaneously, and it includes the pulse output that is so often essential in these setups. Its graphical LCD display features six lines, with four lines dedicated to data display and a customizable bar graph for visualizing content. For added readability, you can opt to highlight the first one or two data lines in a larger font size—a small tweak that significantly improves readability.

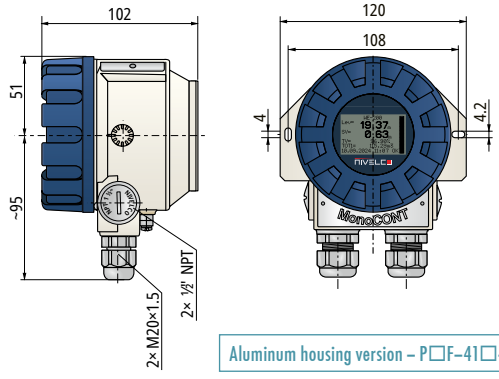


When it comes to commissioning and testing, the MonoCONT offers several advanced support features. For modern NIVELCO transmitters like the **PiloTREK W–200** 80 GHz radar, it can display the echo diagram and the list of detected echo peaks. Even the basic version offers 30 minutes of trend data visualization. Beyond that, a variety of information screens are at your fingertips, such as the transmitter's exact type code, serial number, software version, and a concise summary of the settings.

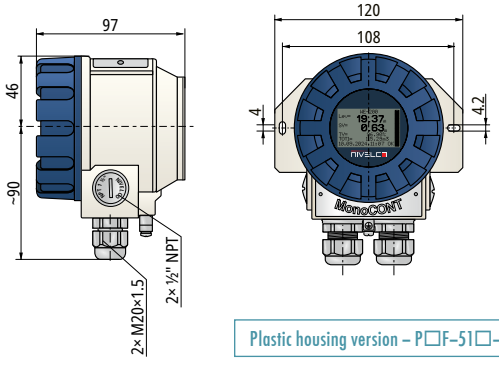
Programming connected NIVELCO transmitters is also available through the MonoCONT's 4-button interface and graphical LCD. For models like **PiloTREK**, **MicroTREK**, **EchoTREK**, and **EasyTREK**, remote configuration features full-text menu support, closely mirroring the transmitter's own display menu. Any error messages from the transmitter also appear in clear text. Other NIVELCO device families can also be remotely configured, much like with the MultiCONT, by entering parameter numbers and values. While remote configuration is not available for transmitters from other manufacturers, all other display and control functions of the MonoCONT remain fully operational.

Looking to the future, we have plans to secure explosion-proof ATEX certification for the MonoCONT within the year. This will include an intrinsically safe Ex ia IIC version and a flameproof Ex d IIB enclosure, broadening its reach into even more demanding environments.

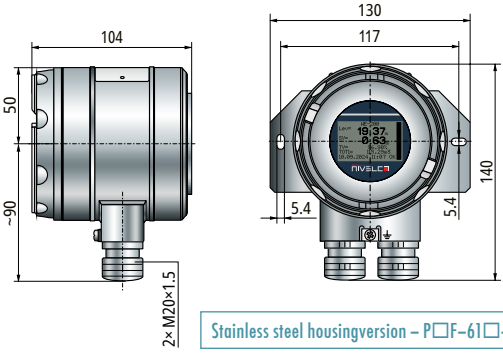
Outline drawings, dimensions *(mm)*



Aluminum housing version – P☐F–41☐–☐



Plastic housing version – P☐F–51☐–☐



Stainless steel housingversion – P☐F–61☐–☐

Partner Visits: Our Ongoing Commitment

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LANS NIVOTHERM B.V.

16 September 2024, The Netherlands

Lans Nivotherm, known as Nivotherm from earlier, is the Exclusive Distributor of NIVELCO in the Netherlands. They are also manufacturers and suppliers of a wide variety of measuring instruments.

The company was founded in 1956 in Groningen, as N.V. Instrumentenfabriek Lans. A few years later they moved to Rotterdam, after which they used the trade name Lans Instruments. Nivotherm Measuring and Control Equipment was added in 1986 as a sister company, a second operating company. In 1990 they became so big that they moved to a bigger building to Hendrik-Ido-Ambacht. In 2019, the two operating companies merged into Lans Nivotherm B.V.

There are 8 people working in the company: *Oscar Bijl* is the owner and managing director; *Eric Dam* and *Ronald van der Wel* make up the sales crew; *Linda Bakker and Brenda Schmidt* handle administration, logistics, and accounting; and three more people work in manufacturing and the calibration laboratory. In their workshop they check incoming devices, they also do repairs and calibrations at their site. They have a nice calibration laboratory which complements their other daily activities. They serve their customers with both standard and custom-made devices and solutions.

Lans Nivotherm believes that their company is a successful distributor of NIVELCO devices because they are flexible suppliers of process instrumentation in the field of level, pressure, temperature and flow measurements and they offer custom solutions to their customers.

During our meeting the sales team was present, so I had the opportunity to discuss sales results of Lans Nivotherm company, new developments at NIVELCO, Lans Nivotherm' s company structure, their mentality,

customer relations, operational methods and beliefs. In addition, we have talked about recent projects and future plans for sales and cooperation between Lans Nivotherm and NIVELCO.

We agreed that our goals are common and Lans Nivotherm and we at NIVELCO also believe that fast service, quality products, customer satisfaction are key elements for successful business.

Lans Nivotherm welcomes the Bluetooth® option in our PiloTREK 80 GHz radar level transmitters and the MobileEView application and they are looking forward to having more level transmitters with that option. They are also glad to hear about our intentions of developing our solar/battery powered versions.

They have also indicated a continuous demand for pre-programming transmitters before delivery to their customers. Downloading and uploading the same parameters to several devices is an important tool in the EView2 HART® configuration software and would be very useful in all platforms used for setting the parameters of the devices, including the local display and programming unit, the SAP–300.

They also believe that we should keep offering the Product Catalog on paper in the future too, as that is a very good way of introducing the NIVELCO products and the product portfolio to their customers.

From the Product Catalog the customer has an understanding of the wide selection of NIVELCO products and it is also a good way of finding the right product for the customers' applications. It is not only an excellent marketing tool but also a very good way of making a positive impression on the customer.
We have also discussed their ongoing projects. The possibility of offering the NIVISION visualization software for one of their projects has also come up during our meeting.
Oscar has also explained an application where the IBC storage containers were outside and rain could settle on top of them. Earlier they had difficulty measuring through the water layer and the top of the IBC container. They would like to know if the PiloTREK W–200 80 GHz non-contact radar level transmitters can now handle such applications.
We have completed a series of tests and it can be concluded that stable measurements of water-based liquids can be achieved with our new PiloTREK W–200 80 GHz non-contact radar level transmitters and they perform exceptionally well under such circumstances with using the new *"Threshold mask"*-ing feature or selecting the second Echo depending on the actual application parameters.
The PiloTREK W–200 80 GHz radar level transmitter with 1½" antenna was installed above the IBC container at a height of approximately 40…50 cm *(1.3…1.6 ft)*, so that the radiation axis of the radar is vertical. The IBC container should be tilted so that most of the water flows off. The surface of the liquid in the container stays horizontal. However, for outdoor applications, it is recommended to install protective covers above the measuring devices and containers. As Lans Nivotherm sells NIVELCO's NIVOMAG magnetic coupling level switches and NIVOPRESS N submersible hydrostatic level transmitters to marine applications they expressed the importance of having marine approvals for these devices for continuous sales. NIVELCO is already working on acquiring this certificate.
We have also discussed the current European and world economy situations, especially because of both of our companies experience a slow-down in 2024. They have also experienced the global economy growth after the COVID-19 pandemic but still face on-going challenges in 2024 due to the impact of the COVID-19 pandemic and the additional economy factors.
Fun fact: Lans Nivotherm has a big bell in their manufacturing facility which they ring every time when a nice order arrives to them to share the good news with all their employees.

> *I would like to thank everyone at Lans Nivotherm for their warm welcome and for Oscar and his wife for the special lunch in a nearby restaurant.*

RETEC INSTRUMENTS NV

17 September 2024, Belgium

RETEC Instruments NV is a Belgian company offering specialized measuring devices and expertise for industrial applications in the fields of level, pressure, flow, and temperature measurement. Their services include providing measurement solutions tailored to various applications and sectors, as well as pre- and post-installation technical advice and support.
The company has six employees: *David Vervaele*, the owner and managing director; *Martin Koch*, *Dersou De Moor*, *Stefaan Van Durme*, and *Koenraad De Can* in sales; and *Sabine Dierickx*, who is responsible for administration and logistics.
The company has specialized for over 20 years in

supplying custom-made measuring devices for industrial applications, particularly for level, flow, pressure, and temperature measurement. Their expert team provides technical advice and support during and after installation. RETEC Instruments is committed to meeting customers' expectations and offering the best solution for every application. To achieve this, they build trusting, long-term relationships with their customers, offer complete and customized solutions, and demonstrate great creativity in problem-solving. They are fully aware that level measurement is crucial at all industrial sites. They believe that a correctly selected, reliably functioning, and properly installed and set device is vital for the entire process to run smoothly. That is why they make sure to fully understand the customer's request and all the details of the requirements. They know that finding the right product for each application requires a personal approach, and they go the extra mile.
RETEC Instruments adapts easily and quickly to each situation and contacts the customer within 24 hours.
During our meeting, the sales team was present, so I had the opportunity to learn about the company, its structure, and its ways of working in the Belgian market. We also discussed the sales results of this year and previous years.
They were very enthusiastic to hear about the recent and planned new developments at NIVELCO. In addition, we also talked about ongoing projects and their future sales plans. We also found that both companies believe fast delivery, product quality, and customer satisfaction are all vital for continuous success. They also consider the Bluetooth® option in our PiloTREK 80 GHz radar level transmitters and the MobileEView application important additions to our product selection. Being able to load parameters set in one device to another is also an important feature for RETEC Instruments.
NIVELCO is already working on this option and plans to release the newest MobileEView app with such a feature.

> *I would like to thank David and all members of RETEC Instruments for their warm welcome, the special lunch organized for this event in the company's garden, and the very nice tour led by David in Ghent, with historical facts, local legends, and personal anecdotes.*

C2PLUS

17 September 2024, Belgium

Founded 15 years ago, C2Plus is continuously developing. They have recently moved to a very nice new office. Renowned for the quality of the products they distribute, the reliability of their solutions, and their ability to develop customized applications, C2Plus offers a wide range of instruments in the field of measurement for industrial process or water treatment applications.
There are six people working at C2Plus. *Christophe Carreira* is the owner and managing director of the company, *Anna Delmotte* is his assistant, *Yvon Dunocq* and *Mathis Glinatsis* are involved in service on customers' sites, *Cécile* is responsible for marketing, and *Pascale Fruchart* handles administrative work.
From the beginning of a project to its completion,

C2Plus applies its expertise to serve its customers by providing them with unparalleled service, measurement solutions, and the possibility of continuous monitoring of measurements.
C2Plus offers a very wide range of NIVELCO products to their customers in France, including level transmitters, level switches, temperature and pressure transmitters, and analytical transmitters complete with process controllers.
C2Plus' service begins when customers contact them for the first time. It continues throughout handling the customers' requests, starting from the preparation of the offer to processing their orders. C2Plus also offers commissioning on site when it is required by the customer.
They also support customers during installation operations, and it is their priority to always resolve any problems, whether in person on site or by guiding customers remotely. They also offer training for their customers' staff when needed and share their know-how and expertise in instrumentation with the customer.
During our meeting, we discussed the structure of the companies, how many employees are involved in which departments in the sales of NIVELCO products and in supporting C2Plus, and who the contact people are within C2Plus and NIVELCO.
C2Plus was very interested in having the Selector software with prices in the future, as that would give them more flexibility for ordering NIVELCO devices. Christophe also explained that C2Plus is going to implement new software that would also handle orders, and orders could be sent from that software to NIVELCO in the future.
Our next point on the agenda was to talk about C2Plus's experiences with our new products. The PiloTREK W–200 series, the 80 GHz radar level transmitters, are welcomed by C2Plus. We also covered other areas of sales during our discussions.
We also discussed areas where NIVELCO can develop to aid the sales of NIVELCO products in France and meet customer requirements. During the meeting, we discussed in detail how C2Plus and NIVELCO are developing and what the visions of both companies are. Ways and possibilities for potential growth and innovation in France with the NIVELCO products were also discussed in detail. We defined clear expectations, responsibilities, and business goals. As a result of the discussions started at C2Plus, the business relationship between C2Plus and NIVELCO was further strengthened to achieve considerable growth in sales in the French market.

> *I would like to extend my special thanks to Christophe and everyone in the C2Plus team for the warm welcome. I really appreciate their attention to the smallest details in their welcome, the special dinner, and the sightseeing tour.*

DETECT Asia:
A Leader in Water and Process Control Solutions

KISHAN CHANDRASEKARA
Area Manager – APAC

DETECT Group
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Established in Sri Lanka in the late 2015, DETECT Asia (Pvt) Ltd. serves as the Asia-Pacific (APAC) regional hub for the DETECT Group under the leadership of Managing Director Kishan Chandrasekara, who also holds the position of Area Manager – APAC for the DETECT Group.

The second phase of the technical training program on *"Leak Detection, Leak Location, and Conditional Assessment of Pipelines for Reduction of NRW"* for the National Water Supply & Drainage Board *(NWSDB)*, Sri Lanka, was held from January 16th to 21st, 2025, in Colombo. This phase was organized under the Institutional Development and Capacity Building Program, which is administered by the Asian Development Bank *(ADB)*.

DETECT Asia (Pvt) Ltd. is a key entity within the Group, a globally recognized service provider specializing in the water sector. Renowned for its expertise in *'Water Supply Network Management'*, particularly in drinking water distribution, DETECT also offers comprehensive services across wastewater, stormwater, irrigation, agriculture, energy, and industrial sectors.
As an authorized distributor in Sri Lanka, DETECT Asia represents esteemed global manufacturers specializing in measurement instrumentation, data telemetry, process control instrumentation, SCADA solutions, and more. The company is authorized to sell various products and solutions, provide after-sales support, submit quotations and tenders, offer technical clarifications, assist with installation and commissioning, deliver training services, and troubleshoot technical issues. DETECT Asia supplies high-quality instrumentation and related services to multiple industries, including water and wastewater, HVAC, food and beverage, and general industries.

DETECT Asia Provides Its Customers With an Outstanding Level of Service and Technical Expertise

With a team of highly skilled and well-trained technical professionals, some of whom have received direct training at manufacturers' facilities, DETECT Asia ensures top-tier service and technical expertise for its customers.
In 2024, DETECT Asia (Pvt) Ltd. expanded its operations by collaborating with industrial service providers in Bangladesh.
This expansion focused on providing continuous technical support, bridging the gap between diverse end-customer requirements and tailored solutions. As a result, DETECT Asia also represents some of its manufacturers in Bangladesh. The company is dedicated to identifying the most suitable products for each client's specific needs, ensuring optimal performance and reliability.
DETECT Asia also provides comprehensive after-sales support, including troubleshooting and training services, to maximize customer satisfaction. By maintaining close relationships with both manufacturers and end users, DETECT Asia is able to deliver innovative and customized solutions across the Asia-Pacific region.
The strategic partnership between NIVELCO and DETECT Asia aims to deliver customized process control instrumentation solutions to industrial clients in both Sri Lanka and Bangladesh. Notably, level monitoring solutions for water treatment plants have already received recognition from Sri Lanka's national water utility, the National Water Supply & Drainage Board.
Looking ahead, DETECT Asia anticipates significant opportunities in the process control sector across various industries in Sri Lanka & Bangladesh, fostering mutual growth and benefits for both NIVELCO and DETECT Asia.

Three Decades of Commitment

The Career Journey of András Gengelicki, Facility Manager at NIVELCO Co.

ANDRÁS GENGELICKI
Operational Manager

NIVELCO Co.
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– My name is András Gengelicki, and I am the Facility Manager at NIVELCO Co. With 30 years of experience at the company, I am pleased to share the story of my professional journey, the scope of my responsibilities, and the reasons behind my long-standing loyalty to both the company and its leadership.

The Beginnings

– I began my career at NIVELCO Co. in 1995. At that time, I responded to a job advertisement, and despite not knowing the company well, I was immediately impressed by its progressive approach and commitment during the interview process. Fortunately, I quickly adapted to the company environment, thanks to the supportive colleagues and cohesive team.

My Role at the Company

– As Facility Manager, I oversee a broad range of responsibilities that ensure the seamless and efficient operation of our office building and manufacturing facilities. Among my key duties are managing workplace safety and fire protection protocols, which are critical to maintaining a secure work environment.

– I am also tasked with managing investments on the company premises, including procurement, project coordination, and supervising project execution to ensure that all developments meet the highest quality standards.

– To ensure the efficient operation of our office and production facilities, I manage the maintenance and operational tasks, oversee the security systems, and ensure the quality of cleaning services. Additionally, I am responsible for preparing tenant agreements and addressing tenant needs, as maintaining tenant satisfaction and fostering long-term relationships are vital priorities for us.

– Energy management is a crucial aspect of my role, with a particular focus on optimizing energy consumption and advancing our sustainability objectives. To achieve this, I work closely with suppliers and energy specialists to ensure we implement the most up-to-date solutions.

– Throughout my work, I frequently collaborate with various authorities, whether in the areas of occupational safety, fire protection, or architectural compliance. This is essential to ensure that our buildings meet all regulatory requirements and provide a safe environment for both tenants and employees.

– This dynamic role is not only challenging but also highly motivating, as each day presents new opportunities for professional growth and innovation.

– Over the years, the work environment has continuously evolved to meet modern business needs and sustainability expectations. What once relied on paper-based processes is now increasingly supported by digital systems that facilitate more efficient operations.

– At NIVELCO Co., we place a strong emphasis on energy efficiency and environmental responsibility across both our office and manufacturing facilities. We have incorporated cutting-edge technologies, such as heat pumps and photovoltaic panels *(solar panels)*, which provide a significant portion of our electricity from renewable sources. Furthermore, we are planning to install a 600 kW battery storage system, which will enhance both our energy efficiency and flexibility in energy usage.

– Additionally, we have implemented a centrally controlled heating and cooling system in our buildings, which not only ensures a comfortable working environment but also results in substantial cost savings. These advancements not only contribute to the sustainability of the building but also support the satisfaction of our tenants and employees.

– At NIVELCO Co., we continuously strive to apply the most advanced technologies while remaining steadfast in our commitment to the environment. I am proud to contribute to these transformative changes and to the ongoing development of the company.
Introducing the NIVELCO Trade Center

– The NIVELCO Trade Center is more than just a typical office building. It represents a convergence of modern business practices, sustainable solutions, and high-quality services. The building's design and state-of-the-art infrastructure offer an exceptional working environment for our tenants.

– We have also upgraded our dining facilities: the office building's cafeteria has been redesigned to offer a modern, comfortable atmosphere with an expanded menu for our employees. Our goal is for tenants to view our office building as a long-term business location, as ongoing improvements and high-quality services ensure their satisfaction.

It is no coincidence that the occupancy rate of the office building continues to rise. The innovative solutions available here, coupled with outstanding services, make the NIVELCO Trade Center a prestigious and desirable choice.

Memorable Moments

The most memorable moments in my career are those when a significant project successfully comes to fruition. A particular highlight was the commissioning of the first units of our solar power system, which marked a major milestone in the company's energy development initiatives.

Leisure Activities

Beyond my professional life, it is essential for me to recharge during my free time. I enjoy activities such as hiking, sports, and gardening, which help me return to my work with renewed energy and focus.

Summary

Over the 30 years I have spent at NIVELCO Co., I have experienced significant personal and professional growth. The company's constant commitment to development and supportive working environment has enabled me to continually set new goals and achieve greater success.

From Mechanic to Group Leader

Interview with Tibor Sípos Szabó, Group Leader of the Mechanical Department

BENJAMIN SZŐLLŐS
Regional Manager

NIVELCO Co.
benji@nivelco.com

– When did you join NIVELCO, and how did you become a member of our company?

– I spent seven years at my previous position with a small family-owned business, where I worked in a cramped environment filled with machines, solely responsible for the mechanical aspects of devices. During this period, neither did the working conditions nor the financial situation improve. After the birth of my younger daughter, I realized that a career change was necessary. A former colleague informed me that NIVELCO was hiring, and after careful consideration, I applied and was hired as a mechanic. The transition was a significant change; the work environment was clean and professional, and the colleagues were welcoming and supportive.

Anno…

– How do you remember the beginning?

– At the time, only five of us were working as mechanics. I distinctly remember my first salary, and it reinforced that my decision to change jobs was the right one. I spent six years working as a mechanic before being appointed as the Group Leader of the Mechanical Department, an honor I deeply appreciated. The new role came with considerable challenges, and it was not uncommon for me to stay late to ensure that all tasks were completed thoroughly and on time.

– Could you tell us in more detail about your job title and responsibilities at the company?

– As Group Leader, my responsibilities include organizing production, assigning tasks tailored to individual team members, ensuring that the required materials, components, and tools are available, and documenting work processes in the TIR system. The core objective of my role is to ensure that all tasks are completed within deadlines and to the highest quality standards.

– What changes have you experienced in your working conditions over the years?

– Over time, our company's workforce has significantly expanded due to continuous growth and an increasing demand for our services. Our facilities have been fully modernized to meet the demands of a contemporary work environment, ensuring that our employees benefit from optimal conditions. This enables us to perform our tasks more efficiently and with greater precision.

…and today.

– Why have you decided to remain a loyal employee for such a long time?

– I have remained with NIVELCO because I am part of a cohesive, supportive team that addresses challenges in a collaborative and friendly manner. The respect every employee feels is fundamental to shaping our strong sense of community. This supportive work environment is one of the most valuable aspects of our company, and it motivates me to continue contributing to its success.

– What activities do you like to do in your spare time?

– In my free time, I prioritize staying active. I enjoy hiking and exploring nature, and I regularly organize family outings. Rowing is another passion of mine, as it provides a refreshing way to connect to nature and to be on the water. In the winter, skiing is my favorite activity, and I relish the opportunity to spend time in the snow-covered mountains. Additionally, I have long been interested in caving, as I enjoy exploring the underground world. These activities help me recharge and maintain a healthy work-life balance.

How AI Has Transformed Our Daily Workplace Routines

KAREL ŠEVČÍK
Sales Engineer

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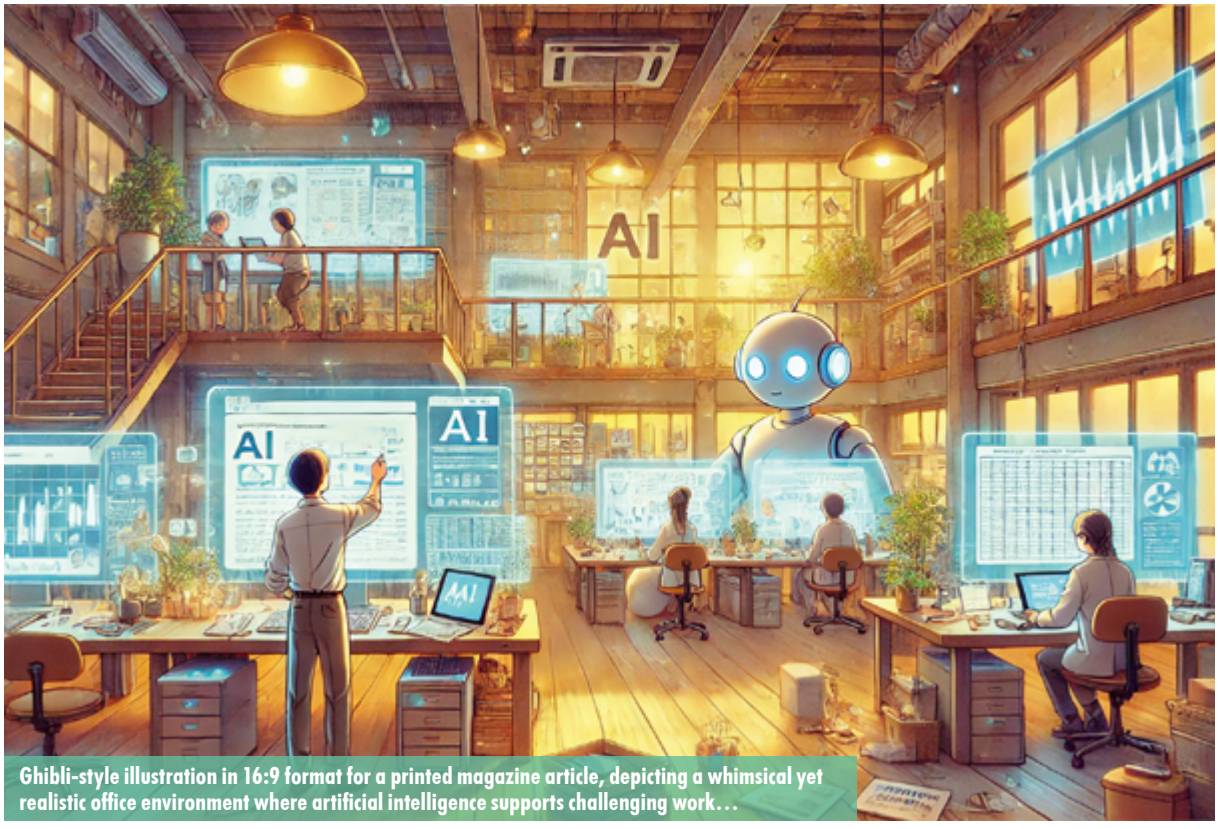
In this article, I would like to describe how AI *(Artificial Intelligence)* has completely changed the game for those of us working in the process instrumentation industry, especially in the office, and how it helps me with my daily tasks—hoping to inspire you with practical ways to integrate it into your work.



Ghibli-style illustration in 16:9 format for a printed magazine article, depicting a whimsical yet realistic office environment where artificial intelligence supports challenging work…

Enhancing Written Communication

The most crucial part of my daily work is written communication with colleagues or clients. I often draft complex emails covering ongoing business cases, research, and strategy. However, the most frequent and demanding are highly technical emails, which require a precise understanding of the situation and a clear, well-structured message to convey the purpose effectively.

Having been in this industry for 15 years, AI is still an essential tool for refining my emails. It helps me craft better phrasing, ensuring my messages are concise yet comprehensive. Additionally, artificial intelligence plays a crucial role in ensuring the technical accuracy of my content by cross-referencing industry standards and suggesting alternative ways to present complex data in a more digestible format.

Breaking Language Barriers

Another major advantage of AI is its ability to translate text into multiple languages with remarkable accuracy. I can quickly translate technical documents, emails, and reports to and from any language, ensuring seamless communication with international colleagues. Even more impressively, AI allows for translation without manual typing—simply by uploading an image of the text, such as an excerpt from a manual or a product specification sheet.

Improved Search

Will this material withstand an acidic environment? What is the relative permittivity of LPG? What is the boiling point of liquid ammonia at 4 bar pressure? Before AI, answering these questions with confidence required me to search through scattered charts and tables across the internet where I often encountered inconsistent data.

Now, answers can be obtained within seconds, and AI not only provides sources but enables meaningful discussion about these technical queries. Of course, relying on AI-provided data carries some risk, but similar uncertainties exist with the previous method.

Mastering Software

AI has become my go-to assistant for many of the software tools I use. In Excel, it helps me with complex formulas. In Word, it ensures my documents look professional and consistent. In graphics software like Inkscape, it guides me in making the edits I need.

Writing Scripts Without the Headache

There will always be limitations to the ERP (*Enterprise resource planning*) systems we use to analyze company data. *You might be able to see a profit margin for a product or specific product family, but what happens when you need to add additional filters, such as a precise geographical point like a county, or you need to exclude certain customers from your analysis?* In the past, these very specific filtering requirements meant having to track down an expert in programming languages to tailor a custom script for your data analysis needs. This created bottlenecks in workflow, added expense, and meant delays in getting the insights you needed to make timely business decisions.

Now, with AI, this entire process can be streamlined based on just a few clear prompts. You can describe exactly what you need in plain language.

The best part is that these scripts can be modified further as your needs evolve.

Need to change the date range? Add another filter? Compare against a different metric? You can simply ask the AI to modify the existing script rather than starting from scratch or waiting for IT support. This iterative

capability means your data analysis can be as dynamic as your business requirements.

For those of us who understand the basics of data analysis but lack deep programming expertise, this democratizes access to custom data insights and puts the power of advanced analytics directly in the hands of decision-makers.

Other Cool Stuff

- I regularly upload wiring schematics to verify my understanding before implementation, saving countless potential errors;
- Instead of skimming through 200-page equipment manuals, I upload them and ask specific questions about operation procedures;
- When searching for suppliers, I can use highly specific queries. For example, I can search for *"the top three manufacturers of inductive flow meters with ATEX certification that ship to Czechia";*
- I've started comparing multiple vendor datasheets simultaneously to identify the best match for our requirements;
- When preparing presentations for non-technical stakeholders, I use AI to transform complex technical specifications into accessible language.

SUMMARY

Looking back on how AI has transformed my daily work in process instrumentation, I'm struck by how quickly it's become indispensable. It hasn't replaced my expertise or experience—instead, it's amplified my capabilities and removed countless obstacles from my workflow. As I look to the future, I'm excited to discover new ways to integrate AI. For anyone in a technical field still hesitating to embrace these tools, I can only offer my personal experience: AI hasn't diminished my role—it's made me more effective.

LevelBOY, the Level Measurement Expert

From Seed to Solution: The Next Chapter in Vegetable Oil Processing

STORY BY ANDRÁS KÁLMÁN
Technical Consultant

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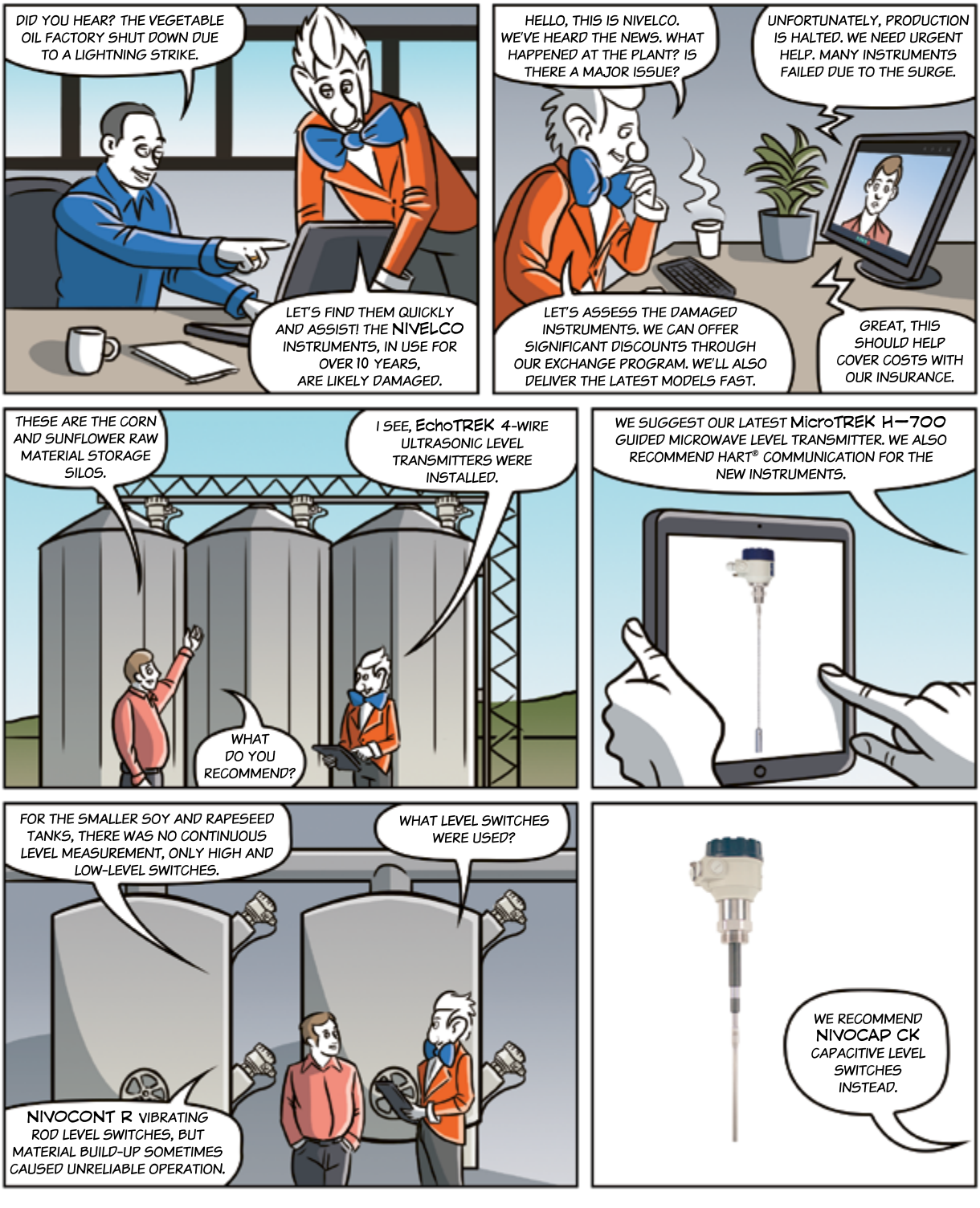

***ART BY* PÉTER SZEBENI**
Marketing Engineer

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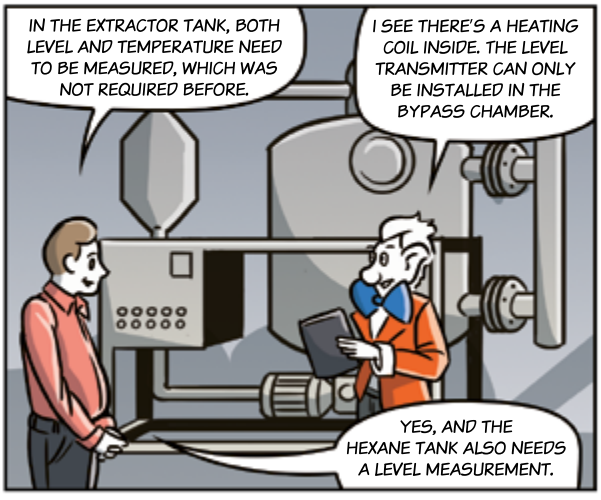
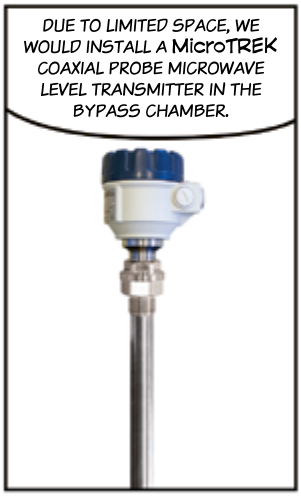
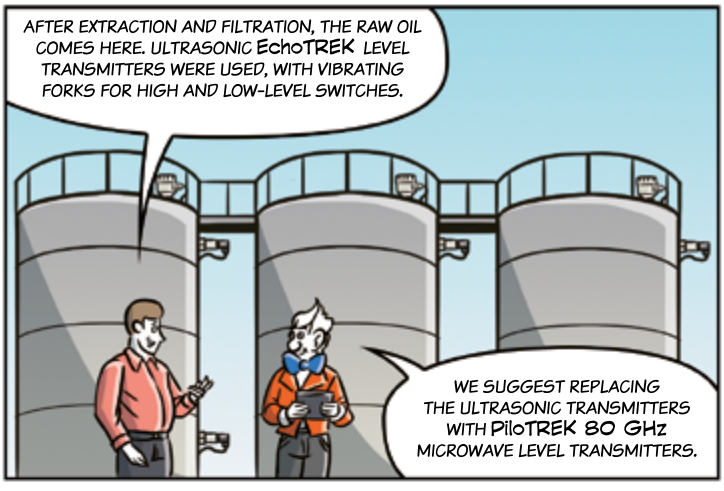
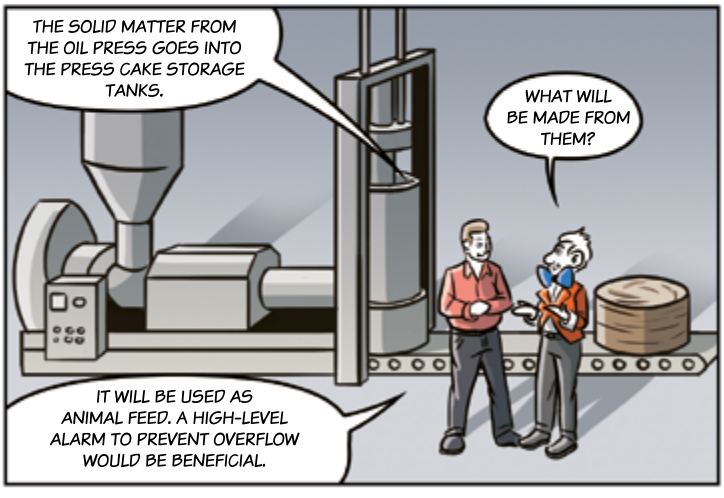
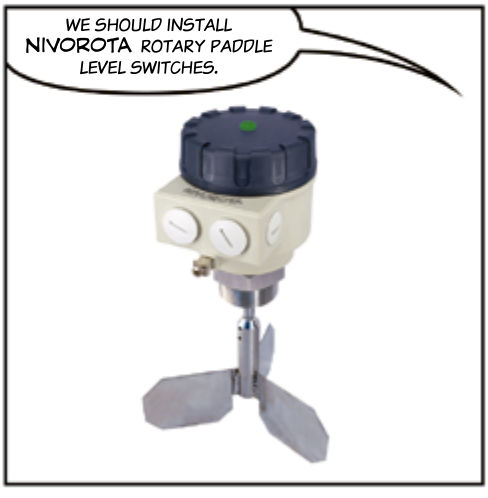
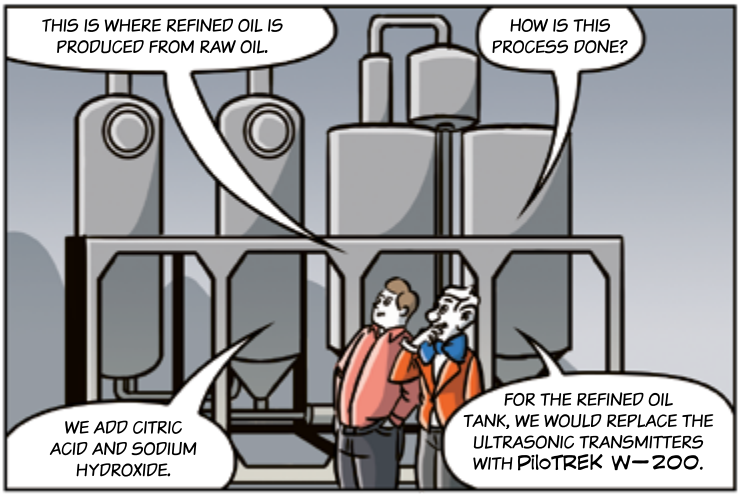


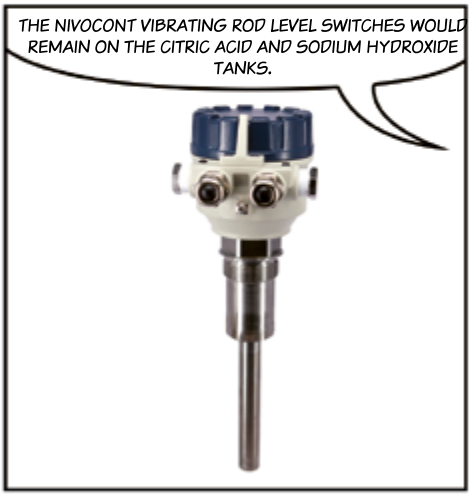


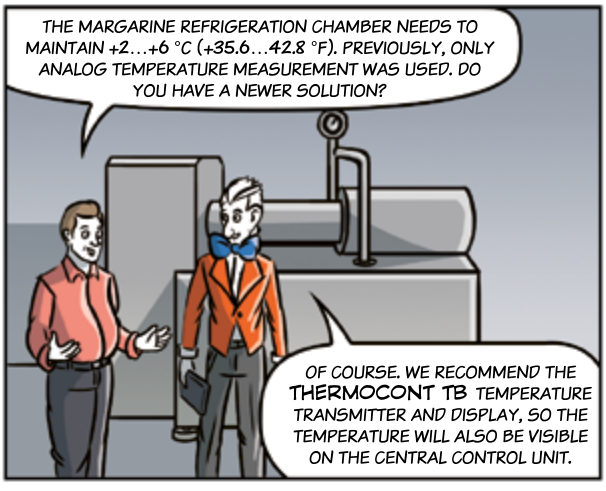


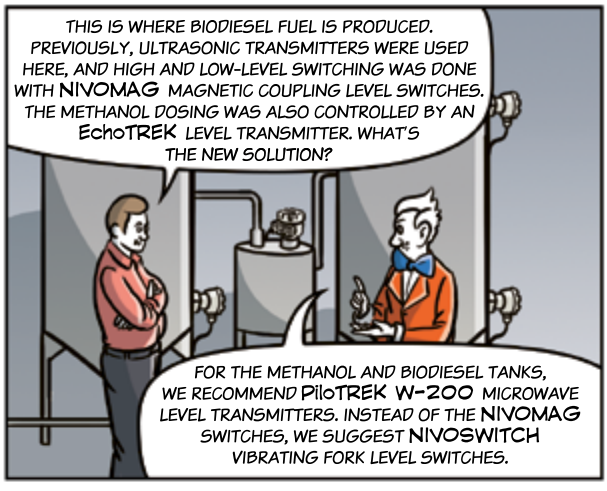


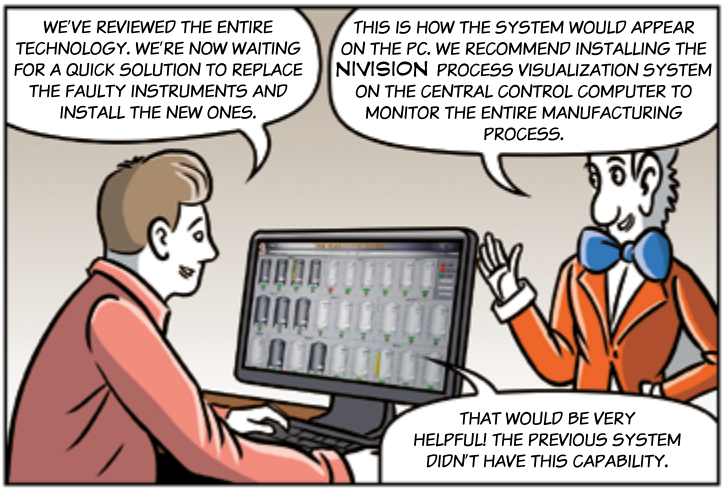


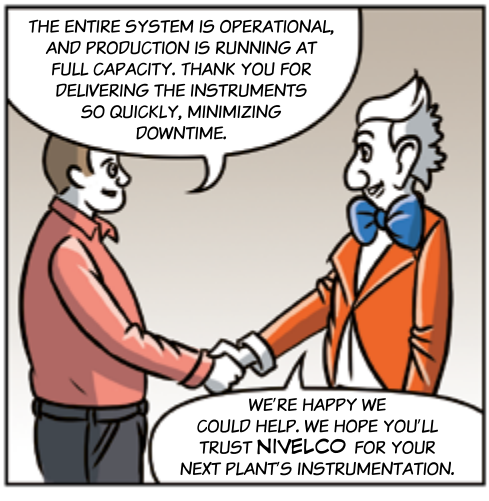

THIS IS WHERE REFINED OIL IS PRODUCED FROM RAW OIL.
HOW IS THIS PROCESS DONE?
WE ADD CITRIC ACID AND SODIUM HYDROXIDE.
FOR THE REFINED OIL TANK, WE WOULD REPLACE THE ULTRASONIC TRANSMITTERS WITH PILOTREK W-200.


THE NIVOCONT VIBRATING ROD LEVEL SWITCHES WOULD REMAIN ON THE CITRIC ACID AND SODIUM HYDROXIDE TANKS.


THE MARGARINE REFRIGERATION CHAMBER NEEDS TO MAINTAIN +2…+6 °C (+35.6…42.8 °F). PREVIOUSLY, ONLY ANALOG TEMPERATURE MEASUREMENT WAS USED. DO YOU HAVE A NEWER SOLUTION?
OF COURSE. WE RECOMMEND THE THERMOCONT TB TEMPERATURE TRANSMITTER AND DISPLAY, SO THE TEMPERATURE WILL ALSO BE VISIBLE ON THE CENTRAL CONTROL UNIT.


THIS IS WHERE BIODIESEL FUEL IS PRODUCED. PREVIOUSLY, ULTRASONIC TRANSMITTERS WERE USED HERE, AND HIGH AND LOW-LEVEL SWITCHING WAS DONE WITH NIVOMAG MAGNETIC COUPLING LEVEL SWITCHES. THE METHANOL DOSING WAS ALSO CONTROLLED BY AN ECHOTREK LEVEL TRANSMITTER. WHAT'S THE NEW SOLUTION?
FOR THE METHANOL AND BIODIESEL TANKS, WE RECOMMEND PILOTREK W-200 MICROWAVE LEVEL TRANSMITTERS. INSTEAD OF THE NIVOMAG SWITCHES, WE SUGGEST NIVOSWITCH VIBRATING FORK LEVEL SWITCHES.


WE'VE REVIEWED THE ENTIRE TECHNOLOGY. WE'RE NOW WAITING FOR A QUICK SOLUTION TO REPLACE THE FAULTY INSTRUMENTS AND INSTALL THE NEW ONES.
THIS IS HOW THE SYSTEM WOULD APPEAR ON THE PC. WE RECOMMEND INSTALLING THE NIVISION PROCESS VISUALIZATION SYSTEM ON THE CENTRAL CONTROL COMPUTER TO MONITOR THE ENTIRE MANUFACTURING PROCESS.
THAT WOULD BE VERY HELPFUL! THE PREVIOUS SYSTEM DIDN'T HAVE THIS CAPABILITY.


THE ENTIRE SYSTEM IS OPERATIONAL, AND PRODUCTION IS RUNNING AT FULL CAPACITY. THANK YOU FOR DELIVERING THE INSTRUMENTS SO QUICKLY, MINIMIZING DOWNTIME.
WE'RE HAPPY WE COULD HELP. WE HOPE YOU'LL TRUST NIVELCO FOR YOUR NEXT PLANT'S INSTRUMENTATION.

Fuel Level Measurement with NIVOTRACK Level Transmitter

Budapest Sewage Works Pte Ltd. (Fővárosi Csatornázási Művek Zrt.)

PÉTER FÜLEP
Regional Representative

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An integral member of the organizations ensuring the smooth operation of the capital is Budapest Sewage Works Pte Ltd., which is responsible for the maintenance and operation of the city's sewerage system. The company operates a diverse fleet of vehicles, including lorries, cars, and specialized equipment at various sites, and, similar to other service providers, utilizes its own fueling stations.

At the South Pest site, the Budapest Sewage Works uses NIVELCO devices at the filling station to ensure accurate and efficient operation.

Fuel Level Measurement with NIVOTRACK

The fuel dispenser, which provides a precise, certified fuel consumption record down to the deciliter, is integrated with a supervisory system that enables the operator to track fuel usage in real time. This automated system also offers alerts to prevent the fuel tank from running dry, ensuring timely fuel delivery orders and helping to identify potential instances of misuse.
Drivers simply swipe their magnetic cards to refuel according to their authorized access, and the system automatically registers their vehicle's fuel requirements. This data is then stored and processed in the central database. The solution's two key components are the NIVOTRACK MTA–518–7 Ex explosion-proof magnetostrictive level transmitter, which monitors fuel level changes with an accuracy of 0.1 mm *(0.004")*, and the MultiCONT multi-channel process controller and signal processor, which displays the level transmitter data and converts it into RS485 Modbus

Displaying and Transmitting Measurement Data with MultiCONT

format for the control system. These devices ensure that fuel consumption data can be evaluated at any time and even retrieved for several years. The installation and periodic inspections of the system are conducted by our partner, Petrol Kft.

NIVELCO Units in Coupling Manufacturing

Hydrochloric Acid Measurement with Ultrasonic Level Transmitter

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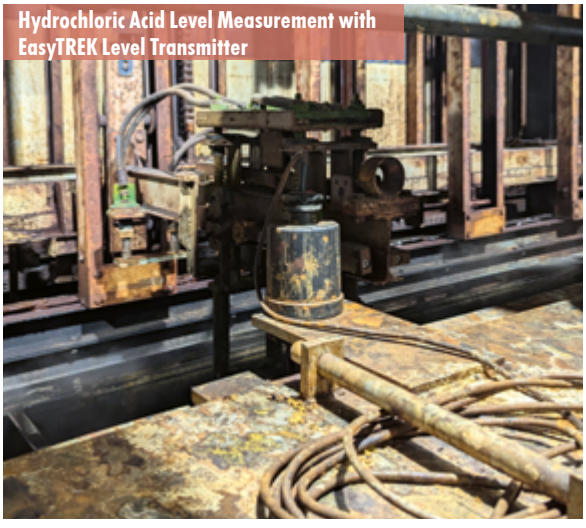
The D.-B. Coupling Manufacturing Ltd. was established in Tatabánya in 1993 and has since developed into a significant international group of companies. The company specializes in manufacturing and selling friction clutch mechanisms and inserts. These components play a key role in the efficient power transmission of traditional internal combustion engines, hybrid and plug-in hybrid systems, and battery electric vehicles, optimizing the performance of their current and future electric motors. The components they manufacture can be found in products from companies such as Mercedes, BMW, Porsche, Lexus, Subaru, Honda, Nissan, and Mazda.

NIVELCO products have already proven popular with the company's technical specialists. **EasyTREK** integrated ultrasonic level transmitters are used in many pre-treatment process tanks, and **THERMOCONT TSP** encapsulated temperature sensors help control the level and temperature of various chemical baths in which pre-treated components are immersed using robust machinery.



Hydrochloric Acid Level Measurement with EasyTREK Level Transmitter

Level measurement in the new hydrochloric acid tanks posed the biggest challenge. Hydrochloric acid is an extremely aggressive substance, and its vapors are harmful not only inside the tank but also in the surrounding area—this is well illustrated by the safety exhaust system shown in one of the pictures. Therefore, it is essential to avoid the use of metal components and to use only devices that feature not only a plastic-coated housing but also a fully plastic-coated sensor.

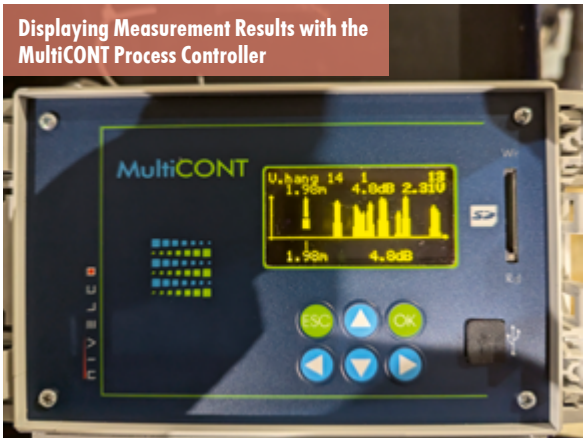
NIVELCO's **EasyTREK SPB–360–4** integrated ultrasonic level transmitter was the ideal choice, as it is made of PVDF, a material perfectly suited to such an environment. The task was to continuously monitor the level of two hydrochloric acid storage tanks approximately 2 m *(6.6 ft)* high.

The hydrochloric acid concentration reaches the critical level of 37%, which also leads to strong evaporation, so the instrument with a 10 m *(33 ft)* measuring range and 60 kHz operating frequency was chosen to ensure sufficient gain reserve. Furthermore, the choice of the integrated instrument was also motivated by the fact that, due to the limited space under

EasyTREK Ultrasonic Level Transmitter and THERMOCONT TSP Encapsulated Temperature Sensor

the exhaust system, it would have been impossible to connect the wires of a compact instrument or to read its display. In contrast, the integrated unit fits easily, and the wiring can be conveniently placed.

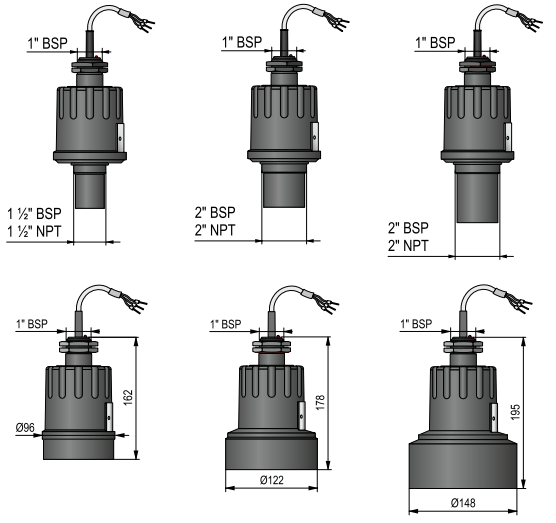
Displaying Measurement Results with the MultiCONT Process Controller



The level transmitter faced an additional challenge in that the tops of the tanks were fitted with flanged closures and high risers into which the transmitters were installed. This was easily overcome during commissioning by setting the correct parameters. The technology is operated using the 4…20 mA output signals from the instruments, which also provide the necessary signals for replenishment.

EasyTREK SP-300

Ultrasonic Integrated Level Transmitters for Liquids



EasyTREK high-performance level transmitters embody more than four decades of NIVELCO's experience in ultrasonic level measurement. Whether measuring the level of sump tanks or open-channel flows, **EasyTREK** transmitters are the best choice. Installed on the tank's roof or above the liquid's surface, the transmitter produces an analog signal proportional to the liquid's level, transmitted via HART®.

FEATURES

- 2-wire integrated level transmitter
- Non-contact level measurement
- Maximum 25 m (82 feet) measuring range
- Narrow (5°) beam angle
- Full temperature compensation
- IP68
- HART® communication
- Ex versions

APPLICATIONS

- For most liquids, including flammable liquids
- Open-channel flow metering
- Wide application area from wastewater to aggressive chemicals
- Level measurement in basins, wells, sumps, lift-stations
- Measuring hydrocarbons, acids, aggressive liquids, any water-based mediums

CERTIFICATES

- ATEX (Ex ia G)
- INMETRO (Ex ia G)
- EAC Ex (Ex ia G)

NIVOPOINT in the Field of Pharmaceutical Technology

Scrubber Filtration Technology

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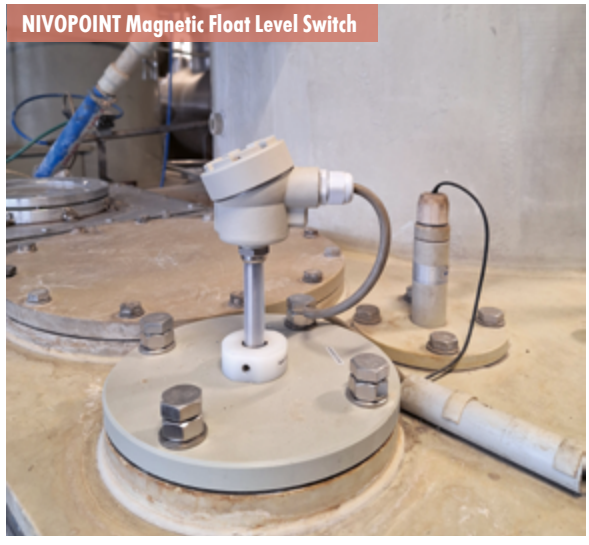
A highly regarded component of NIVELCO's extensive product portfolio is the NIVOPOINT magnetic float level switch family. Its application within the pharmaceutical industry has proven successful, as demonstrated by the following case study.

As an intriguing fact—one that many may not be aware of—fermentation is a biochemical process in which microorganisms such as bacteria, yeasts, and molds break down organic substances, particularly sugars, to extract energy. Fermentation occurs under anaerobic conditions, meaning in the absence of oxygen, and plays a pivotal role in various industrial, food, and pharmaceutical applications.

Level Switching of the Scrubber Tower Feedwater Tank with NIVOPOINT

The probiotics produced during fermentation, including lactic acid bacteria, contribute to maintaining a healthy balance of gut flora and improving digestion. These beneficial microorganisms help reduce inflammation, strengthen the intestinal lining, and offer protection against certain diseases, making them invaluable in pharmaceutical products.

One of our pharmaceutical partners in Budapest utilizes this technology to manufacture several of their products, incorporating NIVELCO instruments in the process. Specifically, these instruments play a critical role in preventing the release of odorous vapors—by-products of fermentation—into the atmosphere. The generated gases are directed into a wet scrubber column, where harmful molecules are removed through scrubbing technology. Water from a feedwater reservoir is injected into the column, falling as



NIVOPOINT Magnetic Float Level Switch

dense rain onto the rising gas. The water droplets capture the undesirable particles, allowing only purified air to flow toward the exhaust. The trapped contaminants circulate in a closed loop until they accumulate to a level that requires cleaning of the scrubber water. The NIVOPOINT MPR–208–3 float-magnetic level switches, installed at the base of the scrubber unit, signal when this level has been reached. The instrument's output—providing both lower and upper-level indications—is processed by the central control system and relayed to the operator, alerting them to prepare for scrubber maintenance and the discharge of the feedwater reservoir. The components in contact with the medium are coated with PTFE to ensure adequate chemical resistance.

During operational trials, all three instruments performed reliably, and it is anticipated that NIVELCO instruments will be used in the upcoming system installation as well.

Reservoir Level Control with MultiCONT Process Controllers

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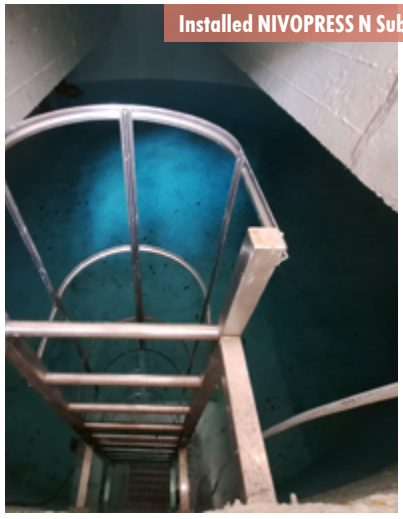

Installed NIVOPRESS N Submersible Hydrostatic Level Transmitter

Budapest Transport Co. Ltd. *(BKV Zrt.)*, a key player in the operation of the capital, is responsible for maintaining the operational readiness of the public transportation fleet, including the periodic maintenance, repair, cleaning, and off-duty storage of vehicles. As part of the automation of the water supply system at BKV's largest site, the Cinkota Bus Depot, NIVELCO instruments were integrated into the process.

The water and fire water supply for the depot is managed by two 100 m^3 *(264 gal)* reservoirs. Due to fluctuations in water pressure during peak usage—particularly when vehicle wash stations are operating or during shift changes at the showers—frequent manual interventions were previously required to maintain the desired water levels. This situation not only necessitated more frequent visits to the pressure booster station by the maintenance staff but also, in the absence of accurate level monitoring, resulted in instances of overfilling the reservoirs or the water level falling below the required threshold.

BKV turned to its long-term partner, Vasuta Inc., a company with over 150 years of experience in mechanical solutions, who subsequently sought assistance from NIVELCO. The solution involved the installation of two **NIVOPRESS NKP–420–5** submersible hydrostatic level transmitters, manufactured by NIVELCO. These transmitters were mounted at the bottom of the reservoirs within rigid PVC piping, providing both mechanical protection and ease of installation.

The precise liquid level data provided by the transmitters is used to control the CHQ-060 ball valve actuators, through the **MultiCONT PEC–21D–1** multi-channel process controllers.

The two **MultiCONT** units enable independent monitoring of the water and fire water reservoir levels, with five relay outputs available for control. The exact level values of the reservoirs are displayed and housed in a custom wall-mounted enclosure, offering IP67 *(NEMA 6 equivalent)* protection as specified by the installer.

NIVELCO Devices at the Wienerberger Hungary Plant Automation of Cement Silos

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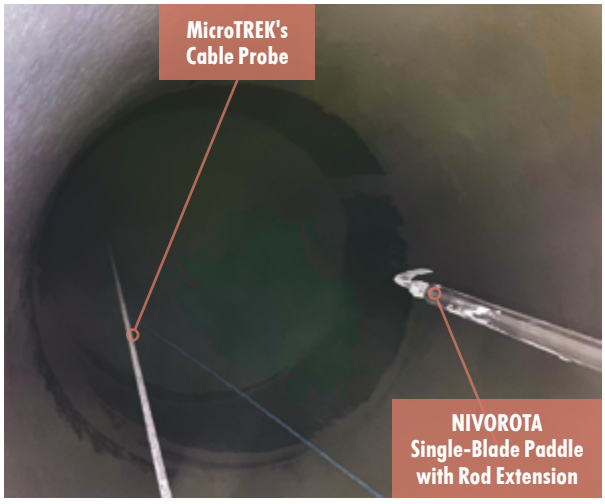
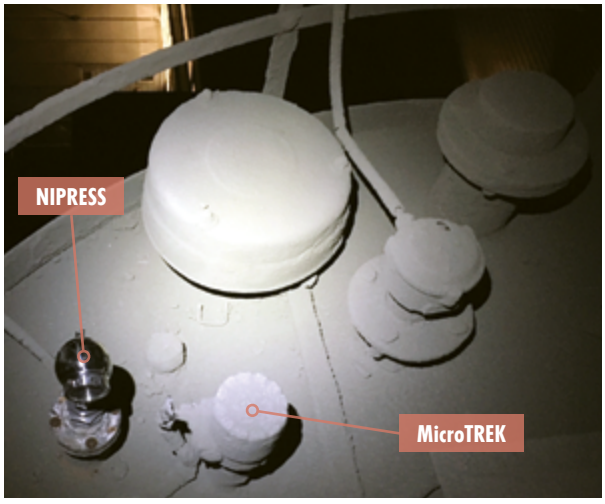
The Wienerberger factory in Hungary specializes in the production of paving stones, flagstones and fencing elements as part of the Semmelrock product range. The plant operates with minimal stocks of finished products, but is highly efficient and can respond quickly to the needs of its partners. This flexibility is due to automated production processes. We are proud that NIVELCO has contributed to this with its reliable equipment.

– 1 million m² *(1.2 million yd²)* of pavers per year? – No problem!

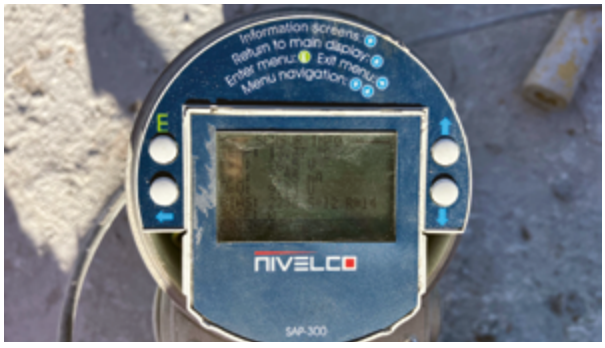
The largest plant of the Hungarian facility uses about 70 tons *(77 short tons)* of cement per day, which is about 3 truckloads. This amount of cement is used for the core concrete that forms the body of the finished product. The material is stored in 6 narrow silos, each about 10 to 12 meters high. Knowing the level of material in these silos is critical for stable production. 3 silos contain 90 tons *(99 short tons)* and the other 3 silos contain 40 tons *(44 short tons)* of cement and gravel. This is accomplished using NIVELCO **MicroTREK HT–700** series guided microwave level transmitters.

To ensure reliable operation of the 90 ton tanks, 4…20 mA signals from the transmitters are integrated into the mixer control system to improve overall performance. The system includes 6× **MicroTREK HTN–712–4** Guided Microwave Level Transmitters that transmit signals which are processed by PLCs *(Programmable Logic Controllers)*. These signals are used for process control by the operator control system, which also calculates the fill weight. In ad-





dition, overfill protection is provided by 6× NIVOROTA ELR–810–1 rotary level switches, each with a 1 m *(3.3 ft)* rod extension, mounted vertically on the silos. The conveying pressure used to transfer materials is monitored by 6× NIPRESS DKC–572–7 ceramic diaphragm pressure transmitters. In addition, 6× UNICONT PMG–511–2 universal controller/indicators are used for field indication at the main silos. Although the area is not explosion-proof, the transmitters are safeguarded by UNICONT PGK–301–D intrinsically safe isolators. The production manager, who is responsible for maintenance and operation, used the UNICOMM SAT–504–1 HART® modem to commission the instruments and to program them later if necessary. By taking advantage of the commissioning and training facilities provided by NIVELCO, he was able to familiarize himself with the equipment and ensure trouble-free operation in the future.



Cement Silo Amount Displays

Missouri Chemical Plant Adopts Integrated Inventory Monitoring Solution

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A household chemical manufacturer in Missouri, USA, wanted to upgrade its outdoor chemical storage tanks from high-level float switches to continuous level measurement.

After reviewing the material list for the 5.2 m *(17 ft)* tall chemical tanks, it became clear that only 4 out of the 24 tanks could be measured with a non-contact radar, contrary to the customer's initial assumption. Several of the tanks contained liquids with dielectric constants too low for both the **PiloTREK** 80 GHz non-contact and the MicroTREK guided wave *(TDR)* radar to measure reliably, even with twin cables *(ε_r < 1.4 (DC < 1.4))*.

Rather than using a mix of non-contact and guided wave radars along with magnetostrictive sensors, the customer was convinced to adopt a unified solution: **NIVOTRACK** magnetostrictive level transmitters with cable probes and titanium floats for all 24 tanks.

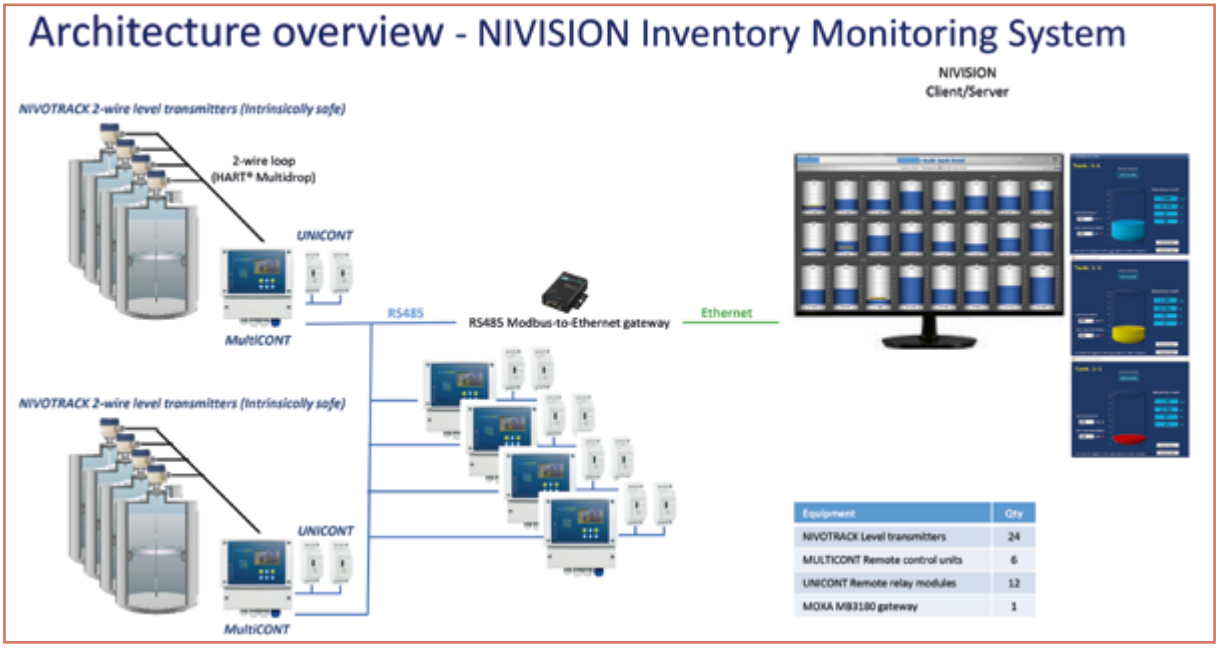
There was no return on investment *(ROI)* for the customer to hire an automation company to install PLCs and integrate these storage tanks into their existing Distributed Control System *(DCS)*, which controls processes on the factory floor.

Instead, we proposed a lightweight inventory monitoring solution using **MultiCONT** multichannel process controllers and **NIVISION** process visualization software. Valve shut-off and high-level alarm relays were also added to the system using **UNICONT PJK** universal interface modules to provide overfill protection.

As this was a Class I, Division 1 environment, each **MultiCONT** was limited to serving up to four intrinsically safe **NIVOTRACK** units.

In **NIVISION**, tank levels are color-coded to facilitate inventory monitoring. Users can set two alarm levels per tank, independent of the field relay-based alarms. These visual alerts help the inventory management team: the liquid level changes from blue to yellow when it falls below the low inventory warning level and turns red when it falls below the critical inventory level.

The customer operates multiple facilities throughout the U.S., and this solution served as their pilot project. Following its successful implementation, the company is now considering rolling out similar systems at additional sites.



Level Measurement of Chemical Storage Tanks with NIVOTRACK Level Transmitters

Smart Tank Level Monitoring for Canola Oil Production in New Zealand

Intech Instruments
www.intech.co.nz

This case study demonstrates the practical application of **NIVOPRESS D** hydrostatic pressure transmitters within the food processing industry. A local food processing company in Auckland approached us for a reliable solution to monitor their canola oil tank levels, a critical aspect of their production cycle and scheduling process. To address this, we installed

Pressed Rapeseed on Conveyor Belt

the NIVELCO **NIVOPRESS DTF–500** hydrostatic level transmitter on a 4.8 m *(16 ft)* high stainless steel tank. The transmitter was used to measure canola oil, which has a medium density of 0.85 kg/dm^3 *(S.G. 0.85)* and operates at a temperature of +95 °C *(+203 °F)*. The **NIVOPRESS D** is a 4…20 mA loop-powered device designed to measure hydrostatic level. Due to their design, the **NIVOPRESS D** front diaphragm level transmitters are particularly suitable for level-measuring tasks by measuring pressure at the bottom of the tank. The same design makes it an excellent device for food applications *(milk, pastes)*. The smooth membrane surface and the maximum permissible process temperature of +125 °C *(+257 °F)* ensure hygienic cleaning in technologies that require regular cleaning and eliminate the risk of clogging. The device can be used for

NIVOPRESS D Hydrostatic Levelling Agent

all level measurement tasks with atmospheric pressure acting on the liquid column. It features simple on-site programming for both the medium's level and density *(SG)* value. For instance, the SG value for rapeseed oil is 0.85 g/cm^3, and for water, it is 1.0 g/cm^3. This data is transmitted to a local control cabinet display and subsequently relayed to the plant's SCADA *(Supervisory control and data acquisition)* system in the operations control room for real-time monitoring.

Rapeseed Oil Tanks

Key Features of the **NIVOPRESS D** Hydrostatic Pressure Transmitter:

- Stainless steel diaphragm construction
- Pressure ranges from *0.1 to 400 bar (1.45…5800 psi)*
- High overload capability and secondary lightning protection
- Wide temperature range compatibility
- 0.25% accuracy and programmable damping
- HART® communication and explosion-proof models are available
- Suitable for a wide range of liquids, including foaming, viscous, and corrosive substances.
- Can be supplied with screwed thread, RJT *(based on individual quote)*, DIN or TriClamp sanitary fittings

The system has been functioning seamlessly since the devices were installed, programmed, and commissioned, delivering reliable monitoring of tank levels to support optimal production operations. As a result, plant personnel have reported greater confidence in inventory management and reduced manual intervention.

Precision Level Measurement in the Agricultural Industry

ANTAL MÁTHÉ
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Throughout its 20 years of operation, **NIVELCO Tehnica Măsurării SRL** has consistently prioritized customer satisfaction and trust through the delivery of high-quality professional services. The company has cultivated strong, honest relationships with its business partners and ensured that the parameters

required for various applications are met with precision. In a competitive and fast-paced market, NIVELCO Co. has successfully achieved this goal by providing advanced instruments that are diverse, high-quality, and competitively priced.

In the following application, we utilized NIVELCO's latest development, the **PiloTREK W–200** non-contact, 80 GHz radar level transmitter. Our partner, Biotech Industries SRL, is based in Fundulea, located 30 km *(19 miles)* from Bucharest in the heart of the southeastern Romanian Bărăgan Plain. The company plays a crucial role in the region's agricultural sector. Biotech Industries specializes in the manufacturing of disinfectants and biocidal products with virucidal properties, effective against all encapsulated viruses *(including the coronavirus),* and also distributes fertilizers. The application required the continuous monitoring of both the level and volume of UAN 30 *(a mixture of ammonium nitrate and urea)* and Thio-Sul *($[NH_4]_2S_2O_3$ – ammonium thiosulfate)* stored in 10 tanks, each 7 meters *(23 ft)* in diameter and 10 meters *(33 ft)* in height. The data is displayed in real-time on both mobile devices and PC.

The following devices were used for this application:

- 10× PiloTREK WPT–214–4 non-contact microwave level transmitters
- 1× MultiCONT PRW–2MA–1 multichannel process controller
- 1× NIPOWER PPK–331–1 switching-mode power supply
- 1× Modbus TCP/IP gateway

Level data is transmitted from the MultiCONT RS485 output via the gateway to the company's custom process visualization application. This application displays the level and volume data for each tank, enabling continuous tracking of stock *(both incoming and outgoing quantities).*

Following the installation, programming, and communication setup, the system has been running smoothly, and the customer is highly satisfied with the results.

25 Years of Highly Explosive Chemical Measurement

From Simple Float Reed Chain Sensors to Advanced Microwave Level Transmitters

DARIUSZ PISZER
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Level control is a critical aspect of industrial process automation, ensuring accurate, precise, and reliable measurement and management of material levels in tanks, silos, and pipelines. Effective level control increases operational efficiency, prevents material wastage, and improves workplace safety. The demand for level instruments is constantly increasing due to the trend towards more compact and smaller installations, as well as the enormous density of industrial and telecommunication electromagnetic noise in the environment. Modern level transmitters are now designed to function effectively even in these challenging environments, where high levels of electromagnetic interference can often disrupt the performance of older, less advanced equipment.

Minova-Ksante started in 1980 as a subsidiary of the largest copper mine in Europe, KGHM Polska Miedź S.A., producing specialized flotation reagents mainly for copper ore processing.

Today, Minova-Ksante is part of Minova, a renowned global company that provides ground support products *(e.g., steel or concrete support structures, fireproofing materials, geotechnical systems, and other stabilization solutions)*, flotation reagents, and solutions for customers in the mining sector.

MicroTREK H–400 Guided Microwave Level Transmitter and NIVOTRACK M–100 Floating Magnetic Level Transmitter

Flotation reagents are chemicals used in industrial flotation processes. Flotation is a process commonly used in the mining industry, particularly for separating metal ores and minerals. During the flotation process, reagents help desired materials *(such as ores)* float to the surface of the water, while undesired materials *(such as impurities)* settle to the bottom. Flotation reagents therefore aid the separation process by improving its efficiency.

For the production of these specialized flotation reagents, mainly xanthates, some highly explosive chemicals are used, among them carbon disulfide, which belongs to gas group IIC—one of the four most explosive gas groups in the industry.

NIVOTRACK Magnetic Level Transmitter in use for 25 Years

Back in 2001, Minova-Ksante turned to NIVELCO-Poland for help in solving the issue of level measurement in tanks with carbon disulfide. At that time, the NIVELCO Group had only the **NIVOTRACK** magnetostrictive float level transmitter, based on the well-known principle of converting float position

Display and Control Local Alarms with UNICONT PM Universal Controllers

to resistance using a chain of reed relays. At that time, it was the only one of our products intended for installations requiring IIC group compliance.

NIVELCO-Poland delivered several **NIVOTRACK MBC–118–5 Ex** units at that time, and some of them are still in operation today, nearly 25 years later. This itself is proof of the very high quality and reliability of our products. Over the years, as production expanded, installations were modernized and extended, requiring new level transmitters to meet the evolving demands for equipment used in explosive zones, especially for highly explosive substances such as carbon disulfide (CS_2).


Carbon Disulphide Tank Level Measurement with MicroTREK H–400 Level Transmitters

In recent years, due to the reasons mentioned above, as well as easier installation, NIVELCO-Poland has supplied and installed several modern **MicroTREK** guided microwave level transmitters, including the **HTA–418–8 Ex** and last year's newest member of this product family, the **HTA–718–8 Ex**. These were installed directly on the tank containing carbon disulfide, which requires the ATEX mark: ⟨Ex⟩ II 1 G Ex ia IIC T6…T3 Ga.

It is worth noting that the level measurement indication for operators, as well as the transmission of signals to the supervisory system and local alarms and controls, are performed in a control cabinet equipped with NIVELCO's **UNICONT PMM** universal controller.

The installation was supervised by one of our colleagues, who also handled the commissioning of this transmitter. As expected, everything went very smoothly and the customer is satisfied with the new purchase. It is always very rewarding to personally see nearly 25-year-old, but still excellently working, NIVELCO transmitters and to hear positive feedback about the technical quality and reliability of our products and our dedicated colleagues.

The Role of Industrial Level Measurement in Nuclear Medicine

RETEC instruments
www.retec.be

In the field of nuclear medicine, accurate and reliable measurement technologies are essential, especially for managing radioactive waste. In the nuclear medicine department of the university clinic, patients receive radioactive drugs, and the water used during their treatment becomes radioactive waste. This waste is collected in separate containers and undergoes special treatment.

The role of PiloTREK radars

Recently, ten **PiloTREK WP–200** 80 GHz radar level transmitters were installed and programmed at the nuclear medicine department of the University Clinic of Liège. These transmitters measure the liquid level in the basement tanks where radioactive waste is stored. One level transmitter was installed per tank, ensuring accurate and continuous monitoring of each tank.

PiloTREK level transmitters offer highly accurate measurements, with an accuracy of up to ±2 mm *(0.08")*, which is critical for managing radioactive waste. Additionally, these transmitters are insensitive to temperature and pressure changes, ensuring reliable operation even under unfavorable conditions. They are also easy to install and program, reducing installation and maintenance costs.

Radioactive Waste Containers

The compact antenna design and narrow beam angle of the **PiloTREK WP–200** make it especially well-suited for installation in confined spaces, such as underground storage tanks. Its IP68-rated housing ensures reliable, maintenance-free operation even in harsh and humid environments. Furthermore, the transmitters' compatibility with HART® communication and integration with **MultiCONT** process controllers allows for remote configuration, data logging, and seamless integration into the clinic's supervisory systems.

Continuous level monitoring provides real-time information about the liquid levels in the tanks, ensuring safe management of radioactive waste.

In conclusion, PiloTREK radar level transmitters are essential for the safe management of radioactive waste in nuclear medicine. Their accuracy, reliability, and ease of installation make them ideal for environments where precision and safety are paramount.

PiloTREK W–200 Radar Microwave Level Transmitter

SUCCESSFUL RETURN TO THE SLOPES

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As we reported in the previous issue of our magazine, both of our athletes, Benjamin and Barnabás, have successfully returned to the race course after their serious injuries. During the rehabilitation period, both worked hard to regain their old form and return to racing.

Preparation Beyond the Arctic Circle

This year's on-snow training began in Finland, where, thanks to snow preserved from the previous season, it was possible to train under race conditions as early as the end of October. Beyond the Arctic Circle, the days are already getting shorter at this time of year, and the breathtaking Northern Lights are often visible at night. In Levi, where World Cup races are also held, the world's best technical skiers gather for training during this period, including the three athletes from NIVELCO SE.

Gradual Return to Competition

The preparation went smoothly, though after their long break the boys could only return to racing gradually.

World Championships in Saalbach

The biggest event of the season was undoubtedly the World Championships, which were held once again in Saalbach, Austria, after 1991. This location is particularly memorable for me, as I participated in my first World Championships here as a competitor, so the course and the environment were not entirely unfamiliar.

New Rules, New Challenges

The World Championships once again brought success for the NIVELCO male athletes, despite the fact that one of their strongest events – the alpine combined – was changed. Previously, this event favored those who performed well in both speed and technical disciplines. However, under the new rules, it was turned into a team event: each nation had to nominate separate competitors for the two disciplines requiring different technical skills. Since we have only one female athlete, *Noa* could not participate in this event.

Sibling Pair in the Field

The boys, however, performed excellently: under the new rules of the alpine combined, they fought hard to secure a prestigious twentieth place. It is worth noting that up to four teams per nation could enter this event. *Barnabás* started with a great downhill run, finishing twenty-fifth, while *Benjamin's* smart slalom brought our team up to twentieth place. We are especially proud that they were the only sibling pair in the entire field!

Memorable Moments in the Finals

Another memorable moment was when *Barnabás* and *Benjamin* – as a sibling pair – advanced from the qualifiers into the top twenty-five, thus qualifying for the finals. For the women, there are no qualifiers, so *Noa* automatically made it to the finals in both events based on her previous results. Unfortunately, she was unable to finish her second run in giant slalom, and in slalom, she was eliminated in the first run.

A Successful Season and Olympic Preparations

This season proved to be truly successful for the athletes of NIVELCO SE. The team members achieved a number of outstanding results that are a source of great pride.

Noa Szőllős stood on the top step of the podium three times and claimed silver medals on six further occasions, once again demonstrating her exceptional form and perseverance.

Barnabás Szőllős finished the season with one gold and one silver medal, and placed in the top ten an impressive fifteen times, confirming his consistently high level of performance.

Benjamin Szőllős also delivered excellent results: he secured one first and one third place, and reached the top ten on six additional occasions.

– However, there is no time to rest on these achievements: the team will already begin preparations in May for the biggest challenge of the next season, the 2026 Winter Olympics in Milan. The athletes are determined and motivated to continue their hard work, aiming to delight their supporters and fans with similarly outstanding results in the future.

Noa

– The 2024/25 season and with that my first full season on the Europa cup tour has come to an end.

We started off in Levi, Finland with some great training between October–November. My first race of the season was also in Levi, the Slalom World Cup, before heading back to Central Europe for the first Europa Cup races. After the great GS results in December, we started focusing more on Slalom over the new year. In Zell am See, Austria I scored my first EC points in slalom and a few more right after in Spindl, Czech Republic. After a trip to Norway for the EC finals I finished the season in Val-d'Isère, France, making my second-best points in slalom.

It has been a long and difficult season. The ever-changing weather has made racing more and more unpredictable and unforgiving over the years, as seen by the unprecedented number of injuries that keep growing season by season, but we can only hope and keep training and fighting to stay healthy and get better every year.

Benji

– This season marked my first comeback after a major injury—a torn ACL that kept me off skis for nearly a year. Standing on skis again in August, 11 months after the injury, was an unforgettable moment

that reignited my passion for the sport. By October, 13 months post-injury, I returned to gate training. While I was physically well-prepared thanks to a disciplined summer of rehab and conditioning, the transition back into high-speed training was mentally tougher than expected.

– Although my knee held up strong—even in demanding conditions—the mental barrier, especially at speeds over 80 km/h *(50 mph)*, proved to be my biggest challenge. As a result, while I was able to regain my pre-injury form in slalom within a few months, I continued to struggle with confidence in giant slalom and ultimately had to step away from super-G and downhill for good.

– Despite not reaching my previous performance level in all disciplines, I'm proud to have achieved the basic Olympic qualification quota in both slalom and giant slalom. This gives me the chance to continue chasing my Olympic dream and to keep on fighting from here.

Barni

– This winter was my comeback season after getting injured last January in Kitzbühel. I lost all my FIS points, which meant I dropped out of the world rankings and had to start again from the back of the field. That meant racing with high bib numbers and worse snow conditions, making everything harder.

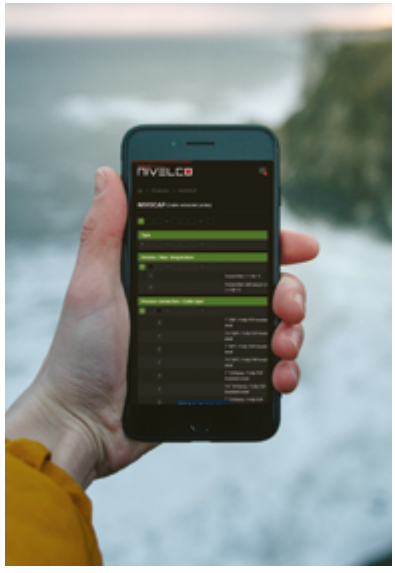
– At first, I struggled to score points again—especially since starting from the back is never easy. I managed to get my slalom points just before the World Championships in Saalbach, but I was still missing results in every other discipline.

– The World Champs went really well. I had good runs in the downhill and finished P20 in the Alpine Combined, racing together with my brother, which was a special moment.

– After that, the focus was fully on getting my FIS points back. I had great results in super-G and Downhill at the Irish Championships in Passo San Pellegrino, which helped me climb back into the top 150 in the world rankings for Downhill. If I stay there, I'll be allowed to race World Cup again next winter.

– In the last races of the season, I finally picked up some points in Giant Slalom—the last event where I hadn't scored this season.

– Overall, I've made solid progress in every discipline and even set some personal bests. I'm not back to where I was before the injury yet, but I'm getting closer with every race.



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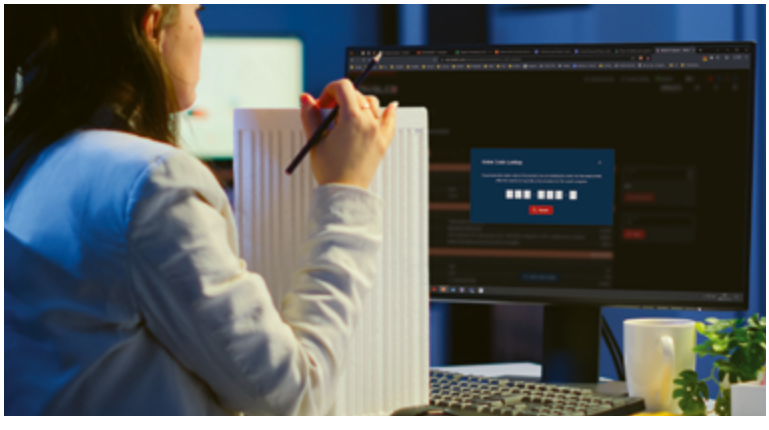

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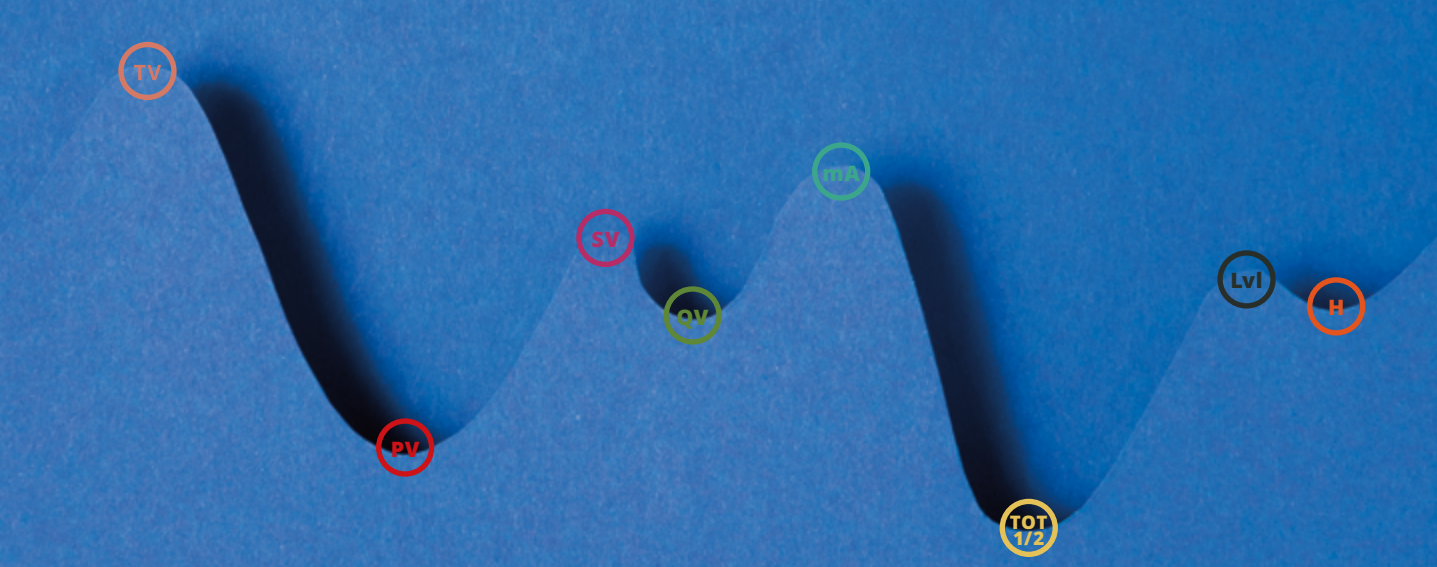

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