

# INGU Case study

## Pipers® hot tap detection with Pan American Energy

A Pipers® hot tap detection makes use of the Pipers® magnetic inspection data to identify the installation of (undesired) hot taps in a pipeline.

Pan American Energy validated the Pipers® performance by installing a hot tap at an undisclosed location along a nearly 3,000 meter steel pipeline with the requirement to locate the hot tap with a 6 meter accuracy.

The pipeline was inspected before and after the hot tap was installed. By comparing the data of both inspections, the hot tap was identified.

Pan American Energy confirmed the identified location was within the 6 meter accuracy requirement.

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Máximo Bugari,  
New Technologies Manager  
at Aconcagua Energía said:

*“INGU’s Pipers® are an effective and economical inline inspection technology that enables mass pipeline monitoring in the Argentinian oil and gas market. We are proud to represent INGU and contribute to the rapid expansion of this technology in our country.”*



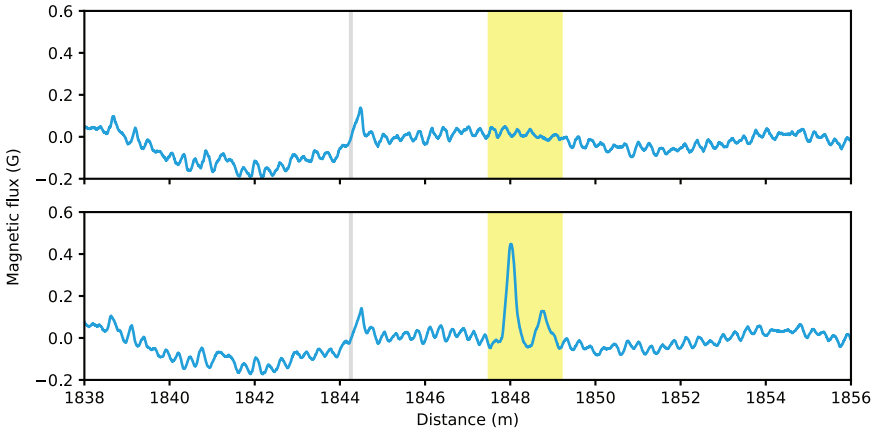
## Pipeline specifications

Pipeline length	2,962 meters
Pipeline diameter	168.3 mm
Pipeline material	Steel API 5L Grade B
Fluid	Crude oil
Location	Argentina

## Analysis results

The following graphs show the magnetic flux as measured by the Pipers® where the top graph is from an inspection before the hot tap installation and the bottom graph is from an inspection after the hot tap installation.

The data is highly repeatable between the two inspections except for the region highlighted yellow, where the hot tap is clearly visible.



*This project was carried out at the famous Golfo San Jorge Basin with the support of Pan American Energy personnel, and INGU's partner in Argentina, Aconcagua Energía. INGU would like to express a special word of thanks to Celeste Vera (Pipeline Integrity Engineer), Facundo Nahuel Ignacio Lamas (Corrosion Coordinator), Miguel Arruas (Corrosion Supervisor) and Leonardo Celeri (Production Supervisor) from Pan American Energy, who were instrumental in making this project a success.*

To find out if the Pipers® inline inspection solution is right for you, visit [ingu.com](http://ingu.com) or email us at [info@ingu.com](mailto:info@ingu.com).



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