

# Immersion Ultrasonic Testing (IUT) for Oil and Gas Pipelines

Ensure the future integrity of welds in oil and gas pipelines with IUT, the most accurate way to ensure pipelines have no critical defects before being deployed in the field.



Production of oil and gas pipelines is a safety-critical task requiring utmost quality. Whether for on- or off-shore application, girth welds used to conjoin pipe sections must be failsafe.

Automated Ultrasonic Testing (AUT) is most often used to assess these welds, a non-destructive testing process for measuring weld flaws on parameters such as depth, length and height. However, to gain the necessary assurances and confidence in the production process, AUT systems themselves must be validated in accordance with the strict requirements of the end client.

Done well, AUT is an efficient method of detecting and measuring defects, but it can only go so far in determining exact position and size. There are great risks involved in undersizing a defect, and substantial, yet avoidable costs involved in repairing defects that have been oversized.

## BEST-IN-CLASS QUALITY ASSURANCE, PERFORMED BY SPECIALISTS

Through our Immersion Ultrasonic Testing (IUT) service, we can inspect weld defects from additional angles and **assess them with greater accuracy**. Elements such as



cracking, inclusion, sidewall fusion and porosity, amongst others, can be analysed at depth.

These IUT results are scrutinized against those of the AUT and systematically compared to data drawn from Macroslicing, a destructive testing method also offered by Applus+. Through this **exhaustive process**, you have the most accurate possible assessment and validation of the welds, the AUT quality and the pipeline production process as a whole.

The testing we perform adheres to all relevant test standards, such as DNVGL-RP-F118 and DNVGL-ST-F101, and can be tailored to meet any customer-specific requirements.

## THE END-TO-END APPLUS+ SOLUTION

At Applus+, our specialized testing teams offer an all-in-one solution for pipeline quality assurance testing: AUT, IUT and Macroslicing. These services can be contracted together or separately – we offer full flexibility concerning the testing scope.

The data derived from the testing is evaluated by industry experts with unique knowledge of certification requirements, including witnessing activities.

By using Applus+ as your one-stop shop, you can rest assured of the **highest-quality data** and you will **significantly cut your lead-time** thanks to the simplification of the logistics.

## REMOTE TESTING SOLUTIONS TO KEEP YOU IN THE LOOP

Choose Applus+ Laboratories and you will also benefit from our [remote testing solutions](#), designed to keep everyone up to speed, in real-time, wherever they might be.