



**NUCLEOELECTRICA ARGENTINA S.A.**

## Customer Success Story: Nucleoeléctrica Argentina S.A

### Nucleoeléctrica Argentina SA Turns to State-of-the-Art X-Probe® to Get More Productivity from Heat Exchangers



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- Laura Casal,  
Lead Engineer for Steam Generators,  
Nucleoeléctrica Argentina S.A.

Like many nuclear plant operators, one of the challenges for Nucleoeléctrica Argentina SA (NA-SA) is coaxing greater productivity and reliability out of existing infrastructure. Take, for example, the Atucha I plant, which was designed in the 1960s and has been generating electricity since 1974, when it was the first nuclear power facility in Latin America.

“For us, our approach to maximizing the performance of heat exchangers, steam generators, and other older components is to use state-of-the-art inspection systems,” says Laura Casal, lead engineer for steam generators at NA-SA. “That’s why we decided to work with Zetec.”

Atucha I recently underwent a series of inspections as part of permit application to operate for five additional years of full power generation. “We can say, without fear of being wrong, that our inspection productivity when using Zetec products is improved by at least three times when compared to competitive probes,” Casal says.

The performance gains start with the choice of probe. NA-SA uses the Zetec High Stability X-Probe, which is designed specifically for steam generator tubing inspections. It produces faster, more reliable results while lowering the total cost of ownership, Casal says.

Spring-supported centering feet and proprietary abrasion-resistant material enable the probe to center more accurately for a longer period of time. Additionally, the X-Probe finds all indications on the first pass at speeds 40 times faster than Motorized Rotating Probe Coils (MRPC).

EPRI equivalency reports have been created for all standardized X-Probe sizes, ensuring that they are inspection-ready at purchase. Both the array and bobbin coils meet this equivalency and may be used for inspections of record.

Cazal says a pre-service inspection of four replacement steam generators at the Embalse plant, a CANDU reactor also managed by NA-SA, illustrates the value of probes that can deliver clean, consistent data and a high probability of detection.

“During the inspection, analysts detected an abnormal signal in two periphery tubes in the U-bend area of the plant’s SG-2,” she says. “Thanks to the X-Probe and subsequent analysis, it could be inferred that this signal was probably due to the fact that the tubes involved may be in contact with one another.”

Plant engineers were able to quickly pinpoint the problem within the steam generator, which measures about 13 meters long and weighs about 130 tons, and perform a visual check that corroborated the results of the eddy current inspection.

The success of the steam generator inspection was critical to a major renovation project to extend the operating period of the Embalse reactor by up to 30 years and increase its generating capacity to 683 MWe.

The X-Probe not only delivers better signal quality, significantly faster inspections, and complete tube coverage, it produces savings related to less rad waste and lower dose, Cazal says.

“As an operator of nuclear power plants, committed to the generation of electric power in a safe, clean, efficient, and competitive manner, we value suppliers who help us maintain the trust of our customers,” says Cazal. “Zetec’s High Stability X-Probes, and the support we receive from Zetec, are essential to those core values.”



Zetec holds ISO 9001  
and ISO/IEC 17025  
certifications



Zetec, Inc.  
8226 Bracken Pl. SE | Suite 100  
Snoqualmie, WA 98065  
Toll Free: 800.643.1771  
P: 425.974.2700