

# COMPUTED RADIOGRAPHY TO INCREASE EFFICIENCY IN HEAT EXCHANGER INSPECTION

*OK CONTROL S.r.l., a service company located in Schio, Italy has always strived to make quality an ultimate priority since its beginnings in 2002. OK CONTROL is capable of performing VT, PT, MT, UT and RT inspections both in-house or on-site at the customer's location.*

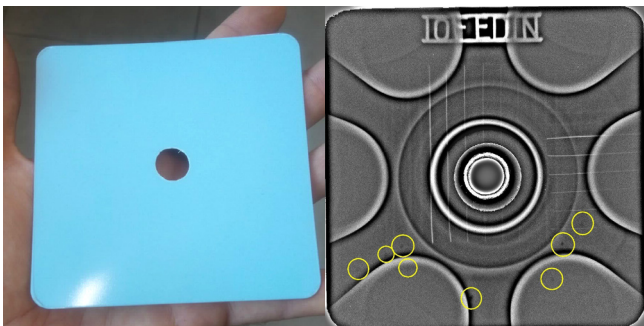


Over the years, OK CONTROL has specialized in a number of very specific and unique applications and through this have developed techniques in which digital radiography plays a crucial role.

For example, a customer manufacturing cooling systems used in nuclear plants requested OK CONTROL to inspect heat exchangers which contain tube sheets. The tubes themselves ranged from 18 mm to 28 mm in diameter and it was the "tube to tubesheet welds" that required inspection.

The solution developed by OK CONTROL could only be made possible with the use of imaging plates (IP) or traditional films owing to the fact that they are flexible and can be customized in size and shape.

OK CONTROL used a rod anode for panoramic X-ray in combination with customized imaging plates which allowed the rod anode to be inserted through the IP and then inside the tube. Since the X-ray source also emits radiation backward, the IP is



*Customized imaging plate and corresponding X-ray.*

able to expose and the welds around the rod anode can be analyzed. This is the only way to inspect these kinds of welds and using CR improved the efficiency drastically due to reduced exposure time and an extremely fast workflow. Furthermore, since the inspector obtains the image directly by scanning the IP on-site, CR allows quick feedback to the customer.

Through the use of the DÜRR NDT CR 35 and HD-CR 35 systems, OK CONTROL has increased their efficiency drastically with the number of projects also increasing. Umberto Zambotto, founder of OK CONTROL, on what he appreciates most about DÜRR NDT CR systems: "The speed of execution, monitored area limitation, no production stops, no use of chemical products, immediate results, excellent image quality, and of course the productivity: we performed digital X-ray with CR on tube to tubesheet welds at a speed of 600 joints per day."



**OK CONTROL S.r.l.**  
QUALITÀ AL SERVIZIO DELLE AZIENDE  
[www.okcontrolinondistruttivi.com](http://www.okcontrolinondistruttivi.com)