

# **NDT INSPECTION IN A PETROL CHEMICAL INDUSTRY USING X-RAY**

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## **ABSTRACT**

We employed a Vidisco foX-Rayzor X-ray portable system in order to inspect pipes and installations in a petrochemical industry. foX-Rayzor is perfect for field use as it is compact and fully battery-operated, only 13mm thin Imager panel that can fit between pipes and tight places, it has a laptop driven flat panel and wireless X-ray and data operation. With the X-ray method we manage to do on-site plant maintenance inspections of insulated pipes, joints, welds etc. without needing to dismantle pipe segments, remove insulation to trace leaks or halt production for long periods of time. Comparing to other x-ray equipment and methods, this one uses a-Si flat panels detector sensitivity whose sensitivity is 50 to 100 times greater than traditional X-ray thereby requiring dramatically less exposure time. A mean time we needed for image acquisition and presentation of the entire image on the laptop screen took approximately 2-5 seconds, depending on the size of detector used. On site, there was a suspicion for a leak on a pipe but no one could tell where this might have been. It took about 2-3 minutes to detect with accuracy the hole in the pipe and to detect leakage. Also, we employed the X-ray equipment in order to test other pipes for possible leakage.