X-ray Services

Fire Cause Analysis
A DIVISION OF IFT INC.

Fire Cause Analysis Forensic Engineering capabilities now include comprehensive X-ray services. Our in-house X-ray unit, manufactured by Golden Engineering, allows preparation of X-ray images in our laboratory and at almost any field location including other laboratories and loss sites. This is especially useful at locations where evidence may be located but be readily moved. The ability to analyze evidence with X-ray allows FCA to provide clients with a non-destructive means of providing previously unavailable. X-ray may be utilized to eliminate the need for extensive or invasive examinations and associated delays and expenses.

Visualizing a feature concealed within melted plastic or encased in a metal housing is often critical to the analysis of evidence. For example, whether or not a valve is in the open or closed position can be crucial in determining how a fluid escaped from a piping system. Views from a non-destructive examination of such a metal valve are shown below:

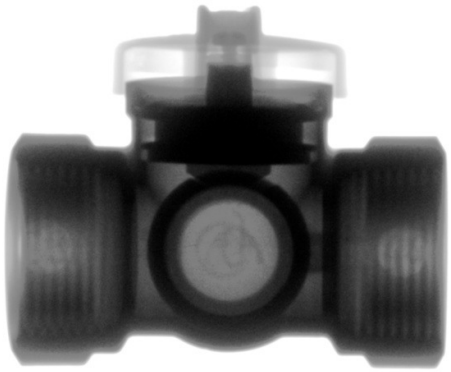

Figure 1: X-ray of a "closed" ball valve.

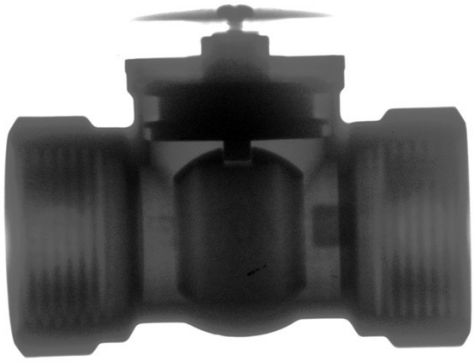

Figure 2: X-ray of an "open" ball valve.

As an added benefit, analyses such as these can be done on-site before evidence is touched or removed, which is especially useful with particularly fragile items.

Specifications for the unit are listed below:

X-ray Unit Specifications

Output dose	4.0-2.6 mR/pulse (12" from source)
Pulse rate	15 pulses/second
Maximum photon energy	270 KVP
X-ray pulse width	50 nanoseconds
Penetration depth	1 inch of steel

FCA's trained personnel acquire the images needed and can provide interpretation as well. The process yields high-quality digital images immediately in a mode which is both environmentally friendly and less expensive than when traditional X-ray sheet film. The technology is the same system as is used for analysis of suspected explosives by bomb squads around the world where reliability, accuracy, and fast turnarounds are a must!

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