

EAN Workshop 2016 WG1: Radiography Equipment
- Improvements to avoid incidents/accidents-

First day conclusion/general remarks:

- X-ray/ Gamma equipment are different and need different approaches for improvement
- To avoid malfunctions of Gamma equipment, maintenance on a regular basis is essential
- Optimum result in the sense of inspection quality and dose reduction depends on the source, the detector and image processing (**entire imaging chain**)
- More remote sensing/warnings (acoustically and visually) by supportive electronic devices to avoid operator mistakes

**“X- and Gamma equipment is well developed and only small improvements are possible!
Isn't it better to focus on improvements of **safety culture** of Radiographers (companies,
clients, workers, suppliers) ?”**

“Industrial Radiography needs to be team sports!”

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- Improvement of personal safety equipment necessary
 - Acoustic signal – loudness to be increased – workers acceptance?
 - Visual signal
- Improvement of Gamma camera:
 - Dose meter integrated in the Gamma camera ? (additional electric supply/batteries)
 - Measure and monitor mechanical resistance -> acoustical, visual feedback (additional electric supply/batteries)
 - New materials for increased mechanical flexibility of guiding tube
- Passive dosimetry (e.g.; TLD) integrated in the camera during work for cross-checking with workers personal dose meter
- “Blackbox” to monitor/ analyse the whole work situation
 - All dose meters are part in a “blackbox”-network
 - Something similar already exists (satellite dose meters network for central read-out)
 - Surveillance camera in “blackbox” integrated (watching the scene)

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- General aspects:
 - Shorter refresher period (in RT and RP) would avoid incidents/accidents?

- X-ray equipment:
 - What can be improved:
 - Fail safe – warning lamps etc. are state of the art
 - In X-ray equipment recording of history is already realized
 - For stationary use without inter-lock circuits, motion detectors are highly recommended

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