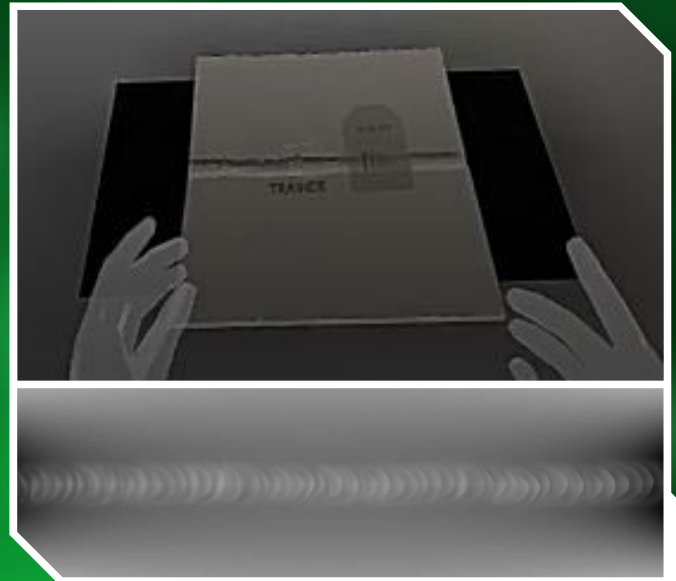## VIRTUAL REALITY FOR RADIOGRAPHIC NDE TRAINING MEANS...

- No need for radioprotection
- Train even when the real source is on site
- Perform several shots in parallel for several trainees simultaneously
- See the invisible, understand, learn with integrated tools designed for teaching

FIND ALL THE TOOLS OF YOUR TRADE IN TRAINDE RT :

- X and gamma sources
- Common films and shooting techniques
- IQIs and markings

UNPRECEDENTED REALISM, FROM PROCEDURE TO RESULTS

- Display the image of the shot from a database of thousands of simulated images
- Analyze the shot with integrated tools (optical density, dynamic of the image, ruler...)

TECHNICAL DESCRIPTION

TraiNDE RT is an innovative simulator allowing you to train on radiography controls (X and Gamma) in a new light through virtual reality.

TraiNDE RT is delivered with a set of exercises representative of RT training sessions, allowing for a significant increase in the number of shots per trainee, avoiding the risks of irradiation and offering new educational features.

RT TECHNIQUES & INSPECTED SPECIMENS

- **Welds** with perpendicular, ellipse, contact, panoramic techniques
- **Cast** parts
- Specimens in **steel**, **aluminum**, **titanium**, **copper**
- Flaws such as cracks, lack of fusion or penetration, porosity, inclusions...

RADIATION CHOICE

Regarding the part to be inspected, the user will be able to choose to shoot from an X-ray or from a gamma source:

- X-ray source: **charts** are provided to determine the intensity and / or exposure time depending on the material and thickness of the component.
- Gamma source: the current version proposes Ir192 source. Based on a **general formula of the exposure time** for such isotope, **the trainee will calculate the exposure time** requested to ensure a correct shoot with acceptable film darkening.

FILM

TraiNDE RT offers (in the first release version) 3 types of films with different system class (C2, C3 and C4 class according to NF EN ISO 11699-1).

ESSENTIAL ELEMENTS

For every exercise and before the shot, the user will have to prepare the component by choosing the relevant **wires IQI** and **markers**.

TraiNDE RT includes all the wires IQI from the NF EN ISO 19232-1 standard.

EXERCISE APPROACH AND LEARNING FUNCTIONALITIES

Each exercise is built to include all the preparation phases: choice of IQI, and choice, positioning and orientation of the source.

Depending on the parameters, TraiNDE RT will draw the picture corresponding to the shot from a databank of several thousands of simulated images.

An optical density value in each point is available to ensure the good darkening of the film.

An error report (under development) will be available, detailing:

- Potential wrong manipulations
- The calculation of geometrical blur
- A bad choice of technique
- A bad choice of orientation of the IQI

Finally, a shot report (under development) will also be available in a future version. This report will trace all parameters linked to the choices made by the trainee.

Live demo and full presentation soon available on
www.youtube.com/extendechannel