

Form 2

Technology Information	
Area	1- Technologies for detection of minor leaks
Title	DETECTION PAINT/GEL
Submitted by	CEA
<p>1. Overview of Technologies</p> <p><u>Functions</u></p> <p>The Detection PAINT/GEL process is based on the spraying/painting of a thin film on the external solid surface of a tank in order to reveal the radiological surface contamination by a simple visual change. After detection, paint is stick to the surface whereas film gel could be easily removed.</p> <p><u>Summary Descriptive</u></p> <ol style="list-style-type: none"> 1. Spraying or painting on the surface suspected to be contaminated 2. Detection time is between few seconds and some hours depending on the type of contamination 3. Option: Proceed to the removal of the film. <p><u>Features & Specifications</u></p> <p>The equipment is composed of the following parts:</p> <ul style="list-style-type: none"> • Tank for paint/gel • Skid to spray the gel/paint • Specific tools developed to spray/paint for difficult access surfaces <p>The main figures</p> <ul style="list-style-type: none"> • Operating pressure: low pressure pump • Operating temperature: -10°C to 50°C <p><u>Advantages of our Technology</u></p> <ul style="list-style-type: none"> • Easily hand operable or remote handling • Very cheap • For inside conditions, large surface area could be scanned (metallic or concrete surfaces) • Films for outside conditions are developed. <p><u>Owner</u></p> <p>DETECTION PAINT/GEL by CEA/AREVA .</p>	

2. Notes

Technology readiness level

Proof of concept (feasibility) at the experimental laboratory scale.

Challenges

- Achieve sufficient sensitivity and durability depending on the environmental conditions (background noise, brightness, humidity, temperature...)
- Achieve efficient implementation of the paint/gel process in particular by an optimized rheology in regard to the tank wall conditions (temperature, humidity..).

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