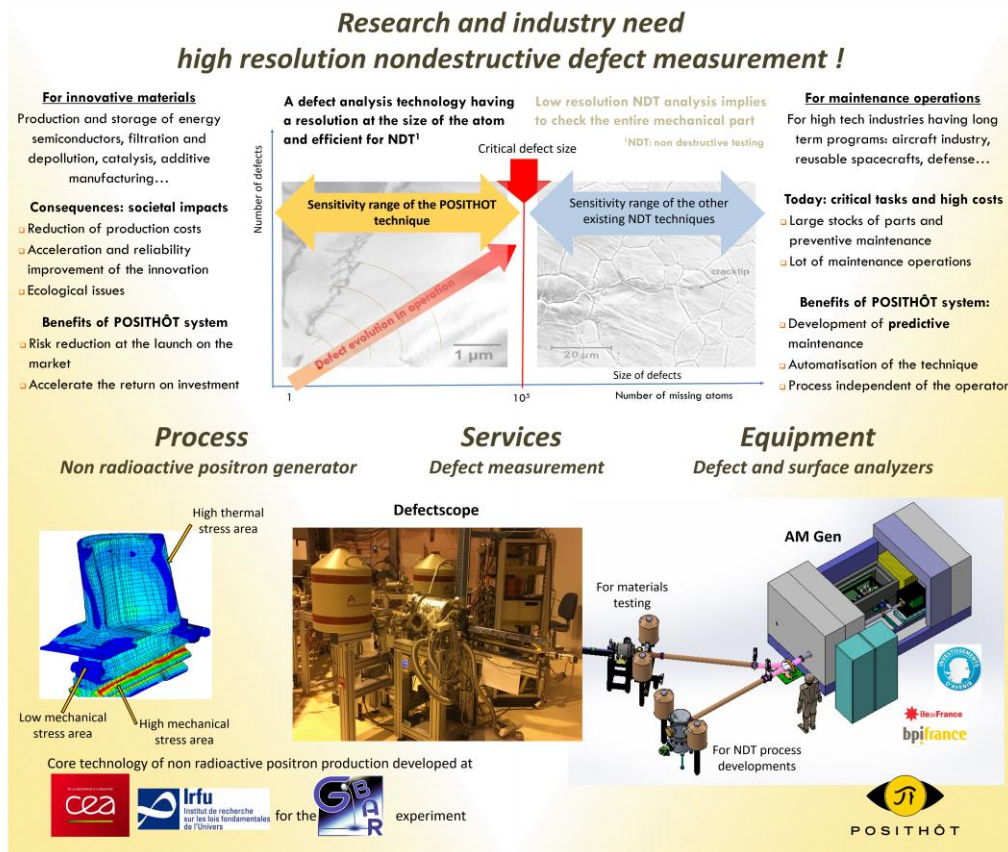
 <b>POSITHOT</b> <i>The Activator Manufacturer</i>		<b>POSITHOT BUSINESS OFFER SYNTHESIS</b> <b>KEY ADVANTAGE: SIMPLIFICATION OF YOUR DESIGN AND MAINTENANCE OPERATIONS</b>	
<b>DEVELOPMENT AND MANAGEMENT OF YOUR VERY VALUABLE PROCESSED MATERIALS AND INSTALLATIONS UNDER HIGH MECHANICAL, THERMAL, ELECTRICAL OR PHOTONIC STRESSES</b>			
<b>MAIN TARGET: COMPETITIVENESS GAPS TO BE SORTED OUT REGARDING THEIR STRUCTURAL TOUGHNESS AND ITS EVOLUTION IN OPERATIONS</b>			
	<b>NEW CAPABILITIES</b>	<b>NEW CAPACITIES</b>	
	<b>INNOVATION GAINS / GAINS OFFERED TO YOUR CLIENTS</b>	<b>SCIENTIFIC GAINS / TECHNICAL GAINS</b>	
<b><u>NEW RESULTS</u></b>	<b><u>Non-destructive analysis of defects and quality of parts and installations with high added value:</u></b> <b>Revolutionary standard for the industries to reinforce their competitive advantage</b> - <b>Upstream:</b> design and material qualification, design improvement (limit oversizing) - <b>Downstream:</b> characterization of the state of damage of the material (optimization of maintenance periods), redesign <u>Internet link for a best understanding of the new capabilities under deployment:</u> <a href="http://www.posithot.com">www.posithot.com</a>	<b><u>Principle of characterization implemented:</u></b> - <b>Positron annihilation spectrometry</b> (Note: analysis of the interaction of positrons with the electrons of atoms). - Detection of gaps and identification of their nature, from the atomic to the macroscopic scale.  <u>Internet link for a best understanding of the positron annihilation spectrometry :</u> <a href="https://www.techniques-ingenieur.fr/base-documentaire/mesures-analyses-th1/methodes-nucleaires-d-analyse-42389210/caracterisation-de-defauts-lacunaires-par-annihilation-de-positons-p2610/">https://www.techniques-ingenieur.fr/base-documentaire/mesures-analyses-th1/methodes-nucleaires-d-analyse-42389210/caracterisation-de-defauts-lacunaires-par-annihilation-de-positons-p2610/</a>	
	<b>QUALITY GAINS / COMPARATIVE GAINS</b>	<b>PROCESS GAINS / KNOW-HOW GAINS</b>	
<b><u>NEW OPERATING MODES</u></b>	<b><u>Advantages compared to other technologies:</u></b> <b>Breakthrough capacities of analysis</b> - Very high accuracy at the atomic scale - Identification of different types of defects at several scales - Efficiency on every type of materials (polymers, metals, semiconductors, ceramics, crystals, thin film materials, porous materials, amorphous materials – homogeneous or multilayer materials – nota: Biologic materials under research) - Determination of the ability of materials to withstand mechanical and thermal stresses at any time in their life in operation - Ability to determine with a quantified process the remaining time in operation.	<b><u>Posithot added value:</u></b> - Accessibility, democratization and deployment of positron annihilation spectrometry <b><u>New equipment:</u></b> <b>Revolutionary spectrometer</b> - By allowing it to be performed in a secure environment (using a <b>non radioactive generator</b> ) <u>Internet link for a best understanding of the new positrons generating process in a secure environment (CEA patents propriety of POSITHOT ):</u> <a href="#">SOURCE DE POSITONS (Brevets) - Data INPI</a> <b><u>New method:</u></b> <b>Breakthrough type of analysis</b> - Through a non-destructive analysis of defects and strength of parts and installations - In a targeted manner at the main critical points presenting early cracking damage and failure risk - By comparative analysis of the <b>density of defects at the atomic scale</b> (in different places or at different times for the same type of material or between different types of materials) - By extraction, sampling or after disassembly of parts	
<b>ULTIMATE PERFORMANCE IN TERMS OF QUALITY, MARGIN, SCHEDULE, SECURITY AND SUSTAINIBILITY REGARDING THE CHARACTERIZATION OF THE STRUCTURAL STRENGTH AND ITS EVOLUTION IN OPERATIONS FOR YOUR VALUABLE MATERIALS, PRODUCTS, PARTS AND INSTALLATIONS UNDER CRITICAL CONDITIONS</b>			

<p><b><u>Research and engineering phases</u></b></p> <p>Materials and installations to be designed and installed</p> <p><b>Main question: Durability expectancy</b></p>		<p><b><u>Production and maintenance phases</u></b></p> <p>Materials and installations in use or to be replaced</p> <p><b>Main question: Remaining life expectancy</b></p>	
<p><b><u>POSITHOT BUSINESS OFFERS</u></b></p> <p>POSITHOT affords equipments and services to the main research centers and to the main industrials</p>			
<p>Training of your upstream (research &amp; engineering) and downstream (production &amp; maintenance) people to the new principles, tools and methods of characterisation</p>	<p>Non-destructive characterization campaigns of your very valuable materials in its industrial site of Villebon-sur-Yvette by its own equipment generating positron using a non-radioactive generator and by its own standard test installations with high vacuum by chamber</p> <p>(30 Ke for 1 campaign of characterization – minimum 8 – maximum 16 samples of 15 mm (l) * 15 mm (L) * 5 mm or less (th) - Duration: 6 weeks (4 weeks measure &amp; results + 2 weeks explanation &amp; iterative integration by the client)</p>	<p>Dedicated equipments generating positron using a non radioactive generator (2Me without building and utilities - Dimensions of the core generator: 2 m (L) * 4 m (l) * 2 m (th) - Weight: 45 tons, optimizable to 30 tons for mobile equipments - Surface: 7*10 m2)</p> <p>Dedicated test installations with high vacuum either by chamber, suction cup or tube for the non destructive characterization of very valuable materials (2 Me without building and utilities – surface: 7*10 m2)</p>	<p>Production and maintenance services of the positrons generating equipments and of the test installations installed on the client's sites (300 Ke/year)</p>
<p><b><u>POSITHOT industrial implantation:</u></b></p> <p>ZA de Courtaboeuf - 12 avenue de Norvège - 91140 Villebon sur Yvette – France</p>			
<p><b><u>PEOPLE TO CONTACT SO THAT TO EXPLORE AND LAUNCH A TECHNICAL AND APPLICATIVE STUDY AND MEASURE:</u></b></p> <ul style="list-style-type: none"> <li>- Jean-Michel REY - 06 52 02 65 60 - Founder and President - Research, engineering, production &amp; maintenance</li> <li>- Pierre BREGAULT - 06 67 53 29 33 - Chief operating officer - Marketing, commercial, legal &amp; finance</li> </ul>			

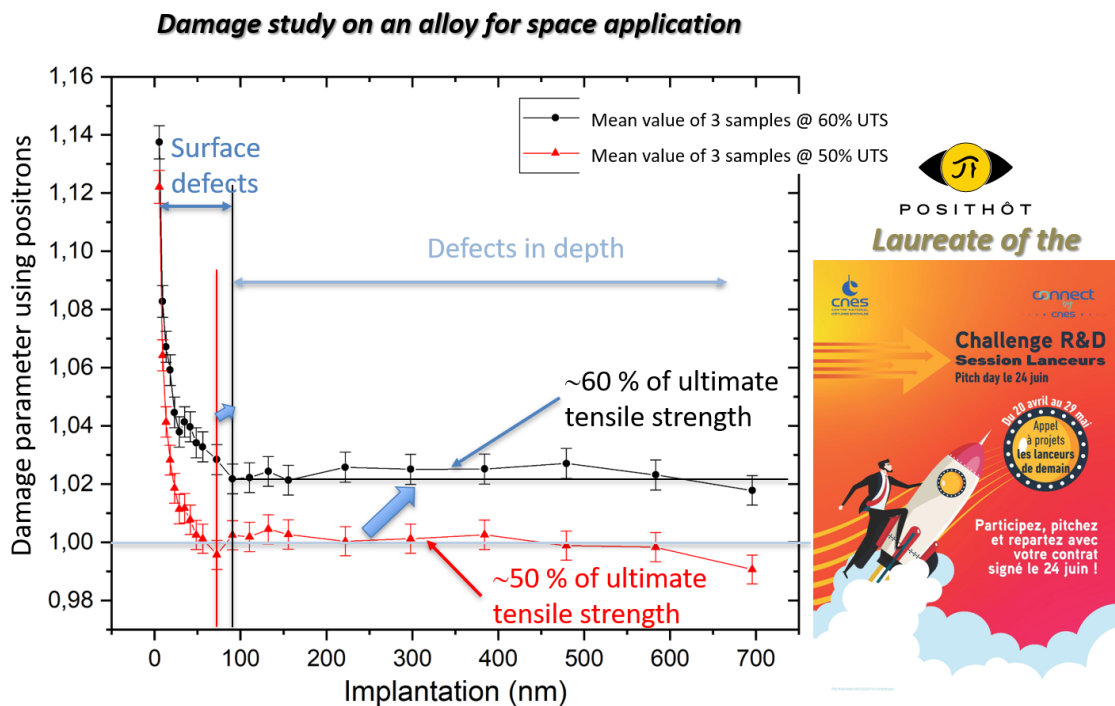
**Notes for your use:**

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**VISUALISATION OF A POSITRON NON-RADIOACTIVE GENERATOR AND LINKED TEST LINES (MAX 3)**



**TYPOLOGY OF RESULT (POSITRON ANNIHILATION SPECTROMETRY)**



The ➡ highlights the increase of the defect density



**SCIENTIFIC AND TECHNICAL METHODOLOGY OF AN APPLICATIVE DIAGNOSIS AND PREDICTION  
BY SPECTROMETRY OF THE STRUCTURAL TOUGHNESS AND ITS EVOLUTION IN OPERATIONS**

	<b>Step by step deployment</b>	<b>Target</b>
<b>Phase 1:</b> <b>Scientific and technical committee</b> (with your open innovation, research, engineering, quality maintenance, control and/or risk experts)	<b>Material of products, parts or installations:</b> Inform on the materials and on their compositions <b>Processes of the material:</b> Inform on the processes employed <b>Critical conditions on operation:</b> Inform on the critical conditions of utilization and their various operational cycles <b>Samples:</b> Inform on the current ways of extracting samples at the various steps of formulation and/or processing <b>Test line:</b> Inform on the positron annihilation spectrometry with high vacuum either by chamber, suction cup or tube, its principles, its results, its modalities, its achievements	<b>Decide on a 20/80 basis the type of products, parts or installations to be submitted to an in-depth diagnosis of their material</b> in order to asses, improve, check and predict their toughness, durability, sustainability, expectancy or remaining expectancy of life on operations
<b>Phase 2:</b> <b>Research contractor for material and product characterization (1<sup>st</sup> level of deployment)</b>	<b>Material of products, parts or installations:</b> Confirm the materials and their compositions <b>Processes of the material:</b> Confirm the processes employed <b>Critical conditions on operation:</b> Confirm the critical conditions of utilization on operations and their various cycles <b>Samples :</b> Ensure the extraction, the sampling or the disassembly of parts in the right number and statute and at the various steps of composition and/or processing <b>Test line:</b> If needed, ensure the adaptation of the standard test line to the singular size and nature (nota: material with water inside needs a preliminary drying) of the samples with high vacuum either by chamber, suction cup or tube	<b>Establish with samples the matrix of signatures</b> in terms of density of defects at the atomic scale of the material of the product, part or installation at the various steps of composition, process and cycle of utilization with critical conditions on operations  <b>Confirm the correlation</b> between the density of defects at the atomic scale of the material and its toughness, durability or expectancy or remaining expectancy of life
<b>Phase 3:</b> <b>Study contract for material and product qualification (2<sup>nd</sup> level of deployment)</b>	<b>Material:</b> Ensure the works on the various compositions. <b>Processes of the material:</b> Ensure the works on the various steps of processes. <b>Critical conditions on operation:</b> Ensure the works on the various critical conditions on operation and their cycles. <b>Samples:</b> Ensure the extraction, sampling or disassembly of the parts in terms of number and statute at the various levels of composition, processing, condition on operations. <b>Test line:</b> Ensure the test and measure by spectrometry with high vacuum either by chamber, suction cup or tube	<b>Ensure the reverse design, design or re-design</b> , of the material with the highest level affordable of density at the atomic scale  <b>Predict the toughness, durability, expectancy or remaining expectancy of life</b> at the various steps or cycles of process or utilization
<b>Phase 4 &amp; 5 for high-valuable needs:</b> <b>EPCI development and maintenance contract of a dedicated installation for material and product monitoring on operations (3<sup>rd</sup> level of deployment)</b>	<b>Material:</b> Ensure the control of the permanency of the various formulations <b>Processes of the material:</b> Ensure the control of the permanency on the various steps of processes <b>Critical conditions on operation:</b> Ensure the control of the permanency on the various critical conditions of utilization on operation <b>Samples:</b> Define and optimize the recurrent extraction, sampling or disassembly cycle <b>Test line:</b> Define and optimize the spectrometry cycle with high vacuum either by chamber, suction cup or tube to the very recurring and very profitable needs	<b>Get a dedicated equipment allowing to proceed on operations at a non-destructive control by a standard spectrometry at the external surface</b> of the level of non-density of defects on focused points of the material of products, parts or installations (Engineering, procurement, commissioning, installation and maintenance of the test line)

**ULTIMATE PERFORMANCE IN TERMS OF QUALITY, MARGIN, SCHEDULE, SECURITY AND SUSTAINIBLTY  
REGARDING THE CHARACTERIZATION OF THE STRUCTURAL STRENGTH AND ITS EVOLUTION IN OPERATIONS  
FOR YOUR VALUABLE MATERIALS, PRODUCTS, PARTS AND INSTALLATIONS UNDER CRITICAL CONDITIONS**