

SENIOR LINEAR ACCELERATOR DESIGNER – Thales AVS MIS Velizy, FRANCE

WHO ARE WE?

Join Thales, the global leader in safety and security technologies for the Aerospace, Transportation, Defense and Security markets. With 80,000 employees in 56 countries, the Group benefits from an international presence which allows it to act as close as possible to its customers, all over the world.

The Microwave & Imaging Sub-Systems (MIS) activity benefits from more than 70 years of experience in the design and manufacturing of imaging and microwave subsystems intended for professional applications

- for the defense industry (radar systems , jamming and communication),
- for the space industry (geostationary and low orbit satellites, “deep space” scientific missions),
- for large scientific infrastructures (particle accelerators (CERN, etc.), nuclear reactors nuclear fusion,
- for security (X-ray detection scanners) and for medical imaging.

In all of these markets, MIS is among the world leaders in its specialties, with industrial locations in several countries and a sales network present on all continents.

MIS designs and manufactures electronic devices and systems such as microwave power sources (based on solid-state components or electron tubes) as well as X-ray imagers, atomic clocks and ion propulsion systems. For this, MIS masters a broad spectrum of expertise in the field of physics (electromagnetism, beam dynamic, physic, chemistry, vacuum technologies, analog and digital electronics, etc.), image processing and AI algorithms, software on PU or GPU, and systems.

Within our Technical Department and as part of our activities in the field of microwave devices and systems, we are looking for a Senior Linear accelerator designer based in Vélizy (78).

Job Summary

You will join a dedicated team of engineers and physicists who are experts in their field, mainly based Velizy. Therefore, as expert and design authority, you will be involved in many aspects of the conception, manufacturing and commissioning of the Flashtherapie platform. You will also be responsible for training and mentoring the new comers in the technical team of accelerator, from operators to engineers.

You are coordinating activities and taking a technical lead role in the LINAC system operation.

Within the technical department, the Senior LINAC designer is responsible of the product line, technical choices and the development policy of the technological key elements needed to fill the strategic roadmap.

WHO ARE YOU? KNOWLEDGE, SKILLS AND EXPERIENCE:

- PhD, MSc. degree in physics or engineering; you have at least 10 years of experience in the field of particle accelerators and knowledge in radiotherapy LINAC;
- You have skills in R&D accelerator systems and significant experience in hardware development and more specifically in installation and commissioning of linear accelerator (electrons) or installation of similar complexity;
- You have a strong technical background in particle physic, electron beam diagnostics and computer science, with a great knowledge of LINAC, radiation norms and standards;
- You have multidisciplinary technical leadership: beam dynamic for LINAC and transfer lines, radiative transport, RF, HPP, Control System, LLRF and timing system, ultra-high vacuum, precision mechanics, customer site integration, machine commissioning;
- A good knowledge of high-pulsed power systems, vacuum technologies, electromagnetism, and command systems is desired;

- Ability to perform measurements and data analysis with a scientific approach;
- Being able to take initiative and adapt well to changes in priorities;
- Must have excellent verbal and written communication skills;
- Open-minded, organized, conscientious and result-orientated;
- Teambuilding capability; and an open management and leadership approach;
- You know how to work independently, you are rigorous, creative and have a strong team spirit.

We are looking for an Expert in LINAC

COMPETENCIES:

You will have to coordinate the activities and taking a technical lead role in the LINAC system operation:

- To manage and to ensure technical leadership in the development of accelerator systems for medical (Flashterapy), scientific and industrial applications (cargo screening, CND etc.)
- To describe the system, mechanical and physical functions, requirements and development plan
- To propose the system architecture of the Flashtherapy machine and for the new products
- To manage and coordinate the design and development of a medical Flashtherapy machine
- To propose and justify technical, technological and methodological choices in accordance with the approved mechanical architecture and design
- To perform accelerator and beam parameter measurements to assist experts in commissioning of the accelerator
- To train and supervise development engineers who work in this area
- To ensure the role of Design Authority for the particle accelerator product line
- To lead the innovation strategy relating to the design and development of new accelerator concepts
- To work collaboratively with production and procurement to produce cost effective, easy to manufacture mechanical design solutions
- To be THALES representative within international academic and medical bodies
- To participate in international conferences in the field and promote the products, machines and systems developed by Thales

YOUR CAREER AT THALES:

Future opportunities will allow you to develop the accelerator particles products line. You will be able to evolve and grow your competencies through different challenges R&T and R&D programs.

Build your talents in all the domain of Thales AVS MIS, discovering other state of the art products used for science applications, new customers or go to other RF complex solution

Evolve between technical expertise and leadership path