



Injection Technician for Elettra 2.0

Deadline: 29 September 2023

Ref: GA/23/23

Background

Elettra Sincrotrone Trieste is an international multidisciplinary research center operated as a user facility, featuring a 2.0/2.4 GeV, third-generation synchrotron light source (Elettra), a new free-electron laser light source (FERMI) and a variety of support laboratories. The extremely high quality of the machines and beamlines has set new performance records and has been producing results of great scientific and technological interest. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being developed. The new source will exhibit a major increase in the brilliance and coherence fraction of the photon beams. The Elettra 2.0 optics is based on our enhanced symmetric six bend achromat structure (S6BA-E) with a 12-fold symmetry and an emittance of 200 pm-rad at 2.4 GeV. The new structure creates also straight sections in the arcs permitting the installation of additional insertion devices, thus increasing the number of beamlines. Existing beamlines will have to be upgraded and new beamlines developed to take full advantage of the characteristics of Elettra 2.0. The new machine is scheduled for commissioning in the second half of 2026. See <http://www.elettra.eu> for more information.

Job description

The successful candidate will be part of the team responsible for the Injection Circuits of Elettra 2.0. In particular, he/she will:

- . support the Injection Circuits staff in the development, prototyping, assembly, cabling, test & measurement, documentation, installation, troubleshooting and commissioning of the mechanical, electrical and instrumentation parts of new Injection plants and spare parts. He/she may also be involved, with the other members of the team, in the maintenance of the current machine Injection Circuits (including Booster Injection and Extraction ones) and follow purchase, update and rotation-in-operation of the spare parts, particularly of the mechanic, electric and electronic components to allow other members of the team to increase their involvement in the development of the new machine;
- . contribute to the Injection Circuits laboratory activities, including printed circuit boards (pcbs), parts logistics, test reporting, instrumentation and software maintenance and documentation.

Qualifications

A three-year university degree in Electronic Engineering or a high-school diploma from an industrial or professional institute with specialization in Electronics or a related field is required, together with at least 3 years of proven experience in activities involving high power and high voltage applications. Experience in radiofrequency instrumentation and/or pulsed circuits would be considered a plus.

The following technical skills are highly desirable:

- designing, assembling, modifying, cabling, troubleshooting and commissioning mains and high voltage power equipment;
- good knowledge of mechanical tools and associated risks in lab or workshop activities (lathe, milling and bending machines, soldering, welding and compressed air tools, etc.);
- safe access techniques to measure and troubleshoot equipment at low and mains voltage;
- setting up automated oscilloscope measurements to detect elusive faults;
- knowledge of wired (relay based) and programmable (PC, PLC...) automation techniques to operate, maintain and troubleshoot test sets and Injection plants;

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- signal integrity probing;
- instrumentation interfacing;
- programming and reporting.

A working knowledge of the Italian language and a basic knowledge of technical English are required.

Good time management skills and ability to prioritize are expected, together with the ability to interact with staff at all levels and to work as part of a multi-disciplinary team, sharing & maintaining common lab software, data bases, design, documentation and procedure repositories.

The appointment envisioned is a fixed term contract with an initial duration of 12 months.

The salary will be commensurate with the previous experience and qualifications of the candidate.

Applications should include full curriculum vitae.

The deadline for the submission of the application is September 29, 2023.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001, employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years will be excluded from the present selection procedure. We thank all applicants in advance.

For more information, please contact Piergiorgio Tosolini (email: piergiorgio.tosolini@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=3341>

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