



Elettra Sincrotrone Trieste

Fluid and mechanical systems engineer for the Elettra 2.0 project

Deadline: 11 February 2022

Ref: SA/22/3

Company description

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. A new generation, diffraction-limited storage ring light source denoted as Elettra 2.0 is under development. See <http://www.elettra.eu> for more information.

Beamline/Activity/Project description

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. Additionally, three in-vacuum undulators and two high-field superbends are considered. The new machine is scheduled for commissioning in the second half of 2026.

Job description

The successful candidate will collaborate in the design and construction of the new fluid and mechanical systems necessary for the development of Elettra 2.0. He/she may also be required to contribute to the management, operation and maintenance of fluid and mechanical plants serving our present accelerators and buildings (HVAC, process cooling water, compressed air, technical gases, liquid nitrogen, fire-fighting systems, special plants, etc.) in order to increase his/her expertise in plant management and allow more senior colleagues to work on the new accelerator systems. In this capacity, he/she may be required to cover shifts for on-call emergencies.

She/he will be involved in the development of fluid and mechanical plants, both in the definition of technical aspects (technical specifications, timing, layout drawings, flow diagrams process, pipe and equipment plants for all process systems, etc.), as well as in the administrative aspects (tender specifications, supplier follow-up, cost vs. benefit analysis, project planning and reporting, etc.). He/She will perform engineering evaluations and analyses, and make engineering decisions for all aspects of the assigned tasks.

Qualifications

A master degree in mechanical, naval, management, chemical, energy nuclear or environmental engineering, or related disciplines is required. The successful candidate must be skilled in HVAC, fluid dynamics, pump system analysis and basic electrical capabilities.

The enrollment in the official register of Italian professional engineers is an essential requirement. Experience of at least five years in management, maintenance and design of industrial plants or proven experience in centralized mechanical plants is highly desirable. In the absence of fully qualified candidates, curricula with shorter professional job experience could be considered.

Good oral and written communication skills in English are required, together with fluent knowledge of the Italian language.

Good time management skills and ability to prioritize are expected, together with the capacity to interact with staff and to work as part of a multi-disciplinary team.

Elettra - Sincrotrone Trieste S.C.p.A.

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Società di interesse nazionale
ai sensi dell'art. 10, comma 4,
L. 19 ottobre 1999 n. 370

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The appointment envisioned is a fixed term contract with an initial duration of 12 months. The salary will be commensurate with previous experience and qualifications of the candidate.

Applications should include full curriculum vitae signed by the applicant (preferably using the European Curriculum Vitae Format in PDF), with the names and contact information (including electronic mail) of at least two professional references.

Due to the situation related to the COVID-19, the interviews will be performed through video conferencing.

The deadline for the submission of the application is February 11, 2022.

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 Dino Zangrando (email: dino.zangrando@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=2381>

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