

Mechanical Engineer Positions

Deadline: 16 March 2020

Ref: RA/20/13

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. 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, the development of a new source, named Elettra 2.0, started in 2018 with the aim to provide intense nano/micro-beams in the range of VUV to X-rays. The main characteristics of this new generation storage ring is a substantial increase of the brilliance and coherence fraction of the sources. Existing beamlines will have to be upgraded and new beamlines developed to take full advantage of the characteristics of the new photon sources.

Job description

The successful candidates will join a team of engineers and technicians that are participating in mechanical projects involving high precision mechanisms, ultra high vacuum technologies, water and liquid nitrogen cooling systems. The candidates will collaborate with an international and multidisciplinary team of scientists and will be involved in cutting-edge scientific and technical projects. The main duties and responsibilities will be to:

- produce 3D, 2D construction and layout drawings of accelerator systems and beamlines components involving high precision motorized mechanical systems, high stability supports, frames, vacuum and cooling technologies;
- Carry out analysis, feasibility studies and mechanical design studies for mechanical components of the accelerator and beamlines (general layout, high stability supports, high heat load components...)
- convert technical assessments of analysis results into design recommendations;
- produce technical documentation (specifications, design requirements and technical reports)
- supervise the procurement, manufacturing and construction of the components.
- carry out tests, installations and commissioning and maintenance of the components;
- participate in commissioning and performance tests;
- to comply with all Health and Safety procedures and policies.

Qualifications

A Master Degree in Mechanical Engineering.

Experience and proficiency in 3D mechanical design using CAD is also required. Proficiency in Catia would be considered an asset.

Expertise in performing finite element analysis, mainly in the fields of thermal stresses and vibrations would be considered a plus as well as experience with vibration measurements, modal testing, and related topics.

Good oral and written communication skills in English and the ability to work productively in a team and have a flexible





approach to the working conditions and environment and be willing to learn new skills are essential.

The deadline for the submission of the application is March 16, 2020.

After an initial training period the candidates must be able to deal with the management of a project independently. The headquarter will be in Trieste but travels to other facilities as well as to suppliers will be required for functional tests of the components under development.

The type of contract duration, level and remuneration will depend on the qualifications of the candidate. Applications should include a full curriculum vitae, description as well as any evidence of the qualifications declared, and, if possible, the names and (electronic mail) addresses, telephone and fax numbers of three references.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection16ter) 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 Ivan Cudin (email: ivan.cudin@elettra.eu).

To apply for this position please visit the following link:

https://www.elettra.trieste.it/it/about/careers/working-withus.html?ref=RA%2F20%2F13