

Call for contribution of expertise

CERN invites collaborating institutes and universities to contribute the expertise of their qualified employees to the activity described below.

Start date:
01.04.2018

Duration: One year, possible extension to a maximum of up to three years.

Project/Activity: Materials engineer on SRF research activities

Detailed description of Activity:

Within the project the candidate will participate in material research at CERN, in the Materials, Metrology and NDT section within the EN – MME group, collaborating with the material procurement and fabrication related activities mainly for the Hi luminosity LHC and Superconducting RF R&D related projects, amongst others the SPL and CRAB SRF cavities. Within this framework the candidate will be in charge of the planning and execution of microstructural observation and mechanical test based studies related to materials and components (material and assembly qualifications, follow-up of quality controls for industrial and in-house CERN production).

The candidate will have to exploit all observational and analytical tools available in the section such as optical microscopy, Scanning Electron Microscopy (SEM), microanalysis, X-Ray diffraction, hardness and tensile testing both at ambient as well as cryogenic temperatures. The candidate will be involved in advanced material studies performed throughout the section, such as giving support for examinations making use of non-destructive techniques (NDT) available in the section, but also in cooperation with other CERN services (follow-up of Residual Resistivity Ratio measurements), or external laboratories.

The candidate will be involved and will be the first contact point in working groups of the above mentioned projects in order to provide them with material expertise on specific topics of material selection and qualification, and to systematically present material tests results. This will include providing support in writing and reviewing technical specifications and performing qualifications and audits related to procurement of materials and production of components.

Profile: Masters degree in materials, mechanical or chemical engineering or equivalent professional experience. General knowledge of materials science and engineering. Familiarity with a broad range of material characterisation techniques is preferential.

Specific details: Work in controlled radiation areas, underground premises, on shift, and during nights/weekends when needed. Work with cryogenic liquids. Diplomacy and excellent team-working attitude. Good working knowledge of either English or French.

Status at CERN: Associated Member of the Personnel (Project Associate).

Conditions in accordance with CERN's Staff Rules and Regulations and Administrative Circular No. 11. Subsistence allowance is payable by CERN to cover the additional cost arising from the individual's (and, as applicable, their family's) stay in the local area while performing activities at CERN.

Option: Collaborating institutes and universities can propose to support the activity of the qualified employees participating in this "Call for contribution of expertise" with students or other employees. Their status and Subsistence allowance when applicable will be adapted to their relation with their institutions.

Contact person: Isabel Bejar Alonso

Reference: 2017_Q4_034_SRF research