



# INDIAN INSTITUTE OF TECHNOLOGY BOMBAY POWAI, MUMBAI 400076.

**Advertisement No.: IRCC/EXT091/2020**

**Job Title**

Junior Research Fellow

**Job Reference Number**

50170093

**Application End Date**

18.08.2020

**Type of Employment**

Proj. Staff Contract

**No. of Position(s)**

1

**IITB Project Recruitment:**

Project title: Green Manufacturing of Automobile Forgings by Precision Forging

**Essential Qualifications & Experience:**

Graduates/Post Graduates from Mechanical Engineering/Metallurgical Engineering/Aerospace Engineering from a reputed University/Institution with a sound knowledge of forging of metallic materials may apply for this position.

Candidate should be NET/GATE qualified.

**Job Profile:**

Job is about designing tools for precision hot forging of automotive crankshafts (forgings without flash). Simultaneously, prediction of occurrence of defects based on the Strain Nonuniformity Index (SNI) developed at IIT Bombay, is expected. Different designs of automotive crankshafts need tools for flashless (hot) forging to be designed. The job involves process design (designing tools and manufacturing parameters) to get the desired microstructure and the mechanical behaviour, simulations using FEM based softwares (some computer programming to develop user programmes might be required), designing tools for manufacture the crankshafts, and validation of the tool and process design.

The job requires a very good understanding of materials, especially ferrous metals, their methods of processing, mechanical behaviour especially at high temperature under different strain rate, temperature and strain conditions, ability to design tools and setups and get them fabricated. Experience in using simulation software like ANSYS and ABAQUS/DEFORM or equivalent, for design and analysis of tools /setups would be desirable. The incumbent will have to work to the timelines of the project.

**Pay Details:**

Consolidated salary Rs.25000/- p.m. + HRA

**General information:**

The Position is temporary initially for a period of 1 Year and tenable only for the duration of the project.

The appointment is for time bound project and the candidate is required to work mainly for the successful completion of the project . The selection committee may offer lower or higher designation and lower or higher salary depending upon the experience and performance of the candidate in the interview.

Candidates called for interview will be required to attend at their own expenses.

For any queries / clarification please contact : [recruit@ircc.iitb.ac.in](mailto:recruit@ircc.iitb.ac.in)