



**भारत हेवी इलेक्ट्रिकल्स लिमिटेड**  
(भारत सरकार का उपक्रम)  
**Bharat Heavy Electricals Limited**  
(A Govt. of India Undertaking)

**Corporate Research & Development**

Vikasnagar, Hyderabad 500093

**Advt No: R&D/03/Rctt/01/HRX/2009**

BHEL, country's premier Engineering Organization and one of the **NAVRATNA** PSUs provides world-class products and services in Power, Transportation, Transmission and Electronics Sectors having Manufacturing and service divisions spread all over the country. BHEL Corporate Research & Development Division at Hyderabad leads BHEL's research efforts in a number of areas of importance to BHEL's products range and has set up Centers of excellence in various areas like Simulators, Computational Fluid Dynamics, Permanent Magnet Machines etc.

We are looking for bright candidates with Engineering and Science qualifications with **Aptitude for Research** for the following positions in our Corporate Research & Development division situated at Hyderabad (RD:01 to RD:11); Amorphous Silicon Solar Cell Plant (ASSCP) situated at Gwalpahari, Gurgaon (AS:21); Heavy Electrical Plant situated at Bhopal (BP:31).

Post Code	Position	No of posts	Qualifications	Area of specialisation
RD:01	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Chemical Engineering	Modeling & Simulation of Chemical Reactors/ Gasifire for Clean Coal Technology. Experience in the following areas is desirable. • Gas-Solid Multiphase Chemical Reactions and Gas-solid flow systems. • Fluidised bed Gas-Solid reactors for Coal Gasification. • Dynamic modeling and simulation of Multi-phase Gas-solid reactions. • Simulation using software such as Aspen Plus and Aspen Dynamics.
RD:02	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Mechanical Engineering/ Applied Mechanics.	Cryogenic system design for high temperature superconducting machines. Knowledge of Cryogenic related Heat transfer, fluid handling and Material selection is desirable.
RD:03	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Metallurgy/Material Science With Basic Degree in Metallurgical Engineering	Advanced Material for Boiler & turbines for Supercritical Thermal Power Project / Nuclear Power Plant Equipments.
RD:04	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Mechanical / Aeronautical Engineering with research topic on Aeroacoustics.	Aeroacoustics (Noise) Modeling and Predictions for Power Plant and Power Plant components. Knowledge in Flow induced noise, acoustic material, vibro-acoustics, and use of S/W such as Sysnoise is desirable.
RD:05	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Mechanical/ Aeronautical/ Chemical Engineering/Applied Mechanics.	Unsteady Flow/Cavitation Flow Simulation/ Nucleating Flow in Nuclear Reactor (NSG) Familiarity with ANSYS-Fluent, ANSYS-CFX softwares with minimum 2 years Post Doctoral experience in the following research areas is desirable. • CFD application to internal flows especially related to turbomachinery. • Transient/Nucleating flow analysis, Cavitation studies in hydro turbines and pumps. • Combustion/Chemical kinetics, including heat transfer due to convection and radiation.
RD:06	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in Mechanical Engineering/ Applied Mechanics	Design and Conducting Turbomachine Experiments and S/W based prediction. Knowledge in Design and analysis of Thermal Turbomachines, experience in experimental techniques for fluid flow analysis in blade cascades and rotating test rigs are desirable.
RD:07	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in High Voltage Switchgear Engineering with Basic Degree in Electrical Engineering	Circuit Breaker Arcs (Power System). Knowledge in High current Arc Physics, Testing & Evaluation of HV Circuit Breakers, Switching/ Transient Phenomena, Switchgear Operating Mechanisms, Vacuum/Sf6 Gas Insulated HV switching equipments is desirable.
RD:08	Sr Engineer/ Dy Manager (E2/E3 grade)	One	Ph.D in High Voltage Engineering with Basic Degree in Electrical Engineering	Partial Discharge (High Voltage). Knowledge in Electrostatic/Electromagnetic field designs, Transient phenomena, Partial Discharges and Gas Insulated Power equipments is desirable.
RD:09	Scientific Officer/ Sr Scientific Officer (E1A/ E2 grade)	One	Ph.D in Science with Basic Degree in Chemistry.	Insulation Chemistry - Electrical Insulation of Transformers and Generators. Working knowledge & experience of Testing Transformer and insulating materials as per National & International Standards is desirable.
RD:10	Engineer/ Scientific Officer/ Sr Engineer/Sr Sc. Officer / Dy Manager (E1A/ E2/ E3 grade)	Two	Ph.D in Nano Technology with Basic Degree in Material Science/ Metallurgy/Chemical Engineering/ Chemistry/ Physics	Nano Materials & Nano Technology as applied to Power Plant Application & Equipments Synthesis, functionalisation, Characterisation and application of Nano materials in the area of Power Plant Equipments.
RD:11	Sr Engineer/ Sr Scientific Officer/Dy Manager (E2/E3grade)	One	Ph.D in Science or Engineering with Basic Degree in Chemical/ Metallurgical Engineering/ Material Science	Fuel Cell in the areas such as Polymer Electrolyte Membrane (PEC), Solid Oxide Fuel Cells (SOFC).
AS:21	Scientific Officer/ Engineer/ Sr Scientific Officer/ Sr Engineer (E1A/ E2 grade)	One	Ph.D in Solid State Physics/Material Science with Basic degree in Engineering or Science	Micro electronics/Thin Film Technology, Vacuum Technology.
BP:31	Engineer / Sr. Engineer (E1A plus service weightage/E2)	Three	B.E and M.E/M.Tech in Thermal/ Fluid/Hydraulic Machinery Engg with relevant post qualification experience (minimum 2 years) in Solid modeling & CFD analysis/Hydraulic design of Hydro Turbines and Pumps.	Hydraulic designing of Turbines, CFD analysis, Solid Modeling.

**"Candidates who had applied earlier, against our advertisement Advt.No.R&D/HRX/03/Rectt/Advt.No.01/2008 need not apply and the applications received earlier will again be scrutinized as per the revised criteria"**

- Note:**
- Candidates should possess Ph D in the relevant area of specialisation, as a full time student of a recognised Institute/University from India or Abroad.
  - Area of Specialisation/working experience should be supported by Published works.
  - Candidates, who have submitted the Ph D thesis for external examination, can also apply with a proof to that extent. Their selection/appointment will however be subject to their submission of the Ph D certificate.

**EXPERIENCE**

**Ph.D (Engineering)**

- Candidates with no Post Ph.D experience will be offered Sr. Engineer (E2 Grade) post.
- Candidates with minimum 4 years of Post Ph.D experience in relevant area will be placed in Dy Manager (E3 grade). However, candidates with Post Ph.D experience of less than or more than 4 years will be suitably considered for placement in appropriate grade and/or with service weightage.

**Ph.D (Science)**

- Candidates with no Post Ph.D experience will be offered Scientific Officer (E1A Grade) post with 2 years weightage.
- Candidates with minimum 2 years of Post Ph.D experience in relevant area will be placed in Sr. Scientific Officer (E2 Grade). However, candidates with Post Ph.D experience of less than or more than 2 years will be suitably considered for placement in appropriate grade and/or with service weightage.

**UPPER AGE LIMIT AS ON (01.06.2009):**

E1A Grade	-	30 years
E2 Grade	-	34 years
E3 Grade	-	38 years

Further age relaxation upto 2 years over the above age limits will be considered in respect of candidates having additional post qualification experience.

**PAY SCALES:**

E1A	Rs. 11,225-450-17,525
E2	Rs. 13,750-550-18,300
E3	Rs. 16,000-640-20,800

(Note: The Pay Scales are due for upward revision wef. 01/01/2007)

**REMUNERATION AND OTHER BENEFITS :**

Besides Basic Pay, Dearness Pay and Industrial DA, benefits like CCA, PF, Insurance Cover, Gratuity, LTC, Medical Facilities for self and family, HRA or Company accommodation, Conveyance reimbursement, Plant Performance Payment, Special Incentive, Uniform, Subsidized Canteen facilities, Leave/Leave Encashment, Membership of Professional Bodies, etc. are admissible as per Company rules.

**MODE OF SELECTION:** Selection will be through interview at Hyderabad.

**RESERVATION AND RELAXATION:**

- Reservation for SC/ST/OBC and physically challenged candidates will be as per Government Directives.
- Upper age limit is relaxable by 3 years for OBC (Non-creamy layer) and 5 years for SC/ST candidates and 10 years for Physically Challenged.
- Vacancies reserved for OBC category are meant only for candidates coming under "Non-Creamy Layer". "Non-Creamy Layer" means the gross annual income of parents of the candidates should not be more than Rs.4.5 Lakhs or possessing wealth above the exemption limit as prescribed in the Wealth Tax for a period of three consecutive years in line with DOPT OM No.36033/3/2004-Estt (Res) dated 14<sup>th</sup> October, 2008.

4. The Physically Challenged candidates are required to furnish Medical Certificate in relation to their disability from Medical Board of a Government Hospital.  
Disabilities: under 'Persons with Disability Act' are defined as:  
Loco motor Disability (Orthopaedically Handicapped) - means minimum 40% disability of the bones, joints or muscles leading to substantial restriction of the movement of the limbs.  
Hearing Impairment - means loss of sixty decibel or more in the better ear in the conversational range of frequencies.
5. Upper age limit relaxable by 5 years for the candidates who had ordinarily been domiciled in the state of Jammu and Kashmir during the period from 01.01.1980 to 31.12.1989.

**GENERAL INSTRUCTIONS :**

1. Candidates employed in Government/Semi Government Departments/PSUs/Autonomous Bodies should send their applications through proper channel or produce NOC at the time of interview.
2. Candidates belonging to General and OBC categories should enclose a crossed demand draft/Bankers Cheque for Rs. 250/- drawn in favour of "BHEL Corporate R&D" on State Bank of India, BHEL R&D Complex Branch, Vikasnagar, payable at Hyderabad along with the application form. Candidates belonging to SC/ST & Physically Challenged categories are exempted from the above payment and hence are not required to send the draft.
3. Candidates called for interview will be reimbursed upto AC 2 Tier to and fro train fare from their starting station or mailing address, within India, whichever is nearer to the place of interview, by the shortest route, on production of proof of journey.
4. Management reserves the right to raise the standard of specifications to restrict the number of candidates to be called for interview.
5. Though the vacancies are tentatively at the locations mentioned, the selected candidates can be transferred to any of the Company's offices/divisions anywhere in India or abroad.
6. The appointment of selected candidates will be subject to meeting health standards prescribed by the company.
7. The Candidates should ensure that they fulfill the eligibility criteria and other requirements and that the particulars furnished by them are correct in all respect. In case it is detected at any stage of recruitment process that the candidate does not meet the eligibility criteria and/or the candidate has furnished any incorrect/false information or has suppressed any material fact(s), the candidature of such a candidate is liable to be rejected. If any of the above shortcoming(s) is/are detected even after appointment, his/her services are liable for suitable actions including termination and prosecution.
8. SC, ST, OBC (Non- creamy layer), physically challenged and J&K domiciled candidates should carefully mention the categories, since these details will not be allowed to be changed later.
9. Any legal proceedings in respect of any matter of claim or dispute arising out of this advisement and/or an application in response thereto shall be subject to jurisdiction of the Courts of Hyderabad.
10. The Company reserves the right to reject any application without assigning any reason whatsoever.

**HOW TO APPLY:**

Interested candidates (only Indian Citizens) fulfilling the eligibility criteria should send the filled-in application in the prescribed format (which can be downloaded from our website: [www.bhel.com](http://www.bhel.com)) along with attested copies of qualifications and experience, indicating "the Name of the post applied for & the Post code" on top of the cover/ envelope to the **Manager (HR/Recruitment), BHEL Corporate R&D, Vikasnagar, Hyderabad – 500093, Andhra Pradesh**, latest by 30-06-2009.

PRESSMAN

**25x10 cm**