



ELECTRONICS CORPORATION OF INDIA LIMITED **Radiation Detectors and Instrumentation Division**

Electronics Corporation of India Limited (ECIL) was setup under the Department of Atomic Energy in the year 1967 with a view to generate a strong indigenous capability in the field of professional grade electronics. The initial accent was on total self reliance and the ECIL was engaged in Design, Development, Manufacture and Marketing of several products. Though the initial thrust was on meeting the Control & Instrumentation requirements of the Nuclear Power Program, the expanded scope of self reliance pursued by ECIL enabled the company to develop various products to cater the needs of Defence, Security, Space, IT & E-Governance.

In order to meet the requirements of high precision and reliable radiation measuring equipments, ECIL has established sophisticated infrastructure, state of the art equipments and calibration facilities. Some of these are given below.

1. Radiation Detectors

1. Ex core neutron detectors (He3, BF₃, Boron coated proportional counters, Compensated/uncompensated Ion chambers, Fission chambers)
2. In-core neutron detectors (Self Powered Neutron Detectors, Miniature & High Temperature Fission Chamber)
3. Gamma Ion-chambers
4. Gas flow proportional counters for Beta detection
5. Ionization chambers for Tritium in air measurement



2. Nuclear Instrumentation Modules

1. NIM Bin and Power Supply
2. High Voltage Unit HV 4828 N
3. High Voltage Unit HV 4827 N/B
4. Charge Sensitive Pre Amplifier PA 4850
5. Shaping Amplifier PA 4901 / PA 4901 N
6. Spectroscopy Amplifier - PA4903N
7. Counter Timer EC 5104 / EC 5104 N
8. Compact 8K MCA with USB Interface



3. Instrumentation for Nuclear Reactors

1. Neutron Flux Monitoring for Reactor Start-up
2. Neutron Flux Monitoring for Intermediate & Power Range of Reactor operation
3. In-core Neutron Flux Mapping System
4. Delayed Neutron Monitoring System
5. Area Radiation Monitors
6. Process Water Discharge Activity Monitor
7. Environmental Radiation Monitors
8. Stack Release Monitoring System
9. Portal Monitoring System - PMS 4020
10. Hand and Foot Contamination Monitor



4. Home Land Security Systems

1. Limb Monitor - LM 4581
2. Door Way Monitor - PMS4021
3. Vehicle Monitoring System VMS 4030



5. Health Physics Instruments

1. Alpha Monitor - CM 4553A
2. Alpha Probe - SP 647 A
3. Beta Counting System - BCS 36A
4. Area Monitors AM 4561, AM 4562 A, AM 4567, BM 4560
5. Radiation Monitoring System RMS 4036
6. Ship Installed Radiac System SIRS4021
7. Gamma Radiography Survey Meter MR 4500 A
8. Radiation Survey Meter MR 4515, RM4564
9. Contamination Monitor - CM 4555
10. Pocket Dosimeters
11. Neutron Flux Monitor
12. Neutron Rem Monitor
13. Radiation Counting System (RCS 4037) & Accessories



6. Instrumentation for Fuel Reprocessing

1. Criticality Alarm System - CAS4018A
2. Passive Neutron Assay Based Waste Drum Monitor
3. Incell Monitor SD 4578 B



7. Radiation Calibration Facilities

1. High Range Gamma Calibration (AERB Recognized/Certified Facility)
2. Gamma Calibration Facility with Single Source
3. Neutron Howitzer
4. Liquid Source Handling Facility
5. Low Range Multiple Unit Test Facility
6. Low Background Test Room



Contact Address: **Electronics Corporation of India Limited**
Radiation Detectors and Instrumentation Division
ECIL Post Office
Hyderabad-500062
Email: headrid@ecil.co.in , Tel.: 040 2718 2243, Fax: 040 2713 6073