Rebar and corrosion detection system

The system should be versatile in rebar locator, cover meter as well as corrosion analysis, in a single system. The corrosion analysis based on the half-cell method and rebar location detection based on the eddy current principle. Electrodes should be placed in wheel which will allow the faster inspection. The system should have fast data acquisition and real time control over the measurement procedure. The system should be supplied with a Laptop for data processing as per the mentioned specification.

Should have following features:

- Display: Minimum 7" colour display and 800 x 480 pixels
- Memory: Internal 8 GB flash memory
- Power input: 12 V +/-25% / 1.5 A
- Battery: 3.6 V, 14 Ah
- Battery lifetime: > 8h (in standard operating mode)
- Humidity: < 95% RH, non-condensing
- Operating temperature: -10°C to +50°
- IP Classification: Touchscreen IP54, universal probe IP 67
- Touchscreen, interface box, battery charger, cable coil l=25 m with clamp, USB cable DVD with software, documentation, carrying strap and carrying case.
- Corrosion rod electrode, with spare parts, cable with spade terminal adapter and copper sulphate (250 g)
- Universal probe with probe cart for rebar location, probe cable 1.5 m (5 ft.), chalk, software, activation key.
- Software for data analysis: Data analysis and reporting in third-party software.
  Should be able to create custom reports with exported graphs and charts.
- Housing specially designed to be used on-site in harsh environments, including carrying strap, integrated stand and sunshield cover
- Dual core / latest processor supporting diverse communication and peripheral interfaces
- Direct upgrade possibilities to upcoming products

Corrosion

- Optimized workflow for rod and wheel measurements
- Customizable text should be entered for any specific locations
- Digital filtering to remove the effect of external noise
- Conform to ASTM C876, JSCE E 601, CE certification
- Voltage Measuring Range: -1000 to +1000 mV
- Voltage Resolution: 1 mV
- Impedance: 100 MΩ
- Sampling Rate: 900 Hz

Rebar-Locator/Cover-Meter

- Conform to BS 1881 Part 204, DIN 1045, CE certification

- Cover Measuring Range: Up to 185 mm
- Cover Measuring Accuracy: ± 1 mm to ± 4 mm or better
- Path measuring accuracy on smooth surface: ± 3 mm (0.12 inch) + 0.5% to 1.0% of measured length
- Diameter Measuring Range: Diameter up to 40 mm or more or better
- Diameter Measuring Accuracy: ± 1 mm or better
- Should be able to measure rebar of the first and second layer typically arranged in a rectangular mesh
- The signal strength spectrum should be seen in addition to the cover and diameter
- Zoom in facility on screen
- Display with cover curve or signal strength curve

Details of Training

Type of training	-	Operational & Maintenance
Number of persons to be trained	-	5 persons
Duration of training	-	3 days
Place of training	-	CBRI Roorkee