ON GOING PROJECTS

| S.No. | Description | Deliverables | Status |
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| 1. | Development of Measurement Techniques for Return Current through Rail, and Investigations on Computation of Rail Potential Rise | (a) Measurement technique for traction return current flowing through rail and earth.<br><br>(b) Simulation based investigations on rail potential rise due to traction and estimation of percentage change in rail potential rise with load current flowing through it.<br><br>(c) Final project report on the developed measurement technique and prototype.<br><br>(d) Special equipments/software etc. procured for the project | MoU has been signed & vetted by Finance. Same has been sent to IIT Kanpur vide letter no. RDSO-TI0LKO (PSI)/10/2020-O/o PED/TI/RDSO dated 22.04.2021 for further necessary action. |
| 2. | On-line Monitoring System (OLMS) for OHE Traction parameters | The measurement system module will have features like measurement of contact wire thickness, Height, Stagger, | Prototype made and some trial conducted, submitted report of IIT/KGP is under examination. IIT/KGP vide email dated 23.01.21 have proposed Phase-II stage i.e. |

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| | | Gradient (Slope) of Contact wire, location of Mast identification and hot spot of exact locations of measurement duly synchronized with GPS positioning system and fully supported software. The scope also covers installation, integration with the existing NETRA car system and putting into operation the entire measurement system.<br><br>• Measurement of thickness of contact wire up to 16.5 mm with target resolution of 0.3mm.<br>• Stagger of contact wire up to 700/350 mm with target resolution better than 5mm.<br>• Height of the contact wire with target resolution of 5mm or better.<br>• Measurement of slope of contact wire with target resolution better than 0.5 mm/meter.<br>• Generation of reports for the above parameters and alarms where they exceeds prescribed parameters. | productization stage to be started as separate project.<br><br>Project being closed. |

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| | | • One set of prototypes with hardware and software.<br>• Method of calibration of the system along with equipments required for carrying out the calibration.<br>• Installation in the existing NETRA car system and field trial of the Prototype with RDSO officials.<br>• Final design specifications of the full OHE monitoring system based on the field trial.<br>• Identification of manufacturing partner and transfer of technology to RDSO/IR (including associated documents, software, source code and training)<br>• Putting in to operation the entire OHE measurement system.<br><br>Final report on the developed technology and prototype. | |
| 3. | Feasibility of assessment in finding out/ anticipating the degraded or faulty composite | • Possible quantification between health of insulator and the signature measurement with<br>• Partial Discharge detection or leakage current measurement. | MOU signed and vetted by Finance/RDSO has been sent to IIT/Kanpur vide email dt. 12.04.2021 for further necessary action. |

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| | outdoor insulators used in electric traction | • Further results anticipating the measured or computed threshold/statistical values of<br>• characteristic parameters (based on PD or leakage current) will be used to establish<br>• correlation with the field values to estimate the health of insulator.<br>• To develop the detection techniques which can be utilized for geographical localization of<br>• Failed/faulty 25 kV insulators in real service life condition with proper sensing of the signature signal based on this project results.<br>• Special equipments/software etc. procured for the project. | |