

**IN SITU NON-DESTRUCTIVE EVALUATION AND ADVICE  
ON THE PRESENT CONDITION OF TRACK AND HAULAGE  
ROPES OF BI-CABLE AERIAL ROPEWAY PASSENGER  
CABLE CAR INSTALLATION AT GANGTOK, SIKKIM**

**EXECUTIVE SUMMARY**

In-situ study on one number of haulage rope (in two parts- forward and reverse) [22 mm dia., 6X19 Seale (9/9/1) construction] and two nos. of track ropes [each of 48 mm dia, full locked coil construction (61R + 2Z – shaped layers), ungalvanised (wires according to OENORM M 9503), R.H. lay] of Passenger Cable car Aerial Ropeway installation Gangtok, Sikkim has been carried out for the *8<sup>th</sup> time* during 16<sup>th</sup> -18<sup>th</sup> Oct., 2019 using INTRON Rope Tester, (Russian make) as per **IS 17235:2019 [Magnetic Rope Testing (MRT)–Specification]** for monitoring their suitability in the installation depending on the condition of haulage and track ropes. The track ropes are said to have been installed during February/March, 2003. The haulage rope, forward and reverse sides, has been installed during Sept., 2014 and Sept., 2019 respectively.

Calibration of the instrument (INTRON Rope Tester, Russian make) has been carried out in air before commencement of the scanning of rope.

Keeping in view of the observations, condition of haulage and track ropes have been found to be satisfactory and may be recommended for further continuance in the installation till the next non-destructive investigation having close visual watch of the portions of the ropes which have not been covered under this investigation. It is also suggested to have next nondestructive investigation on all these ropes during the month of **Oct.-Nov., 2020 as per IS 17234:2019 (Operation and Maintenance of All Types of Ropeways).**

*This non-destructive investigation on haulage and track ropes does not include the aspect of **fatigue** which may develop in the ropes in course of time.*