IN-SITU NONDESTRUCTIVE EVALUATION AND ADVICE ON THE PRESENT CONDITION OF WINDING ROPES OF CHASNALLA COLLIERY, JHARKHAND

EXECUTIVE SUMMARY

Two winding ropes each in (1) Deep Mines Downcast, (2) Deep Mines Upcast and (3) USP Incline No. 5 of 44 mm dia, 36 mm dia and 32 mm dia respectively, Full Locked coil Wire Ropes, Strand construction, Wire finish – Galvanised, Lay rotation –RH, Lubrication – A2/Petroleum Lube, Usha Martin Ltd., India make of Chasnalla Colliery of M/s Steel Authority of India Limited, Chasnalla, Dhanbad have been subjected to nondestructive investigation on **18th Feb., 2020** for the *first time* after installation of new ropes as per **IS 17235: 2019 [Magnetic Rope Testing (MRT)– Specification]** for monitoring their suitability in the installation, using INTRON Rope Tester, (Russian make). Two winding ropes (North and South) of Deep Mines Downcast were installed on 16.11.2019 and 29.03.2018 respectively. Two winding ropes (North and South) of Deep Mines Upcast were installed on 19.04.2018 and 26.06.2017 respectively. Two winding ropes (Man winding and Counter weight) of Incline No. 5, Upper Seam Project were installed on 24.11.2019 and 25.02.2018 respectively.

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

Keeping in view of the observations, condition of all the Winder ropes in (1) Deep Mines Downcast, (2) Deep Mines Upcast and (3) USP Incline No. 5 have been found to be satisfactory and these ropes 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 these six winding ropes during the month of **Aug. –Sept., 2020**.

This non-destructive investigation on winding rope does not include the aspect of **fatigue** *which may develop in the rope in course of time.*