Presented at NDE2002, to predict. assure. improve. www.nde2002.org
National Seminar of ISNT, the Indian Society for Non Destructive Testing
Hotel Taj Connemara and Raja Muthiah Hall, Chennai, 05. – 07. 12. 2002

Non-Destructive Investigation on Steel Winding Ropes for Men/Material Handling and Aerial Ropeway Passenger Cable Car Installations

G. Lakshminarayanan

Central Mining Research Institute, Barwa Road, Dhanbad - 826 001, Jharkhand, India

Abstract

Applications of Steel winding wire ropes are getting their importance day by day. Steel winding ropes which are heterogeneous in nature are to be inspected for their structural integrity to avoid untoward/unpredictable failures causing accidents due to different parameters by virtue of corrosion, abrasion wear and broken wires.

Non-Destructive inspection by magnetic method is the only means for rope evaluation towards qualitative and quantitative analysis of wire ropes which are required to be carried out at intervals and till date this technique of NDT has not been given due recognition/importance in India.

The author would like to bring to light this technique undertaken by C.M.R.I on mine winder ropes (particularly on friction winder) for hauling men and material, cable belt system, conveyor ropes, aerial ropeway passenger cable car(mono cable with fixed/automatic grips) haulage/carrying ropes and track ropes where drawl of a test specimen for conducting destructive test is ruled out and the importance of declaring this NDT specification as a mandatory since no other method of rope evaluation is possible other than NDT technique.

C.M.R.I is engaged since last three decades in this endeavor by extending its facility by conducting such inspection to the mining and aerial ropeway installations.