

Dynamic Monitoring

Strain Monitoring, Vibration, Telemetry



Keywords

- ▶ Strain Gauging Service
- ▶ Multiple Channel Data Acquisition System
- ▶ Linear Displacement Transducers
- ▶ Accelerometers Transducers
- ▶ Telemetry transmitters and receivers
- ▶ Automated Data Analysis

Working with railway clients, Nprime Ltd provide consultancy projects for the rolling stock (bogies and vehicle structures) but also for the infrastructure of the railway (escalators, lifts, etc..).

Nprime Ltd have assisted a railway company in studying the behaviour of a component in one of its many escalators. The escalator step carries several thousands of people every day on a continuous rolling moving circular chain in railway stations. The step was designed to carry a define load and had an estimated life of 50 years. This aluminium frame is pinned by a roller bearing on either side and hinged on two others. The frame is pulled by a chain along a railing up and down the escalator.

Nprime Ltd investigated the rolling process and set about instrumenting several steps within the escalator to define the weight distribution, the strain and vibration data carried during the test cycle. Each step was instrumented with an eDAQ data acquisition of several channel, strain gauges, battery power and wireless transmitter.

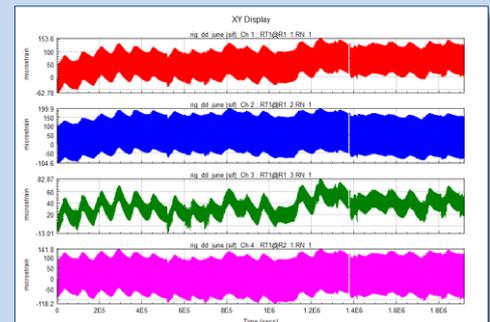
With the assistance of the client, Nprime Ltd proceeded in acquiring the necessary data to measure the strain and stresses in the chosen areas of the escalator step. All data was transmitted to Nprime offices for analysis. Using our expertise in telemetry and data analysis, Nprime monitored the various data to designate the critical area of the step for analysis.

Nprime Ltd provide services whether your goal is:

- Optimisation of design
- Extending machine or structure lifetime
- Component Life assessment
- Monitoring of engineering data via sensors

Nprime Ltd can provide the critical data for you to make informative decision.

Nprime Ltd is a partner to Wyle TDS, HBM, Quasonix, OROS and ATI Telemetry.



Nprime Limited
 3-6 Kelham Square
 Kelham Island
 Sheffield S3 8SD
 United Kingdom
 Tel: +44(0)114 2727 868
 Fax: +44(0)08704 299 258
 Email: info@nprime.co.uk
 Web: www.nprime.co.uk