

# STRAIN GAUGED ROCKBOLTS

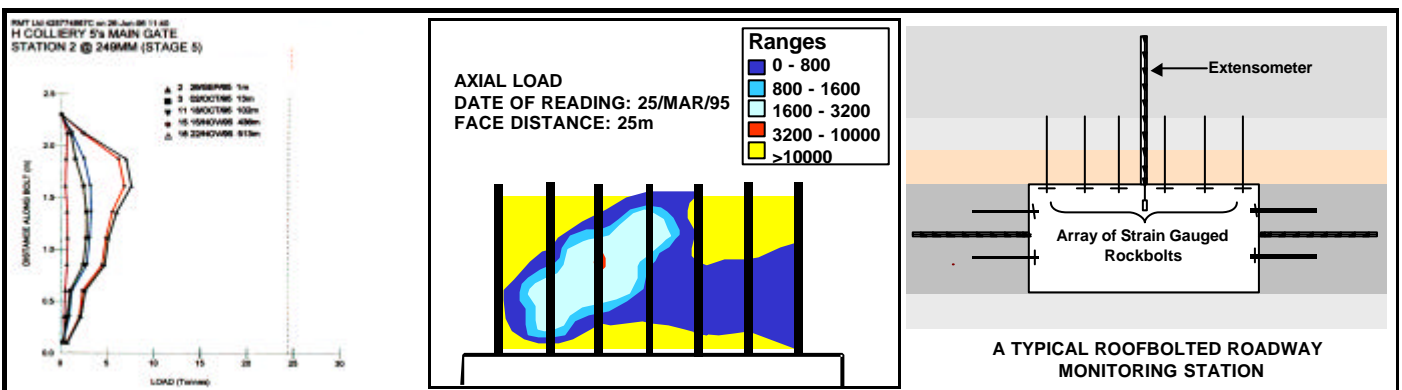
Wherever rockbolting is used for support, strain gauged rockbolts can be used to measure the distribution of bolt loads for design purposes. Bolt loads can be monitored along each bolt by the use of multiple strain gauges. Strain gauged bolts are normally placed in an array across the excavation as part of the standard bolt pattern. They are typically installed at the face of the excavation as part of the normal support cycle.

Multiple pairs of strain gauges are embedded at regular spacings along each bolt enabling the axial loads and bending moments to be measured along its full length. RMT strain gauged rockbolts provide a valuable tool for monitoring support system performance against design specification. Strain gauged rockbolts are suitable for local or remote reading in potentially explosive atmospheres.

RMT have many years experience in successful manufacture, supply and installation of high quality strain gauged rockbolts. Most designs of rockbolt and ground anchor can be instrumented. Our products are rugged and proven in the harsh mining and civil engineering environments. Over 450 per year are currently used in British coal mines.

Data obtained can be stored and analysed by our "Exbolt for Windows" software package to determine:

- Axial loads and strains
- Bending loads and strain difference
- High strain zones from contour plots



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