

## Q : Instrumentation

### Q INSTRUMENTATION

#### Q (1) Rock Bolting Instrumentation

1. Manufacturer/Supplier : M/s Nanda Manufacturing Co.,  
32 A, C. R. Avenue, 2nd Floor,  
Calcutta - 700 012
- (i) (ii)
- i) Anchorage testing equipment approved by DGMS : Rock Bolt Tester Sag Bolt
- Force kg : 500/1000 -
- Bolt displacement mm : 10 -
- Strength : 4 to 5 T for 20 mm rope -  
6 to 7 T for 22 mm rope -
- ii) Torque meter
- Torque range kg : 7.0 to 35.0 & 14 to 57
- Square drive mm : 12.7 & 19.05
- Overall L mm : 787 & 1130
- iii) Suspension convergence indicator measured by vernier calliper to to an accuracy of 0.02 mm
- iv) Telescope convergence indicator : 1 mm Least : Count by Etching Operation
- v) Sag bolts
- vi) Load cell - 5 to 100 T
- vii) Clock wound convergence recorder

#### Q (2) Ventilation Instrumentation

1. Manufacturer/Supplier : M/s Nanda Manufacturing Co.,  
32 A, C. R. Avenue, 2nd Floor,  
Calcutta - 700 012
- i) Anemometer range m : 0 to 1,00,000
- Possible measuring wing speed m/sec : 1 to 15
- ii) Velometer range m/sec : 0 to 15
- Directly reads air velocity
- iii) Aneroid barometer
- Dial size mm : 100

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- iv) Stop watch  
least count      sec : 1/5 or 1/10
- v) Inclined manometer : Suitable for measurement of smaller and larger pressure and can be locked in two positions
- vi) Pilot tubes : 0.5 m Long Stainless Steel as per BSS Design
- vii) Whirling Hygrometer  
Range : 0 to 50°C. Divided on Stem in 5°C
- viii) Air sampling bottle sizes : 250 cc to 500 cc  
Manufactured From Corning Glass with 3-Way  
Cock on Both Sides
- ix) Smoke generator : For producing smoke with high Density for Low  
Velocity Measurement and Leakage Detection etc.
- x) Pit water gauge  
("Davis Debray" Gauge) : Suitable for Measurement of Pressure Difference  
Between the Upcast and Downcast or the Depression  
Produced by the Fan
- xi) Maximum & Minimum  
thermometer : Available in °C as well as °F
- xii) Wet & Dry thermometer  
range : (-) 10 °C to 50 °C or 15 °F to 120 °F
- xiii) Kata thermometer range : 35°C to 38°C  
Duly Engraved with Kata Factor
- xiv) Portable manometer
- xv) N M C Air flow meter : A Combination of Portable Manometer & Pitot  
Static Tube for Measurement of Air Velocities  
in Ducts, Chimneys etc.