

Our Ref:ERO Lab/Pur/Mech/05-06

28 February 2006

Subject: Quotation for Supply of:

- 1) Height gauge with needle point
- 2) Ball ended Micrometer
- 3) Beveled Protractor
- 4) Inside Micrometer
- 5) Drift expansion test set up
- 6) Square Bar & straight Edge of steel

TO,

Dear Sirs,

Quotation (s) are invited for the supply of the above item(s) complying the requirements of the Annexure-1 to 6 (The Technical Specifications of the Equipments listed above) in **SEPARATE sealed covers** superscribed "**QUOTATION FOR THE SUPPLY OF.....**" which should reach the undersigned latest by 15-03-2006. The quotation(s) shall be opened in this office at 1100 hours in the next working day & those who would like to attend may be present.

All the equipments shall be supplied along the warranty /guarantee certificate including NABL accredited calibration certificate, wherever possible /applicable. The decision taken by the competent authority of Bureau of Indian Standards shall be final. Payment shall be released only on satisfactory performance of the equipment.

Thanking you,

Yours faithfully

P.Seshagiri Rao
Sc-E & Director(OIC Mech)

Encl: As above

ANNEX -1

Technical Specification for the Height Gauge(Microhite-600)

1. Measuring Span: 615 mm
2. To measure 1 or 2 co-ordinate directions for length measurements in the form of internal, external, height, depth, step & distance dimensions of geometric elements high flat, parallel or cylindrical surfaces.
3. Dynamic probing with memory functions
4. Facility to measure any deviation from perpendicularity straightness and parallelism as well as runout.
5. Numerical display to 0.0005, 0.001, 0.01 and 0.1 mm or in equivalent in inch units.
6. RS-232 data output facility
7. Co efficient of linear expansion identical to steel.
8. Calibration certificate from a internationally accredited laboratory.
9. Built in printer for result output.
10. For any measurement all calculation should be automatically i.e no manual calculation is required.
11. Accuracy of the instrument shall be mentioned in the quotation.

ANNEX -2

Technical Specification for the Ball ended Micrometer

1. Digital Micrometer with one spherical face and another flat face
2. Least count: 0.001 mm.
3. Spherical face should be 3.5 mm radius
4. Measuring face should be tungsten carbide tipped.
5. Measuring span: 0 to 30 mm.
6. Both unit (mm/ inch) measurement facility should be available.
7. Calibration certificate from an internationally accredited laboratory.
8. Accuracy of the instrument shall be mentioned.

ANNEX -3

Technical Specification for Beveled Protector

1. Angle protector with numerical indication 200 mm.
2. Resolution: 0.01° or 1 minute
3. Should be marked IP 51.
4. Accuracy: 4 minutes of arc
5. Measuring Range: 1 X 360° , 2 X 180° , 4 X 90°
6. Maximum rotation speed: $1080^{\circ}/s$
7. RS- 232 data output facility.
8. Calibration certificate from a internationally accredited laboratory.
9. Accuracy of the instrument shall be mentioned.

ANNEX -4

Technical Specification for Inside Micrometer

1. Digital Inside Micrometer.
2. Measuring Range : 25 to 250 mm.
3. Least count: 0.001 mm.
4. Extension rods are made of suitable material hardened upto 800 HV and
measuring faces are tipped with tungsten carbide.
5. Spacing collars are intended for smaller adjustments in the range of measurement.
6. Both unit (mm/ inch) measurement facility should be available.
7. Calibration certificate from a internationally accredited laboratory.
8. Accuracy of the instrument shall be mentioned.

ANNEX -5

Technical Specification for Drift expansion test set up

1. Mandrel with angle 30° , 45° or 60°
upto Dia 150mm, to Expand the
Nominal Diameter to 12.5%
B) Mandrel with Taper 1 in 16 may
equivalent to 30° angle
2. To Drift the Nominal Bore Sizes of 50, 75, 100, 125, 150 mm with angle
 30° , 45° or 60°
3. Accuracy of the instrument shall be mentioned.

ANNEX -6

Technical Specification for Drift expansion test set up

1. Mandrel with angle 30° , 45° or 60°
upto Dia 150mm, to Expand the
Nominal Diameter to 12.5%
B) Mandrel with Taper 1 in 16 may
equivalent to 30° angle
2. To Drift the Nominal Bore Sizes of 50, 75, 100, 125, 150 mm with angle
 30° , 45° or 60°
3. Accuracy of the instrument shall be mentioned.

ANNEX -

Technical Specification for Square Bar & Straight edge

1. Square Bar & Straight edge of steel with Riser Block, Extension holder,
Adjustable holder & Feeler. Digital Inside Micrometer.
2. Vertical Travel: 150, 250, 450 mm.
3. Code No: 311-215, 311-225, 311-245
4. Squareness: 0.003, 0.006, 0.009 mm
5. Straightness: 0.0020, 0.0025, 0.0035 mm
6. Dial gauge indicator: Graduation: 0.002 mm
7. Dial Reading: 0-100-0, Accuracy: 0.003 mm
8. Mass 13.7, 16.2, 24.0 Kg.
9. Both unit (mm/ inch) measurement facility should be available.
10. Calibration certificate from a internationally accredited laboratory.
11. Accuracy of the instrument shall be mentioned.

