

Approval Date: 6th, October 1999

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Version: 2

Purpose

The theodolite will be used for general topographic surveying application and in particular for position fixing during discharge measurements on rivers and canals from boats.

Conditions & Requirements

- The instrument must be of reliable and simple design, adequate for the application.
- An operator's manual shall be part of the delivery.
- The theodolite shall generally comply with IS 2976-1964.
- The tripod shall generally comply with IS 8330-1997.

Specifications

image	erect
magnification	30 x
effective diameter of objective	≥ 40 mm
field of view	1°30' to 1°40'
shortest focussing distance	2.0 m
resolving power	±2.5 to 3.0 sec
minimum focussing distance	≤ 2.0 m
stadia ratio	1:100
• stadia multiplier	100
• stadia addition	0
optical plummet	
• magnification	≥ 2.3 x
• focussing range	≤ 0.5 m
sensitivity of level plate	20 sec per 2 mm run
tribarch circular bubble	8 min per 2 mm run
vertical circle level	1 sec per 2 mm run
graduation error	
horizontal circle	1 sec (least count of micrometer)
vertical circle	1 sec (least count of micrometer)
instrument life time	>5 years of continuous operation
temperature range	0 to 60°C
housing	splash waterproof

Accessories

diagonal eye-piece	two (one for telescope, one for micrometer)
dark glasses	dark green, light green, light blue
water proof cover	made of durable plastic material
plumb bob; adopter plug	one unit
tool-set	spanner, tommy pins, screw driver, etc. – one set
lens cover set	one set
cleaning brush	one unit

oil bottle	one unit
electrical illuminating unit	Two units
re-usable desiccating material that may be reactivated	one packet 200 mg, e.g. silica gel
Telescopic 4.0 m levelling staffs and accessories	2 nos., complying with IS 11961-1986
instrument manual	one
carrying case	one unit made of light fibre plastic wood or metal having sufficient strength to bear normal shocks and with receptacles for holding accessories with handle, carrying shoulder strap etc.
tripod	1600 mm well seasoned wood or light & strong alloy telescopic with mounting for battery, illumination unit & clamping arrangement for the instrument
centering provision	30 to 50 mm

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