FIELD CALIFORNIA BEARING RATIO (FIELD CBR)

BE 27

The in-situ California Bearing Ratio (CBR) apparatus has become increasingly vital in large road construction projects due to its ability to efficiently assess the bearing capacity of soils. Mounted on a rolled steel joist cantilevered from a truck or attached to a mobile frame's underside, the apparatus enables rapid field testing through piston penetration. This method is particularly effective under specific conditions: when soil has a saturation degree of 80% or higher, when the material is coarse-grained and cohesionless (unaffected by water content changes), and when the material is already in place. These characteristics make the in-situ CBR test a practical tool for determining load-carrying capacity directly in the field, ensuring reliable data for road design and construction.

STANDARD FOLLOWING

IS 2720 (PART-31), IS 12287

DESCRIPTION

BE 27-01	Loading Jack	with U-bracket, capacity 50 kN (5,000 kgf). This is specially designed for use with Field CBR test apparatus. It consists of a hand operated, two speed, screw jack fitted with a U-bracket. A hexagonal adapter is provided to fix a proving ring. A thrust bar, which passes through the U-bracket, is screwed on to a proving ring (supplied at extra cost) which protects the proving ring when the loading is eccentric.
BE 27-02	Proving Ring	50 kN (5,000kgf) capacity
BE 27-03	Dial Gauge	25 x 0.01 mm
BE 27-04	Slotted Metal Weight	10 kg, 215 mm to 250 mm dia with 53 mm dia slot 2 Nos.
BE 27-05	Slotted Metal Weight	5 kg, 215 mm to 250 mm dia with 53 mm dia slot - 2 Nos.
BE 27-06	Annular Metal Weight	5 kg, 250 mm dia with 53 mm dia central hole
BE 27-07	Adjustable Bracket	for mounting the Dial Gauge
BE 27-08	Datum Bar Assembly	consisting of two stands and 1 m long Bar
BE 27-09	Connector Set	consists of eight connectors for coupling the penetration piston and proving ring assembly, either directly or through extension pieces
BE 27-10	Extension Set	consisting of 1 length of 5 cm, 2 lengths of 10 cm, 1 length of 30 cm, 1 length of 50 cm and a length of 100 cm used as spacers between the proving ring and penetration piston. The lengths are machined from steel tubing
BE 27-11	Penetration Piston	50 mm dia threaded at the upper end, to connect to the various lengths of extension sleeves, through a connector
BE 27-12	Swivel Head	for the Loading Jack