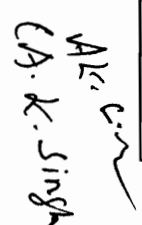


SPECIFICATION OF CIVIL ENGINEERING EQUIPMENT FOR FQA LAB AT 3x660 MW NORTH KARANPURA STPP
DOC NO PE-TS-405-571-9158

Dated:08/02/2016

S.N.	Equipment	Item Specification
1	Impact testing machine	IMPACT TESTING MACHINE (AS PER IS 9377-1979), of AIMIL/ENKAY/Accro-Tech industries or equivalent make, Required for determining the impact value of coarse aggregate, Complete set with all accessories including blow out counter.
2	Crushing value apparatus	CRUSHING VALUE APPARATUS (AS PER IS 9376-1979) of AIMIL/ENKAY/Accro-Tech industries or equivalent make, Used for determining the aggregate crushing value, Size : 150 mm dia. cylindrical shell. Complete set with Tamping Rod, Heavy Duty.
3	Los angles Abrasion Testing Machine	LOS ANGLES ABRASION TESTING MACHINE (AS PER IS : 10070-1982) of LOKPAL/Accro-Tech or equivalent make, Used for estimation of abrasion value of coarse aggregate. Complete set consisting of a hollow cylinder mounted on a sturdy frame on ball bearings capable of rotating about its axis in a horizontal position, detachable shelf fitted inside the cylinder at a distance of min. 1250 mm from the opening measured along the circumstances in the direction of rotation and motor with reduction gear which runs the drum at 30-33 rpm. etc all complete.
4	Bitumen Extractor Machine	BITUMEN EXTRACTION MACHINE (HAND OPERATED) of VEKAY/ENKAY/LOKPAL or equivalent make, Complete set, For determining the quantity of bitumen in hot mixed paving mixtures and pavement samples. It shall be a portable unit for use in field and laboratory, consisting of a cast Aluminum bowl mounted on vertical shaft and a filter paper disc pressed in between bowl and cover plate by a knurled nut.


(Rajendra Nari)


(A.K. Singh)





5	Vicat apparatus with dashpot VICAT APPARATUS WITH DASHPOT (AS PER IS : 5513-1976) of AIMIL/VEEKAY/ENKAY or equivalent make, Complete set with all accessories, For determination of consistency of standard cement paste and initial and final setting time of cement.
6	Le-Chatlier flask and moulds LE-CHATLIER FLASK AND MOULDS (AS PER IS : 5514-1969) of Everest Scissors/ACME or equivalent make, Complete set with all accessories, Heavy duty. Used for determination of soundness of Cement, and Class-B limes.
7	Cement cube moulds CEMENT CUBE MOULDS of ENKAY/Accro Tech or equivalent make 70.6 X 70.6 X 70.6 mm , Heavy duty.
8	Vibrating Machine VIBRATING MACHINE (AS PER IS : 10080-1982) of ACME/ACCRO-TECH or equivalent make, complete set with all attachments, to be used for compaction of 70.6 mm cube specimens of cement mortar under standard vibration required for determination of compressive strength of cement. The vibration machine shall consist of a frame mounted on four coiled springs to carry a cube mould and an eccentric revolving shaft mounted in ball and roller bearings. The machine is so balanced that the eccentricity imparts simple harmonic motion to mould carrier and the mould. The frequency of vibration shall be 12000 +/-400 per minute. 230 v ac operated.
9	Shrinkage Limit Apparatus with mercury SHRINKAGE LIMIT APPARATUS WITH MERCURY , ACME or equivalent make, Complete set with all accessories and mercury. (AS PER IS: 10077 AND IS 2720 (PART VI))





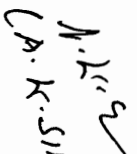
10	Automatic Sieve Shaker	AUTOMATIC SIEVE SHAKER (MOTORISED) of ACCROTECH/VEEKAY/LOKPAL or equivalent make, complete with all accessories, having a sturdy cast Iron body. The sieve table shall have gyratory motion in addition to tapping action, It shall be 230 v ac operated.
11	Automatic/Manual mortar mixer	AUTOMATIC MORTAR MIXER (5 liter Capacity) of VEEKAY/ENKAY/LOKPAL/ACME or equivalent make, Motorized , with Stainless steel Drum , 230 V AC Operated, Heavy Duty, Complete with all accessories.
12	Density Basket/Density pot	Aimil/ENKAY/ACME or equivalent make, Ruggedly constructed from galvanized wire mesh.
13	Proctor testing equipment	PROCTOR TESTING APPARATUS of Multitech or equivalent make, complete with all accessories having 2250 cc mould and Rammer , As per IS:2720 (part-VII)
14	Slump test apparatus	SLUMP TEST APPARATUS , Complete set with cone , base plate, and tamping rod.
15	Hot air oven	HOT AIR OVEN of ACCRO-TECH/ENKAY or equivalent make, complete set with all accessories. Min. Size : 18" X 18" X 18" , Inside chamber made of stainless steel-304 and outer chamber made of mild steel, duly powder coated , with Digital Temperature Indicating Cum Controller Device , Hot Air Blower , Stainless steel trays, 230 v ac operated.
16	Electric Platform Balance (150kg)	ELECTRIC PLATFORM BALANCE 150 KG CAPACITY , MULTITECH / ENKAY or equivalent, complete with all accessories, LEAST COUNT : 20 gm, 450 X 500 mm Platform size, 230 v ac operated
17	Electric pan balance 10kg (1gm)	ELECTRIC PAN BALANCE 10 KG CAPACITY ,, MULTITECH / ENKAY or equivalent, complete with all accessories, LEAST COUNT : 1 GM
18	Precision balance 600gm (0.1gm)	PRECISION BALANCE 600 GM CAPACITY , MULTITECH / ENKAY or equivalent, complete with all accessories, LEAST COUNT: 0.1 GM

19	Rapid moisture meter	Lokpal/ACME or equivalent make complete with all accessories, as per IS:12175.
20	Thermometer for measurement of room temperature	THERMOMETER FOR MEASUREMENT OF ROOM TEMPERATURE, DIGITAL, WALL HANGING TYPE, BATTERY OPERATED
21	Thermometer for measurement of temperature of bitumen, concrete...	THERMOMETER FOR MEASUREMENT OF TEMPERATURE OF BITUMEN, CONCRETE ETC. , DIGITAL, PEN TYPE, BATTERY OPERATED , STAINLESS STEEL STEM, complete with all accessories.
22	Burette	GLASS BURET 50 ML, Complete with all accessories.
23	Measuring cylinders	MEASURING CYLINDERS (PLASTIC) 100 ML , 250 ML, 500ML, 1000 ML
24	Digital Compression Testing Machine 2000 KN capacity	DIGITAL COMPRESSION TESTING MACHINE (2000 KN CAPACITY) of ACCRO-TECH/ENKAY/VEEKAY or equivalent make, complete with all accessories having Microprocessor based Digital Readout Unit, With Calibration Certificate, Three Phase Operated, Heavy duty as per IS:14858.
25	Digital Compression Testing Machine 500 KN capacity	DIGITAL COMPRESSION TESTING MACHINE (500 KN CAPACITY) of ACCRO-TECH/ENKAY/VEEKAY or equivalent make complete with all accessories having Micro Processor based Digital Readout Unit, With Calibration Certificate, Three Phase Operated, and Heavy duty, as per IS:14858.
26	Measuring flask	MEASURING FLASK (PLASTIC) 1000 ML
27	Measuring Tape- 3M	MEASURING TAPE , STEEL, 3 METER
28	Measuring Tape- 10M	MEASURING TAPE, STEEL, 10 METER
29	Measuring Tape- 30M	MEASURING TAPE, 30 METER
30	Measuring Tape- 50M	MEASURING TAPE, 50 METER
31	Concrete cube moulds	CONCRETE CUBE MOULDS 150 x 150 x 150 MM
32	Concrete Mixer 0.5 cum capacity (Electrically operated)	CONCRETE MIXER 0.5 CUBIC CAPACITY (ELECTRICALLY OPERATED), JATYPEE/Techwin international or equivalent make, complete with all accessories, 230 v ac operated, With Belt cover, Heavy duty.
33	Sieves for coarse aggregate	SIEVES FOR COARSE AGGREGATE , 300 mm diameter, G.I Frame, Set of 8 pcs with Lid & Pan, Complete set.

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34	Sieves for fine aggregate	SIEVES FOR FINE AGGREGATE, 200 mm diameter, Brass Frame, Set of 8 pcs with Lid & Pan, Heavy duty, Complete set.
35	Curing tank	ACCELERATED CURING TANK, of ENKAY make or equivalent, complete with all accessories, suitable for 6 No of 150 X 150 X 150 casted moulds, Inside chamber made of Stainless steel-304 and outer chamber made of mild steel duly powder coated, with Stainless steel tray, Digital Temperature indicating cum controlling device operated, With Water circulating pump, Temperature Range : ambient to 100 Degree Celsius, 230 V AC Operated, With Top Opening Door, Heavy duty
36	Flakiness and elongation index test gauges	of ACCRO-TECH/Everest Scissors make or equivalent.
37	Liquid Limit Apparatus	of ACCRO-TECH/VEEKAY make or equivalent.
38	pH meter	PH METER, pen type, 0-14 pH measurement range, Digital, complete with all accessories
39	Pycnometer	PYCNOMETER 1000 ML
40	Trowel (small & big)	TROWEL (SMALL & BIG) 1 pcs each
41	Trays	ENAMEL TRAYS 12" X 18"
42	Sampling Scoop	SAMPLING SCOOP (stainless steel)
43	Steel buckets	STAINLESS STEEL BUCKETS(nominal capacity 11.0 litres as per IS:4768.


(Rajneesh Rai)


(A. K. SINGH)

