SECTION No. 6 : TECHNICAL SPECIFICATION

6.1 Isolating Switch Fuse (For 12 M. H-Type Pole)

This type shall be 11-KV 3-phase, outdoor, 3 insulator rocking type, air break, manually, operated mechanism suitable for vertical mounting complying with and factory tested to (IEC: 129, BS: 3297 and BSS: 5253) wherever applicable.

The switch fuse shall be capable of carrying a continuous normal load current of 400 amps. under the worst site conditions stated above.

The clearances shall be to the relevant BSS.

The switch fuses shall neither endanger the operator nor show any signs of distress during operation and shall ensure free operation at all times.

These switch fuse are required to control Spur and Pole Mounted Transformers and shall be suitable for mounting on 12 meter high "H" type wood pole with 183 CM. centers. The distance between the top of the switch and ground level shall be 8.5 meters and the phase units arranged 61 CM. apart. The switch fuse shall be complete with 11-KV. Expulsion type drop out fuses of 8 AMPS.

One wood insulator of adequate dimensions shall be arranged for insulation in the operating rod at 4.5 meters from the ground level. The insulator shall be constructed of grade "E" permalli and shall be complete with all fittings, bolts, nuts and washers.

The 11-KV fuses shall consist of three units (one per phase) and shall be incorporated in the switch.

The dropout fuse carriers shall be suitable for fixing re wireable double tail or universal type slow blowing fuse elements, rated from 8 AMPS. To 100 AMPS. The mounting channels shall be drilled for 183 CMS. Pole centers and 61 CM. Phase centers. The fuse element shall be of the double tail type without button head. Universal type will also be accepted.

The switch fuse shall be fitted with multi terminals to permit for fixing of 32 SQ. MM. To 100 SQ. MM. Copper jumper wires for incoming and out going connections.

6.2 Isolating Switch (For 12 M H-Type Pole)

This type of isolating switch shall be 11-KV, 3-phase outdoor three insulators rocking type, air break, manually operated mechanism "Horizontal Mounting Type" suitable for mounting on 12 meters wooden poles forming "H" type construction with 183 CMS. centers. The distance between the top of the pole and ground level will be 10 meters.

All other details shall be the same as for the switch fuses specified earlier, but excluding only the D/O fuses.

6.3 Other Details of Isolating Switch

All the isolating switch fuses and isolating switches shall be complete with operating rod, operating handle, wood insulator, operating rod guides, phase coupling rod, mounting steel channels and all necessary bolts, nuts and washers.

The operating handle shall be 120 CMS. above the ground level and shall have earthing terminals suitable for fixing with earthing lugs. The operating handle shall be clearly marked to indicate whether the switch is in "ON" position. The operating handle shall have provision for padlocking by means of 2.5" padlock having 3/8" diameter staple.

IT Shall be coated with silicone coating this shall be subjected to approval of MEW Engineer.



SECTION No. 6 : TECHNICAL SPECIFICATION

6.4	Drawings	

Each offer shall be accompanied with fully detailed and dimensioned drawings of each type of isolating switch and switch fuses, incorporating all the requirements of this specification.

Offer without such drawings will not be considered. The successful tenderer shall submit final detailed drawings for MEW approval, before commencement of manufacture.

6.5 Test Certificate to be Submitted with the Offer.

All tenderers shall submit fully detailed and complete test/reports/certificates, etc., from an internationally recognized testing authority for the following.

testing t	additivity for the following.
I)	H.V. Fuse short circuit rating.
II)	Dropout device current rating.
III)	Wet one-minute power frequency, voltage test at 50 KV, dry lightning impulse withstands voltage test at 95 KV and other type tests on insulators as per BS: 3297 and revisions.
IV)	Di-Electric type test on isolating switch fuse unit and isolating switch as per CL: 37 of BS: 5253 and revision.
V)	Temperature rise type test as per CL: 38, BS: 5253 and revision. The rated full load current of 400 amps shall be applied on the complete 3-phase switch replacing the fuse link with solid links during test.
VI)	Rated peak current and short time current type test as per CL: 39, BS: 5253 and revision.
VII)	Mechanical endurance type test as per CL: 41, BS: 5253 and revision.
VIII)	Maximum ambient temperature operating type test at 55 ^o degree centigrade as per CL: 43, BS: 5253 and revision.

The purchaser reserves the full right to ask the successful tenderer to carry out a fresh any of the above tests, should it be necessary. In this case, the inspectors appointed by the purchaser shall witness all tests. All expenses involved in the carrying out of these tests shall be borne by the successful tenderer.

6.6 Tests to be Witnessed and Approved by the Inspectors.

The following routine tests are required to be carried out and witnessed as per BS: 5253, in addition to the above type tests (if necessary).

Note	For the guidance of the tenderer, two drawings, one drawing for the isolating switch fuse unit and the other for the isolating switches are attached in order to explain the general arrangement of the isolating switches to the tenderers.			
IV)	Any other routine test required by the inspector.			
III)	Mechanical operating test as per CL: 51, BS: 5253.			
II)	Measurement of resistance of the main circuit as per CL: 49, BS: 5253.			
I)	Power frequency dry withstands test on main circuit as per CL: 47, BS: 5253.			
tests (if	necessary).			



