

Annexure 'D'

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.

SCHEDULE ' A '

TECHNICAL SPECIFICATION FOR CONDUCTORS

SPECIFICATION NO: RE/ II/ ACSR & AA/ Conductors/ 2005

INDEX

CLAUSE NO.	CONTENTS	PAGE NO.
1.	PARAMETER	2
2.	CONDUCTOR DRUM	2-4
3.	VERIFICATION OF LENGTH OF CONDUCTOR	4
4.	REJECTION	4
5.	BIS CERTIFICATION MARK	5
6.	SCHEDULE	5
	SCHEDULE - C	6

(Rankhambe D: Pramod / New AA ACSR SPEC DT. 14.11.2005)

SEAL AND SIGNATURE OF THE TENDERER

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.
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TECHNICAL SPECIFICATION FOR CONDUCTORS

SPECIFICATION NO. RE/ II/ ACSR & AA CONDUCTORS / 2005

SPECIFYING TECHNICAL PARAMETERS OF THE CONDUCTOR

1. The Aluminum Stranded Conductors used for overhead transmission purposes and the Aluminum conductors, Galvanized Steel reinforced used for overhead power transmission purposes to be manufactured, tested and supplied shall strictly conform to IS-398 (PART-I)and IS-398 (PART-II) /1996 modified upto date respectively. The clearances provided for various parameters shall be as per relevant ISS except for the following technical parameters.

a) Lay Ratio For Aluminum Wires:

Lay Ratio for aluminum wires of Aluminum Stranded Conductors (hereinafter denoted as AAC) and Aluminum Conductors, galvanized steel reinforced (hereinafter denoted as ACSR) shall be minimum 10 (Ten) and Maximum 12 (Twelve).

b) Tolerance on nominal sizes:

No. negative tolerance shall be permitted on the nominal diameter of aluminum wires used in the manufacture of AAC or ACSR conductor. However, positive tolerance in this respect shall be as provided in IS-398 (Part-I & Part-II) modified upto date.

c) Lengths and Variation in lengths:

The standard length of AAC conductor shall be 1.5 (one point five) Kms and that of ACSR conductor shall be 2 (Two) Kms. However, for ACSR Raccoon conductor standard length shall be 1.5 Kms (one point five Kms.) only.

Short length shall not be less than 80% (Eighty percent) of the standard length specified as above and the total acceptable quantity of such short lengths shall be within 7% (Seven percent) quantity of the allotted quantity to each consignee of the respective size of the conductor. The maximum continuous length of the conductors should not be more than 105 % of the standard length prescribed above.

2. Conductor Drums:

The conductor to be supplied shall be packed in the drums. The drums used shall be conforming to IS specification No. 1778/1961 amended upto date applicable for reels and drums for bare wire and the dimensions of

SEAL AND SIGNATURE OF THE TENDERER

the conductor drums (wooden reel) shall be such that after accommodating suitable number of lengths of the conductor the total weight of the drum with conductor on it should not exceed the values given below:

ACSR Gnat	-	1000 kg.
ACSR Weasel	-	1000 kg.
ACSR Rabbit	-	1000 kg.
AAC Ant	-	1100 kg
ACSR Raccoon	-	1200 kg.
ACSR Dog	-	1000 kg.

The supplies effected with gross weight of drum exceeding the above values shall not be accepted.

The conductor drum shall bear the following markings:

- a) Name of the supplier
- b) Order reference No. and date
- c) Drum No. or identification No.
- d) Size of conductor
- e) Number of length of pieces of conductor in each drum
- f) Bare weight of drum
- g) Gross weight of drum
- h) ISI mark

Before reeling, cardboard or double corrugated or thick bituminised water proof bamboo paper shall be secured to the drum barrel and inside of flanges of the drums by means of a suitable commercial adhesive materials. After reeling the conductor, the exposed surface of the outer layer of the conductor shall be wrapped with water proof thick bituminised bamboo paper or preserve the conductor from dirt, grit and damages during transport and handling.

The minimum space of 75 mm shall be provided between the inner surface of the external protective lagging and outer layer of the conductor.

SEAL AND SIGNATURE OF THE TENDERER

The conductor ends shall be properly sealed and secured with the help of nails or bolts on the side of one of the flanges to avoid loosening of the conductor layers during transit and handling. The supplies effected without complying the above packing conditions shall not be accepted.

3. Verification of length of conductor:

i) Company shall ascertain the length of AAC/ ACSR conductor at supplier's works and at the receiving store centres by measuring the actual length by length measuring machine used for the purpose. The supplier should ensure that length measuring machine is available for measurement of the length by our inspecting officer.

ii) Both ends of the AAC/ ACSR conductor will be sealed by supplier and the seals will be contained in the drum and not exposed out of drum.

iii) The declared length will be measured between manufacturer's seals at both ends of AAC/ ACSR conductor.

iv) Weight of the AAC / ACSR conductor will also be checked for ensuring correct lay and length of the AAC/ACSR conductor.

v) For the verification of the length of the conductor , 10 % of total lot (in Drums) should be selected at the works. The physical verification of the length of the conductor should be carried out for maximum up to 5 (five) drums. If there are anymore drums left for verification , then weight of each verified drum should be carried out and average weight may be calculated .

Then the weight of each of all the remaining selected drums may be taken and if these weights are matching with the average weight , then that particular lot may be accepted otherwise rejected.

vi) Verification of length of conductor will also be carried out at each stores center for two drums out of each lot. If the average length is found correct or more , the lot will be accepted . If the average length is found to be less than the declared , the percentage of such short length will be applied for reduction for the entire quantity supplied in the lot at respective stores for acceptance.

vii) In case of dispute, joint inspection alongwith the representative of the supplier shall be carried out after giving 10 (ten) days notice to the supplier to remain present at stores centre for the purpose. If the representative fails to attend on stipulated date for joint inspection, the decision of consignee shall be final and binding.

4. Rejection:

i) While measuring the length the sample piece from each length shall be taken for carrying out the test as per IS-398 (Part-I & II) amended upto date. All the values of each sample should not exceed the values of the relevant IS read with specification. In case of deviation, whole lot will be rejected at works.

SEAL AND SIGNATURE OF THE TENDERER

ii) Specific resistivity of Aluminum used should not exceed 0.02845 ohm.sq.mm/m at 20 degree centigrade as prescribed in IS-398. If the results are at variance, the whole lot shall be rejected.

5. **BIS Certification mark**:The AAC/ ACSR conductors with BIS (ISI) marking only is required by the Company against this tender specification and as such only those tenderers who hold valid BIS license for AAC /ACSR conductor need quote against this invitation of tender. A copy of BIS license valid on the due date of the tender should be submitted with the offer, duly attested failing which, the offer shall be rejected.

6. **SCHEDULES:**

The tenderer shall fill in the following schedule which is part and parcel of the tender specification and offer.

Schedule – 'C' - Tenderer's experience

SEAL AND SIGNATURE OF THE TENDERER

SCHEDULE 'C'

SCHEDULE OF TENDERER'S EXPERIENCE

Tenderer shall furnish here a list of similar orders executed under execution by him during the last five years and name/s and address/es of person/s to who a reference may be made by purchaser in case he consider such a reference necessary.

Sr. No.	Name and description of order	Value of order	Period of supply & commissioning	Name and address of person to whom reference may be made
1	2	3	4	5

Name of the firm_____

Signature of tenderer_____

Designation_____

Date:-_____

SEAL & SIGNATURE OF THE TENDERER