

TITLE:
**SPECIFICATION FOR TREATED
 WOOD POLES, Part 1:
 Eucalyptus Poles**

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5.2 Copies of previous test certificates and test reports by a third party testing laboratory accredited to ISO/IEC 17025 shall be submitted with the offer for evaluation. A copy of the accreditation certificate for the testing laboratory shall also be submitted with the tender (all in English Language). Any translations of certificates and test reports into English language shall be signed and stamped by the Testing Authority.

Copies of Test Reports to be submitted shall include the following tests as per KS 02-94 and KS 516:

- 5.2.1 Ultimate Strength Test
- 5.2.2 Preservative Penetration Test
- 5.2.3 Dimensions Test
- 5.2.4 Preservative Retention Test
- 5.2.5 Knots Test
- 5.2.6 Splits and Checks Tests
- 5.2.7 Marking for Serialization and Traceability
- 5.2.8 Banding
- 5.2.9 Straightness Test
- 5.2.10 General Defects Tests

5.3 Routine test reports for the treated wooden poles shall be submitted to KPLC for approval before shipment/delivery of the goods. KPLC appointed inspectors (2) shall witness acceptance tests at the factory before shipment and such consignments presented for inspection shall not consist of less than 2,000 poles unless the order quantity is less.

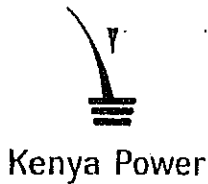
5.4 On receipt of the treated wooden poles, KPLC will inspect them and may perform or have performed any of the relevant tests in order to verify compliance with the specification. The supplier shall replace/rectify without charge to KPLC, wooden poles which upon examination, test or use fail to meet any or all of the requirements in the specification.

5.5 Sampling

5.5.1 Lot: In a consignment, 500 poles or a part thereof of the same overall length, same dimensions and belonging to the same batch of manufacture shall be grouped together to constitute a lot.

5.5.2 For ascertaining the conformity of the poles in the consignment to the requirements of this specification, samples shall be tested from each lot separately.

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5.5.3 The number of poles to be selected from the lot shall depend on the size of the lot and shall be according to the sampling table below.

5.5.4 All the poles selected according to 5.5.3 shall be tested for defects, physical dimensions and straightness. A pole failing to satisfy one or more of these requirements shall be considered as defective. All the poles in the lot shall be considered as conforming to these requirements if the number of defective poles found in the sample is less than or equal to the corresponding acceptance number given in Column 3 of the sampling table.

5.5.5 The lot having been found satisfactory according to 5.5.4 shall be further tested for ultimate load of the poles. For this purpose, the number of poles given in column 4 of the sampling table shall be tested, these poles may be selected from those already tested according to 5.5.4 and found satisfactory. All these poles tested for ultimate load shall satisfy the corresponding specification requirements. If one or more poles fail, twice the number of poles required for ultimate load tests shall be selected from the lot again and subjected to this test. If there is no failure among these poles, the lot shall be considered to have satisfied the requirements of this test. If there is failure then the entire lot shall be rejected.

Sampling Table

No. of poles in the lot	Sample size	Defects and Dimensional Requirements acceptance number	Ultimate load test
Up to 100	10	1	1
101 to 200	15	1	1
201 to 300	20	2	1
301 to 500	30	3	2

6 MARKING

- 6.1 Each pole shall be marked with the following information:
- The words 'PROPERTY OF KPLC';
 - Manufacturer's name or trade mark;
 - Date of treatment, comprising the first two digits of the month followed by the last two digits of the year separated by a slash;
 - The number of the Kenya Standard to which the pole is manufactured, in this case, KS 516 & KS 02-94;
 - Length of the pole (in metres);
 - Top diameter (in mm);

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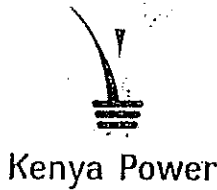
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- g) Hazard class (In this case H4);
- h) Species of timber;
- i) Preservative used and applicable standard;
- j) Marking for serialization and traceability.

All the markings shall be legible and permanent.

- 6.2 The marking in 6.1 above shall be on a plate made of aluminium and of at least 60mm x 60mm x 1.2mm in dimensions.
- 6.3 The aluminium plate shall be secured to the pole by at least four galvanized steel wire nails of at least 50mm length.
- 6.4 The aluminium plate shall be placed at a depth of 3mm from the surface of the pole and positioned 3.5m from the butt end of the pole.

7. DOCUMENTATION

7.1 The bidder shall submit its tender complete with technical documents required by Annex A (Guaranteed Technical Particulars) for tender evaluation.

7.2 The successful bidder (supplier) shall submit the following documents/details to the Kenya Power & Lighting Company for approval before manufacture:

- a) Guaranteed Technical Particulars of the poles to be manufactured for KPLC,
- b) Quality assurance plan (QAP) that will be used to ensure that the design, material, workmanship, tests, service capability, maintenance and documentation will fulfil the requirements stated in the contract documents, standards, specifications and regulations.
- c) Test Program to be used after manufacture,
- d) Marking details and method to be used in marking the poles,
- e) Manufacturer's undertaking to ensure adequacy of the design, good workmanship, good engineering practice and adherence to applicable standards, regulations and specifications in the manufacture of the poles for KPLC,
- f) Packaging details.

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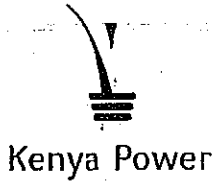
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ANNEX A: Guaranteed Technical Particulars (to be filled and signed by the Manufacturer and submitted together with relevant copies of the Manufacturer's catalogues, brochures, drawings, technical data, sales records for past five years, customer reference letters, details of manufacturing capacity, the manufacturer's experience and copies of test certificates and test reports for tender evaluation, all in English Language)

TENDER NO. BIDDER'S NAME & ADDRESS

CLAUSE NUMBER	DESCRIPTION	BIDDER'S OFFER
	Name & address of Manufacturer	
	Country and forest where the trees were grown	
	Country of manufacture	
	Manufacturer's Letter of Authorization	
	Manufacturer's warranty and guarantee for the offered treated wooden poles	
	Capacity of manufacturer (number of treated wood poles produced in a day)	
	List & contact addresses of previous customers of manufacturer for similar poles (last five years)	
	Reference letters from at least four of the previous customers	
1	Scope	
2	Reference Standards	
3	Definitions	
4.1.1	Species	
4.1.2	Felling	
4.1.3	Moisture content	
4.1.4	Defects	
4.1.5	Straightness	
4.1.6	Dimensions (tolerances)	
4.2.1	Sapwood thickness	
4.2.2	Moisture content at impregnation	
4.2.3	Impregnation (indicate process & standard)	
4.2.4	Preservative (indicate type & standard)	
4.2.5	Penetration & retention	
4.2.6	Fixation	
4.3.1	Banding	
4.3.2	Colour coding	

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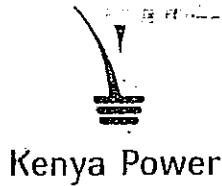
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4.4	Length	
	Minimum top diameter	
	Minimum diameter at theoretical groundline	
	Theoretical groundline diameter from butt	
	Force required to cause a fibre stress of 55MPa (cantilever loading), kN	
4.5	Quality Management System (indicate certificate submitted)	
5.1	Test Standards	
5.2	List copies of previous test reports submitted to support the offer	
5.3	Routine/acceptance tests (also indicate quantities to be presented for inspection)	
5.4	Inspection & acceptance to KPLC stores	
5.5	Sampling	
6	Marking (indicate parameters to be marked, method of marking & position of marking)	
7.1 - 7.2	Documentation	

.....
 Manufacturer's Name, Signature, Stamp and Date

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