

1977

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Murira, K.K (1977) Durability of wood poles for transmission and telephone lines in Tanzania, Masters dissertation, University of Dar es Salaam, Dar es Salaam.

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# **Durability of wood poles for transmission and telephone lines in Tanzania**

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The main objectives behind the study were:

- to establish the average service life of poles,
- to establish the condition of poles at different ages with the aim of proposing an inspection schedule,
- to establish the major causes of pole failure
- to relate some of the factors and some of the environmental factors to pole failure,
- to recommended a pole maintenance programme.

A total of three thousand and thirty eight pressure creosoted eucalyptus transmission and telephone poles were examined. The study was carried out in Morogoro, Tanga, Arusha and Moshiregions. The area of examination on the pole was 20cm above and below the ground- line. The examinationinvolved visual examination of the area mentioned coupled with boring at the ground – line. The main findings were as follows:

- Poles started to deteriorate at around age five.
- the average services life was estimate to be between fifteen and twenty one years.
- subterranean termites and fungi were the major causes of pole failure
- baring insects and fire were not by any standards a major cause of pole failure.
- the relation between preservative penetration and pole damage was not consistent but deeper penetrations appeared to protect the wood better than shallow penetration.
- there was no relation between pole diameter at the ground –line and pole damage.
- checks were found to be potential entry points for wood destroying organism that damage the wood both externally and internally.
- Soil texture according to its classification in this study had no effect on the durability of poles.
- no relationship was established between pole damage and pole drainage.
- there was no correlation between pole deterioration and the vegetation growing around the poles.

-anthills within a radius of 5m from the poles did not increase the chances of termite attack on poles.

The following recommendations were made

-it has been recommended that a pole inspection schedule be initiated in this country at age four and subsequent inspections should be placed at three years intervals.

- all methods used in the ground – line treatment of poles should be tried, the oxy-char method which is strength requirement of the poles.