

COPPER-CHROME-ARSENATE TREATMENT OF WOOD FROM TWO *HEVEA* CLONES

Rubber wood is a by-product from the rubber(*Hevea brasiliensis*) trees which are primarily planted for latex production. When the latex yield is not economical, 25 to 30 year old trees are felled and the area is replanted. The attractive colour with good working properties make rubber wood a substitute for many tropical timbers in various applications.

Since rubber wood is highly susceptible to the attack of borers and microorganisms, chemical treatment of the wood is essential (Sekhar, 1989). The timber is easy to treat with different preservative chemicals. However, the effect of clonal variety on preservative penetration and distribution, especially that of copper-chrome-arsenate (CCA) preservative, has not been adequately studied. A preliminary study was carried out to understand the treatability of rubber wood obtained from two clones of *H. brasiliensis* planted in South India.

Wood samples were collected from 31 year old rubber trees of RRIM 600 and 30 year old PR 107 felled in 1995. Twelve samples each of both the clones were obtained from the butt log, kiln-dried and dressed to 100x50 mm cross section. These were cut to provide two 250 mm long treatment samples and 20 mm thick biscuit between them and numbered serially. One

set of samples (T1) was treated with 2.7 per cent preservative solution of copper chrome arsenate (Tanalith C) solution following Bethell (full cell) treatment process in an experimental pressure treatment cylinder. The mean moisture content of the samples was 13.8 per cent. Another set of samples (T2) was treated with 2.6 per cent CCA solution. The samples had a mean moisture content of 10.9 per cent as these were stored in the laboratory for several months before treatment.

T1 was subjected to a vacuum (-85 kPa) for 15 minutes, flooded with the preservative solution, followed by a pressure of 1400 kPa held for 15 min. The pressure was then released and the solution drained from the cylinder. The sample was again held in vacuum (-85 kPa) for another 15 minutes. T2 was subjected to similar treatments as T1 but the pressure period was increased to 45 min.

The samples were weighed before and after treatment. The treated samples were kept wrapped in polythene sheet for one week to allow the CCA preservative to get fixed in the wood. A 10 mm thick biscuit was cut from the centre of each sample, air dried, sanded on one side and spot-tested with rubeanic acid reagent to determine preservative penetration.