

## Pre-1940 Hemmi Slide Rule Manufacturing Process

Original pictures Courtesy of Japan's [Slide Rule Library](#)  
Modified by ISRM, text provided by Atsushi Tomozawa, Japan.

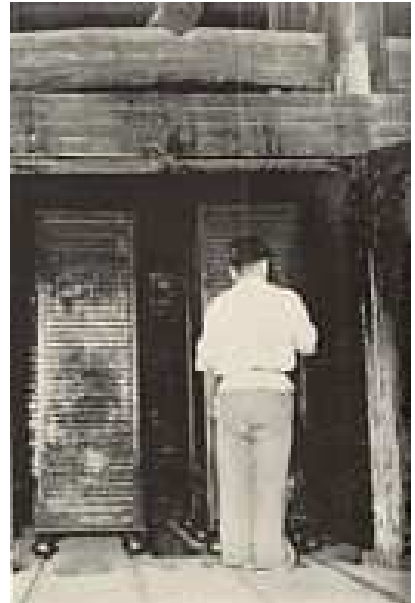
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(1) Selection: Pieces of bamboo, which is the main material for slide rules, undergo quality inspection.



(2) After selection and rough cutting, pieces are formed using circular saw.



(3) Heating process: Pieces are heated for long period of time at constant temperature.



(4) After gluing two or four pieces together, a flat surface is milled out using this machine.



(5) A block is split in half using circular saw, thus making two slide bars at the same time.



(6) Sheet of Celluloid is glued and pressed. Student rules are not covered with Celluloid on all sides, but are treated with a hard vanish.



(7) Overview of the factory. Hundreds of special purpose machines are lined up.



(8) Overview of the factory. This is where slide rules are manufactured for shipping world wide.



(9) Inspection: Checking thickness with micrometer.



(10) Making grooves: It requires great attention since this is one of the areas on which accuracy of the slide rule depend.



(11) Seasoning: Seasoning gives dimensional stability of the stock. It is one of the key processes and can not be neglected.



(12) Finish: After red markers are put in, and after inspection, the surfaces get polished.





(13) In some rules, there is an index line on the back of the rule. Since accuracy is required, a line curving machine with microscope is used.



(14) Cursor line is created by first coating surface of cursor glass with wax and drawing a thin line and finally etching the glass.



(15) Assembly of two-sided cursors: Two sided cursors are the most difficult to assemble.