DETERMINING THE CONSUMED POWER WHEN DEBITING WITH THE CIRCULAR SAW FCA - 810 M

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The existent technical bibliography offers little data in connection to the establishment of the splinting regime parameters at debiting with a circular saw.

Although the debiting is very similar to milling with milling cutter disk, the conditions of debiting are different from milling as such:
- The continuous variation of the section of splitting;
- Harder evacuation conditions of splinters, which creates higher friction forces and variables between the surfaces of the cloth-disk and the surfaces resulted through splinting;
- Worse cooling – oiling conditions;
- The data about the parameters of the splinting registered on the machine plate are in summary, which does not ensure the best charge of the machine and does not eliminate the danger of overload of teeth;

On a test stand made up of FCA - 810 M type circular saw was preceded when debiting a semi finished Ø160 OL38.

During the experiment, the total power consumption was analyzed, when running empty and in charge, the number of teeth when splinting and the specific power per tooth.

From the analysis of results obtained, the following can be noticed:
- The total consumption of power varies with the penetration of the disk cloth in the semi finished product, having the maximum value in its vicinity of x= Ø/ 2.
- The power varies much more emphasized with the variation of the cloth-disk and much less with the variation of the advance speed.
- Based on the contact length between the cloth-disk and the semi finished product, in consequence of the number of teeth in contact, the medium power per teeth was determined.

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