

# VIBRATION LEVEL EVALUATION AT SOME TYPES OF ELECTRIC MOTORS

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In the paper, it is effected the evaluation of electric motors, from the point of view of vibration level, by determining the vibration displacements, velocities, and accelerations, in accordance to the recommendations of Romanian and international standards. The vibration measurements have been effected at the "Electromotor" Company of Timișoara, on electric asynchronous motors, having the power nominal values of 15 kW, 18.5 kW and 22 kW. The measurements were effected on each tested motor in the three measure points, having the localization in figure1. The aim of measurements was to establish a selection criterion for the motors, in two categories, "good" and "faulty", on the basis of admissible vibration level. As mathematical apparatus, it was applied the method of orthogonal polynoms from he statistic calculus, in order to determine the  $N_i = f(v_{ef})$  dependences, where  $N_i$  is the number of measured motors of  $i$  type, and  $v_{ef}$  is the effective vibration velocity.

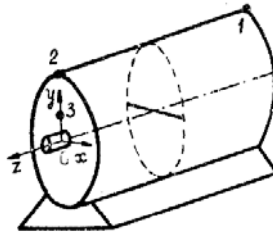


Fig.1. Location of vibration measure points

The  $N_i = f(v_{ef})$  dependences were drawn (fig. 2), permitting the determination of value  $v_{ef}^*$  which separates the fields of "good" and "faulty" motors.

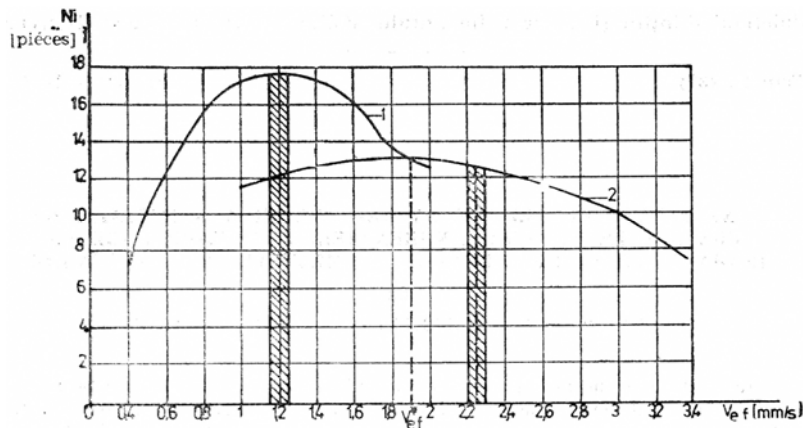


Fig.2.  $N_i = f(v_{ef})$  diagram

## REFERENCES (SELECTIVE)

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