

ASPECTS REGARDING THE OPERATION OF SOME PULSATORS FOR MILKING EQUIPMENTS

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Abstract

Mechanical milking can only be done using specific milking systems. The pulsators are components of the milking machines. These components make it possible to obtain a certain working frequency of the milking cup and also make it possible to obtain a certain ratio between the milk extraction phase and the massage phase during operation. The two mentioned parameters influence the milking time. Given the importance of pulsators for mechanical milking, this paper analyzes the operation of two types of pulsators: a BRK pneumatic pulsator and a prototype electromagnetic pulsator, design by author. Both types of pulsators are equipped with drawer type working elements. The electromagnetic pulsator was set for the operating mode in which the extraction time is longer than the massage time (3: 1 ratio). For both types of pulsators, the operating frequencies and the ratio between the extraction time and the massage time were determined on the basis of a number of vacuum-time diagrams. The value of the vacuum at the level of the milking cup was -42kPa. Following the tests, it was observed that both the pneumatic pulsator and the electromagnetic pulsator fall within the normal operating limits in terms of pulsation frequency. Regarding the work phases ratio at the prototype pulsator there is a bigger difference between its theoretical value and the real one than at the pneumatic pulsator. This difference can be corrected from the electronic control device of this pulsator.

Key words: milking equipment; milking cluster, pulsators