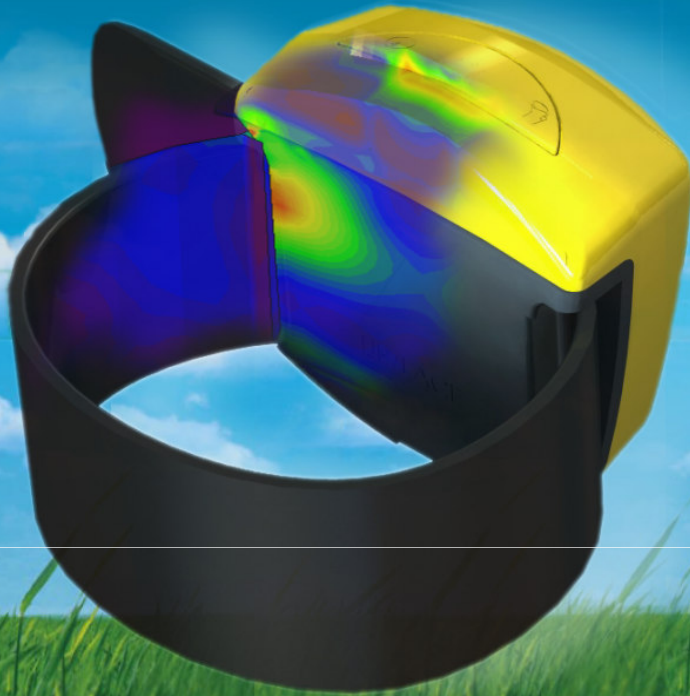


Nedap: Lactivator



Simulation of stresses in the housing of the Lactivator

A cow's pedometer

Optimisation of housing

Nedap has developed a new generation of pedometers for monitoring cows. BPO optimized the design of the housing. With subtle, but effective adjustments the housing became factors stronger.

A farmer can learn a lot from his cows: whether they are in good condition, are not too fat, are in heat or lame. With a small dairy herd, that is easy to see thanks to the farmer's trained eye. But larger numbers make it impossible to monitor each cow individually. Therefore, Nedap has developed a new simple and convenient system for monitoring large numbers of cows. The Lactivator is a pedometer which combines the cow's activity with the identification of the animal. The system for instance helps to determine the optimal insemination moment by indicating exactly when each individual cow is in heat. The Lactivator is easy to fit on the cow's leg using Nedap's patented leg strap.

During its lifetime, the housing of this pedometer will have to withstand extreme weather conditions. Moreover, the cow will not simply rest on her feet. She will collide with objects in her surrounding. Therefore, a robust design of the housing is absolutely indispensable. To check and if possible improve the strength of the polypropylene housing, Nedap asked BPO to assist in the development of the housing. By combining advanced non-linear computer simulations with test samples, critical spots were identified. Based on these analyses, the geometry around the strap was optimized. In this process BPO also performed moldflow simulations to guarantee functional and production demands. With subtle, but effective and production friendly adjustments the housing became factors stronger.

In a short time pace, BPO optimized the design so it is able to withstand the cow's environment. Due to its robust housing, the Lactivator can now optimally monitor the cow.

Meer informatie: www.nedap-lactivator.com