Bicycle manufacturer Cowboy validates e-bike for the European market at Sirris

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Cowboy's e-bike entered the European market in 2019. The company worked together with Sirris on the e-bike design as well as standardised and customised testing.

The Cowboy e-bike has an intuitive pedal assistance and can easily achieve a radius of 70 km, thanks to its removable battery. Following its successful launch in 2018, the team has been working hard on the second version of the e-bike with a more powerful battery and technological improvements. Cowboy wants to make the maximum improvements in order to introduce it to the European market.

Resistance against shocks and vibration

Cowboy started working with Sirris at the beginning 2019 in order to carry out the validation tests on its e-bike. The company called on the coating and plastics experts for advice about a suitable test set-up and how it should be implemented. This way the resistance against shocks and vibrations was tested in a special set-up with the components being inspected when exposed to UV radiation and moist salt spray.The accelerated life-span tests made it possible to identify possible defects over a short period of barely three months, which would only have appeared after many years of normal use. The information gained from these tests will make it possible for the quality assurance team at Cowboy to make further improvements.

A year in the sun

Various plastic components and coated parts of the electric bicycle underwent a UV ageing test in Sirris's Smart Coating Lab. This test combined a cycle of damaging UV radiation and condensation at raised temperatures in order to provide accelerated simulation of the impact of sunlight (Factor 1:12). At various intervals the components were inspected for signs of degradation and discolouration. Some components displayed discolouration. Cowboy then looked at the possibility of making these components using a different plastic in future.

Sensitivity to corrosion

The entire bicycle, including wheels, underwent a corrosion test in a salt spray chamber for 1,000 hours. Components from various suppliers were also tested in the test chamber thereby serving as a benchmark, or so that they can be used as components in the next generation of Cowboy bicycles. This test provided very useful information about the resistance against rusting of the various components.

Based on the results obtained, Cowboy set to work to put an improved version of the e-bike on to the market. The company looks back on a successful collaboration with Sirris and will bundle all the information regarding the tests carried out in order to continue improving the quality of the e-bike.

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