Case Study

2012-08-08 | 1/1

MotionBLITZ® LTR1p System: Detecting errors, assuring directional stability

Long-term effect observation and design correction

In the tyre sector, car manufacturers must demand absolute reliability from their original equipment manufacturers. When it comes to driver safety, every moment is vital: does the bead sit tightly on the rim even in extreme banks? Does the tread surface have sufficient contact with the ground even during high accelerations? How consistent is the tires concentricity overall? To determine these data during tests down to the last detail, high precision measuring instruments are called for. The MotionBLITZ® LTR1 portable High Speed Longtime Recording System is the ideal test tool with one decisive advantage: via the seamless, continuous long-time recording of the test processes every single moment is being reliably recorded. This allows for tyre construction and design to be much more efficiently and systematically optimised.

The application scenario

For efficiency reasons the track in tyre tests is simulated. On a virtual track, crucial features such as the grip, the abrasion as well as the cornering ability and the brake performance can specifically be observed with different tyre pressures and profile depths. Similarly, the loss of tyre pressure or mechanical damage can be optimally reproduced. In addition, high-speed tests above the designated speed class become possible and tyres can be extremely strained or even destroyed without any real danger.

The task

Instead of just recording individual test sequences as before, now the complete test program needs to be depicted. This requires a system with outstanding image quality that at the same time is equipped for mobile use.

The customer benefit

Thanks to the MotionBLITZ® LTR1p System's continuous recording possibility the complete test cycle can now be seamlessly monitored. Thus not only the trigger event itself but also its evolution and consequences are recorded in their entirety. The resulting know how allows for design improvement of the tyre that is considerably more targeted than before. An additional advantage of the MotionBLITZ® LTR1p Systems is its multi camera mode: recording from several perspectives permits a targeted monitoring of the tyre.

MotionBLITZ® LTR1p System with MC 1362 camera - All advantages at a glance

- Seamless: Up to 55 minutes recording time at full resolution (1280 x 1024 Pixel) and speed (506 fps)
- Flexible: Quad Mode permits quadruple speed or recording duration
- Concise: Marker function during recording marks individual images for quick capturing and analysis of relevant moments
- Expandable: Multi camera mode allows for connection and central control of up to four cameras with one system
- Compact and robust: with dimensions of just 51 x 39 x 24 cm very flexible and mobile

MIKROTRON GmbH in Unterschleissheim near Munich develops, produces, and markets digital high-speed cameras, image processing components, and high-speed recording systems for industry, research, and development worldwide. As a specialized activity for industrial image processing, Mikrotron also markets industrial cameras of leading manufacturers, as well as image processing software.

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