Multifunctional Crash Test System

Testing at Concept

- Development from one source and under one roof
- Reduction of interfaces
- Close cooperation between design, analysis, crash simulation and testing
- A continuous process-chain from prototyping to test preparation, immediate result return in design and analysis
Multifunctional Crash Test System

System Description

The crash system offers many possibilities including application in the course of development, as well as for the use in the series monitoring (COP: Conformity of Production). These services are completed by: high resolution digital camera, target tracing, comprehensive measuring and dummy technics, detailed evaluation, analysis, reports, and homologation.

Areas of Application

With the multifunctional crash system, offering the most important test in the field of passive safety, Concept expanded its service spectrum in the area of testing.

With this system we can additionally offer the integration of window bags and active or passive restraint systems, as well as their real testing in the area of interior development.

Combined with the broadening of our competence in the field of interior and exterior development, we complete our process-chain of design – simulation – testing.

We have increasingly dedicated ourselves to the crash tasks of component tests and entire vehicle tests.

Frontal Crash Tests
acc. to 96/79/EG, ECE-R33, -R12, ECE-R94, FMVSS 208, FMVSS 203, or Euro NCAP, US NCAP, Allianz, IIHS etc.

Side Crash Tests
acc. to 96/27/EG, ECE-R95, FMVSS 201 Pole, FMVSS 214, FMVSS 301 or Euro NCAP, SINCAP, IIHS etc.

Rear Crash Tests
acc. to ECE-R32, FMVSS 223, FMVSS 224, FMVSS 301 or Allianz, IIHS etc.

Sled Tests
acc. to 74/408/EG, ECE-R17, ECE-R44, FMVSS 208, FMVSS 213, Isofix & Normen...

* according to the latest revision status

Crash Test System:
- Test field: L: 42 m, B: 18 m, H: 7 m
- Launch Track: L: 90 m, B: 7 m, H: 4 m
- Film pits
- Film pit 1: 6 m x 2 m x 3 m deep
- Film pit 2: 3 m x 4 m x 3 m deep
- Drive: momentum wheel drive

Full Vehicle Tests:
- Min./Max. impact speed for individual vehicles or mobile barriers: 4 km/h up to 80 km/h
- Impact configuration:
  - Stiff block, with rigid, angular as well as deformable barriers
  - Mobile barriers for rear and side impacts over film pit. Rollover and pole impact

Sled Tests:
- Min./Max. impact speed for sled: 6 km/h up to 80 km/h
- Max. impact speed for sled: 80 km/h with max. 1 000 kg
- Brake system: Hydro-brake 1.6 MN

Lightning System:
- 160 000 Lux HMI (daylight quality)

Concept is a development service provider in the field of vehicle safety. In particular we focus on the development of vehicle interiors, vehicle bodies, pedestrian protection development, crash/component tests, conformity of production tests and tests for special body manufacturer and much more, whereas Industrial Engineering represents a key development tool alongside test investigations.

Since 2012 Microsys is within the „Concept Tech Group“ and the combination of Microsys and Concept products provides the market with a fully integrated safety test solution for impactor and airbag testing.

www.concept-tech.com
office@concept-tech.com
+43 (3124) 203-0
+1 (905) 678-3288

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