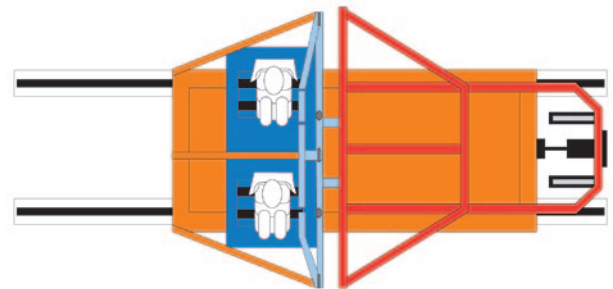


DYSIN - Dynamic Side Impact and Intrusion

Overview

Continental has developed a test approach for the simulation of side impact crash events on the HYGE sled. This test rig is capable of demonstrating vehicle and crash specific deformation with intrusion characteristics.

This approach is used for the development and testing of side airbags, curtains, pillar trims, headliner, door trim and child restraint systems.



Technical Description

DYSIN is used on the servo-hydraulic sled test facility. Using DYSIN, the interaction between safety components, like airbags, trims and the occupants can be investigated under crash conditions. Side impact crash tests with moving barrier are simulated as well as fixed pole impacts.

A dynamic intrusion of more than 300 mm and a maximum acceleration of up to 150 g can be achieved. The assembly also allows realistic testing of different seating positions in side sled tests.

On the sled rig, a complete side wall of the vehicle is built up with all the side interior components including side and head airbags (curtains).

After an analysis of the crash test, the vehicle side frame is modified to collapse through links and hinges at the buckling points, so the structure can deform during the test. The tested airbags and trims are replaced for following tests to be performed. This approach gives comparable results to the crash test utilising a minimum of test parts.

There is the possibility to change test parameters and utilise different configurations during a development, such as pole impact and site impact barrier configurations.