

Child Seat Dynamic Test Analysis System

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ACCELERATION TEST SOFTWARE



This software is designed to analyze child seat dynamic test data in accordance with the test standard and to print out the results. To record the dynamic test data, the DIS series onboard crash test measuring system can be used. The dynamic test is conducted using the sled impact tester with the child seat (CRS) and child dummy mounted to the test seat on the bogie. Supposing the bogie is driven at a speed of 50 km/h, the prescribed range of acceleration or deceleration is given to the bogie to obtain dynamic data. The recorded data is analyzed to calculate injury ratings of the child dummy. The analyzed results (waveforms and injury ratings) are displayed and printed out.

Features

- DIS series onboard crash test measuring system is used for data acquisition.
- Calculation processing and graph format are regularized by regulations, thereby ensuring easy operation.
- Can be built in the crash test analysis software (barrier impact test software) as an additional function.

Specifications

Hardware

Data Acquisition System: DIS series onboard crash test measuring system, control software
Data Analysis System (PC)
CPU: Pentium II or higher recommended
Memory: 128 MB or more
Display: 1024 x 768 dots, 256 colors or more
Printer: Windows-compatible (A4 size)
Hard Disk: 100 MB or more
OS: MS-Windows 98/SE/Me/NT 4.0/2000

Software

Selectable Test Conditions: Type of seat, type of dummy, comment, etc.
Assignment of Measuring Regions: Measuring channel data is assigned to respective regions of the dummy.
Unit Conversion: Based on amplifier ranges, calibrations and calibration coefficients of sensors, measured signals are converted to values in proper engineering units.
Filtering: Digital filters conforming to SAE-J211; CFC60, CFC180, CFC600, CFC1000
Calculation of Injury Ratings
Head injury criterion: Level of 3 ms (m/s^2) of composite acceleration
Thorax injury criteria:
 Level of 3 ms (m/s^2) of composite acceleration
 Level of 3 ms (m/s^2) of acceleration in Z axis (abdomen-thorax)
Acceleration of Bogie: Bogie acceleration graph (allowable range is graphed)
Output: Display and printout of regular graphs and output in ASCII format



Printout Image

