

Repeatability of Stopper Materials for the Flex-GT Dynamic Assembly Calibration Test

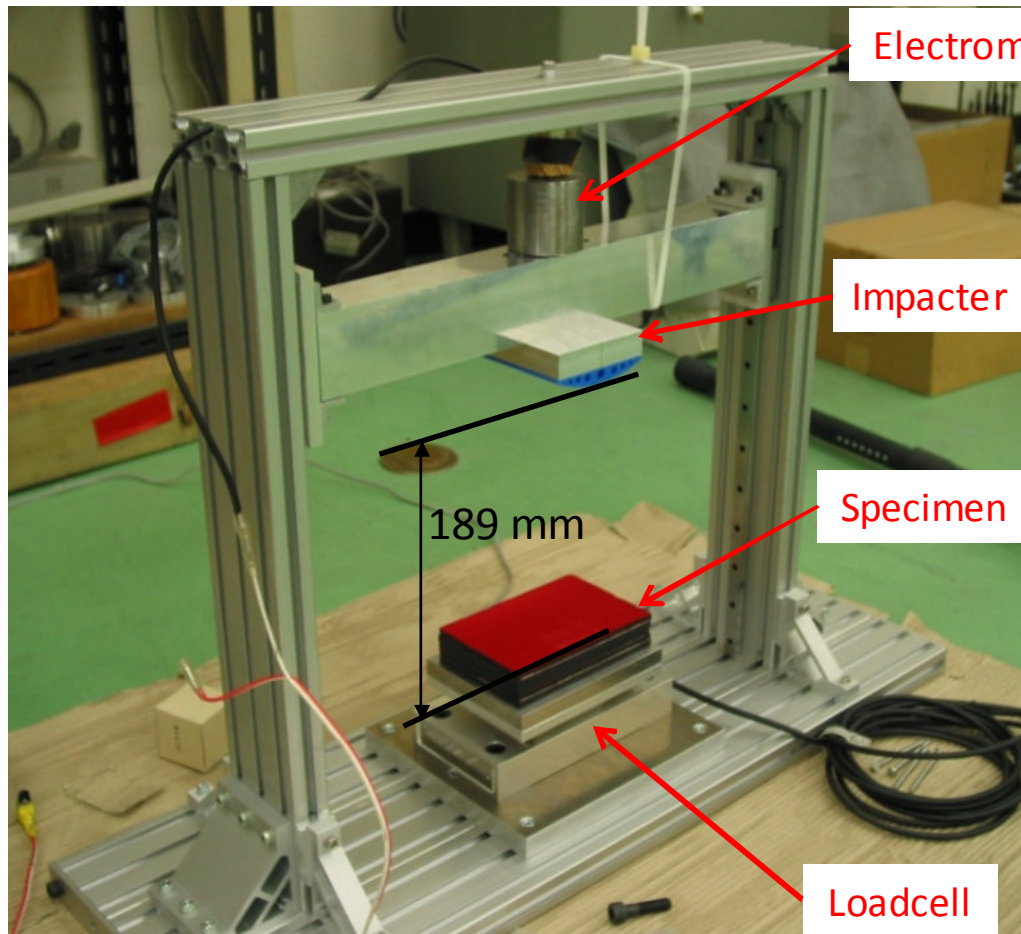
Background

- Rubber and neoprene are used for the dynamic assembly calibration test stopper materials.
- However, their repeatability has not been investigated.

Purpose

- To evaluate a repeatability of the stopper materials.

Experimental Setup



Major Specification

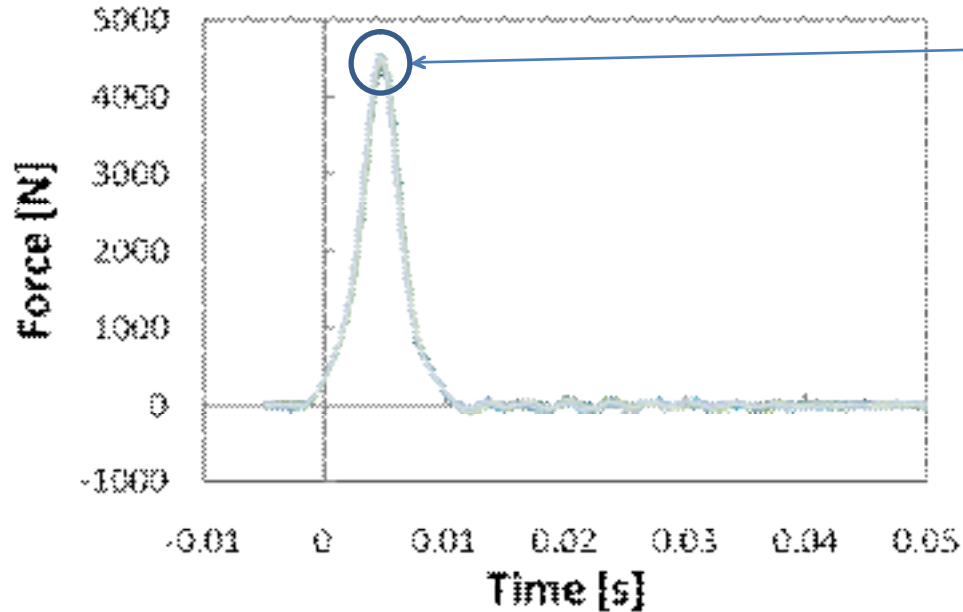
Drop Height [mm]	189
Impacter Mass[kg]	5.56
W × L × H(System)[mm]	800 × 270 × 600
W × L × H(Specimen)[mm]	150 × 100 × 25
Switch	Electromagnet

*the specimen is stopper material of the dynamic assembly calibration test.

- The impact force is measured using a loadcell set under the specimen.
- The test was repeated 25 times within at 5 ~ 10min. interval.

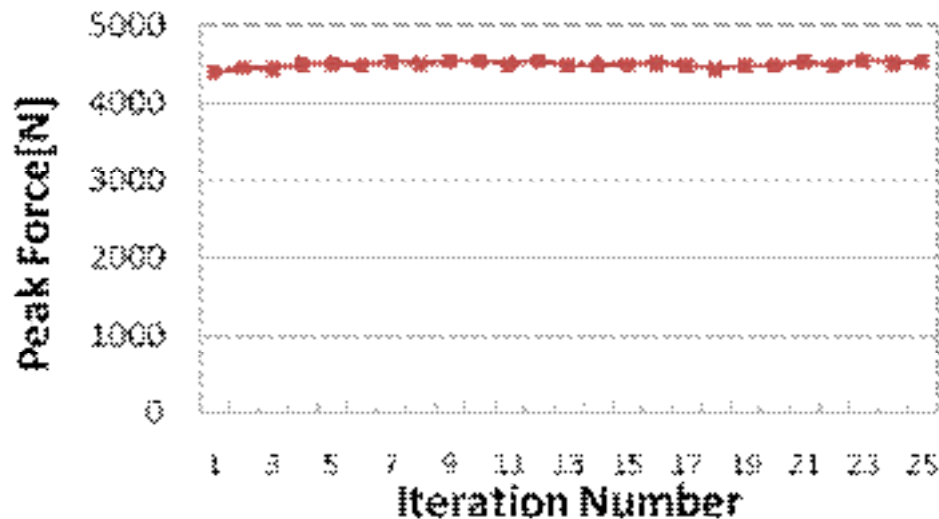
Results

Force history of in each iteration



Peak Force [N]

Average	4496.3 (0%)
Standard deviation	35.6
Maximum(@23rd)	4549.5 (+1.2%)
Minimum(@1st)	4394.9 (-2.3%)
CV[%]	0.79



- The force peaked at 5msec after the contact.
- The peak forces were varied between +1.2% and -2.3%.



The variation in the repeatability of the stopper materials are negligible.