

## **Adaption of the load values for traffic loads in car parks given by the German Standard DIN 1055-3 to the current development of increased car weights**

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The current load values for traffic loads in car parks given by the German Standard DIN 1055-3 are based on load measurements of the early 1970ies. Because the car weights have increased significantly during the last decades, the respective loads given by the standard have to be modified. Therefore load measurements of vehicle weights have been realised at a multi-storey car park in Frankfurt am Main/Germany. The results have been compared to statistical data given by the Federal Statistical Office of Germany. With the information given by the cumulative distribution function of the measured vehicle weights, it was possible to calculate the uniformly distributed traffic loads as well as the annual extreme values for multi-storey car parks with the help of numerical simulations. As expected, the updated load values are higher than the load values given by the German Standard DIN 1055-3, based on out of date measurements in the years 1972/1973. On the basis of the updated load model, equivalent uniformly distributed loads have been adapted and a proposal for traffic loads dependent on the distance between the supports of the structural system has been presented.

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