

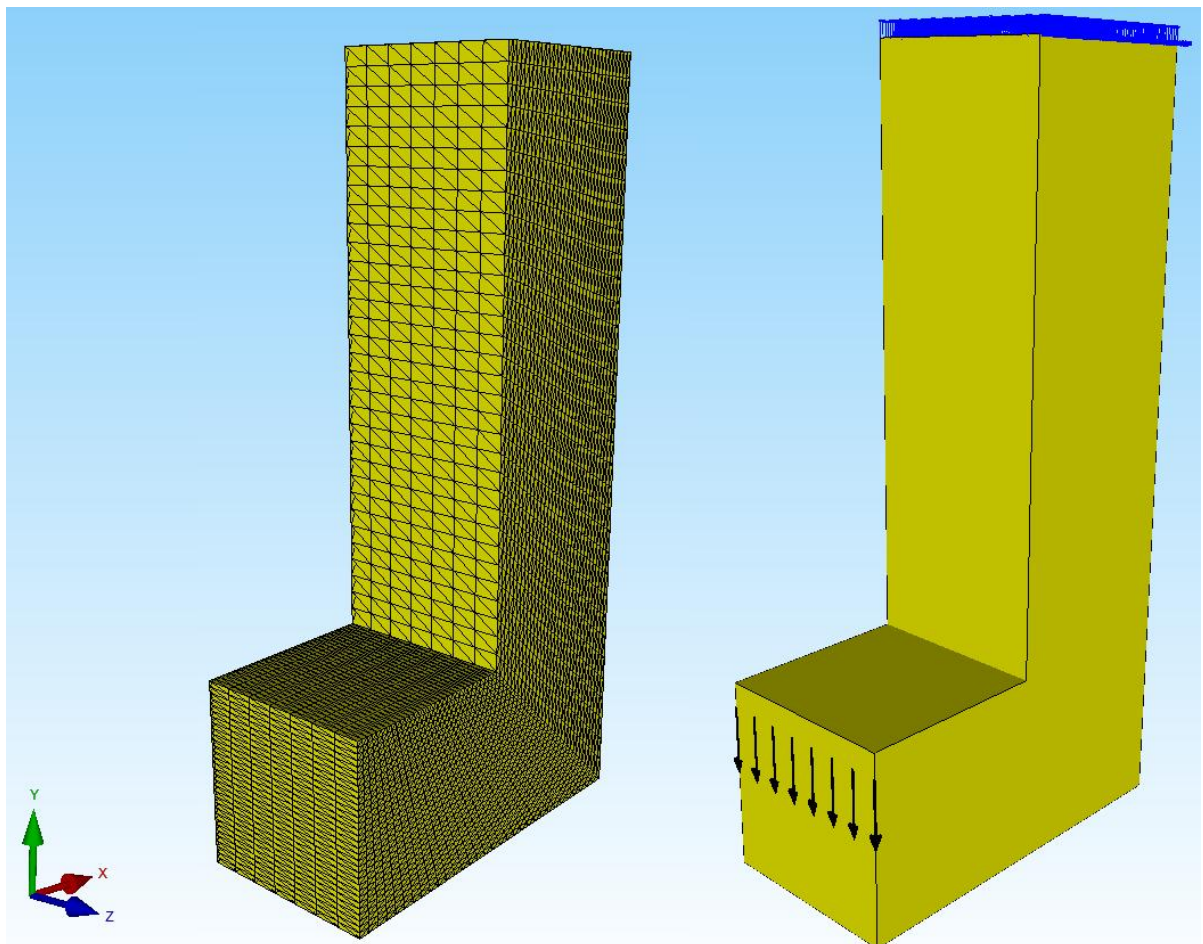
Part 40 - Form and Design Optimization with MEANS V14

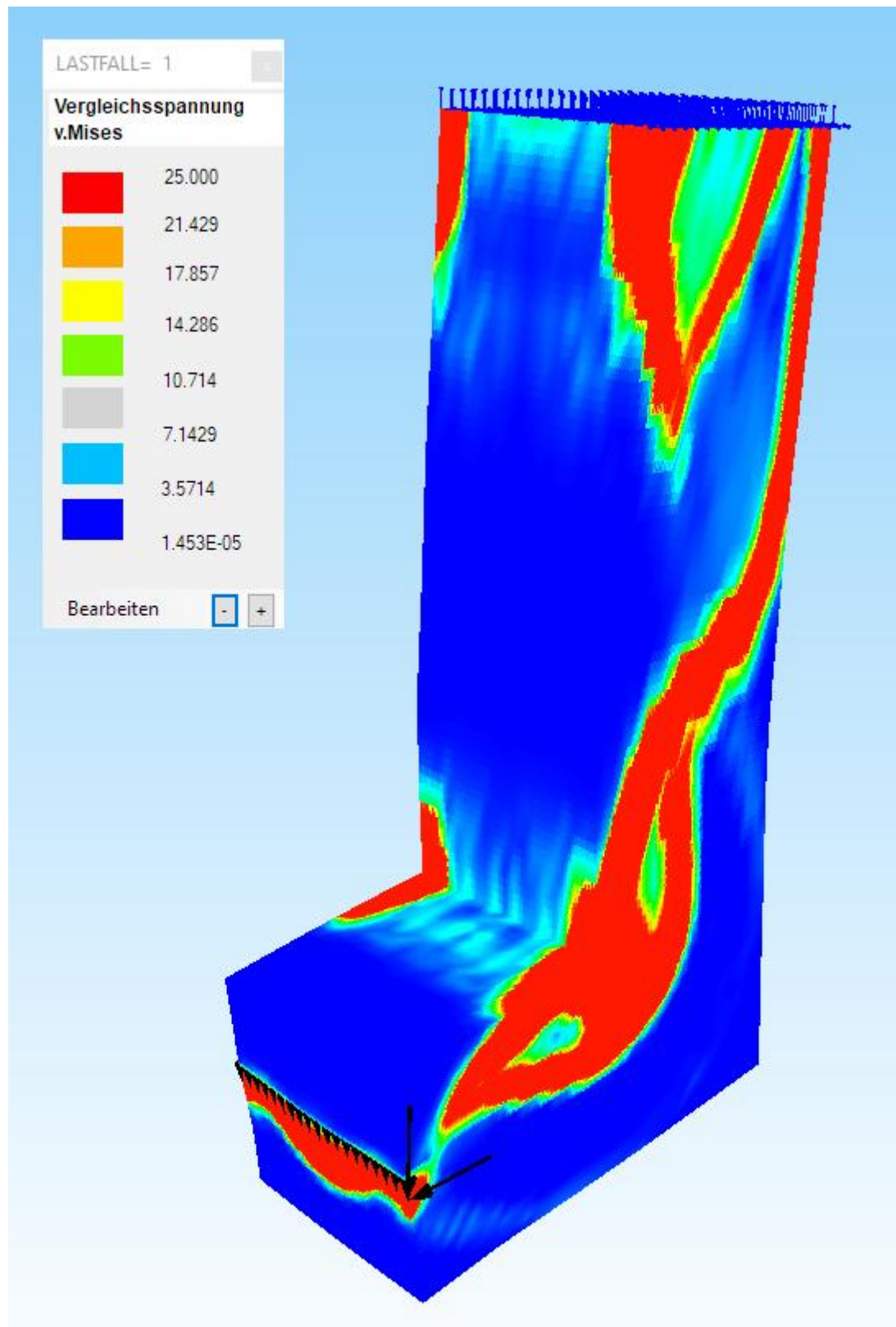
Especially for today's electric cars, which have to accommodate batteries weighing over 500 kg in their lightweight aluminum bodies, the use of FEM optimization can be of great importance, because less weight also means less material and energy consumption. However, material savings of up to 80% must not lead to a loss of safety or quality. Therefore, it is also very important to check design proposals to ensure they still meet all requirements regarding strength.

Example 1: Form Optimizing a Rectangular Box

The following 3D rectangular box is to be optimized:

Hexader HEX20 / C3D20 - Modell



v.Mises-Stresses:

STL- and CAD-Modell with 80% Material Savings: