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Dynamic Test for  
Over-head guard  
protection, supplied as  
mast integration

**The over-head guard protection supplied as mast integration is required to pass the tests defined in the Standards**

### **Static Test**

- To determine if the overhead guard protection resistance is adequate.
- Uniform surface load on the upper part of the guard
- The load depends on the truck capacity
- The static test has to last at least one minute

### **Dynamic Impact Test**

- TEST OBJECT= 45kg mass, 50mm thick, impact square area with one side of 300mm, rounded edges to 10/15mm, in oak wood or material with similar density.
- TEST CONDITION= free fall of the test object with impact surface parallel to the guard protection from a height of 1,5m. At least one of the test is to simulate free fall centered on the operator head position.

**Structural Analysis to perform a numerical simulation of the required tests**



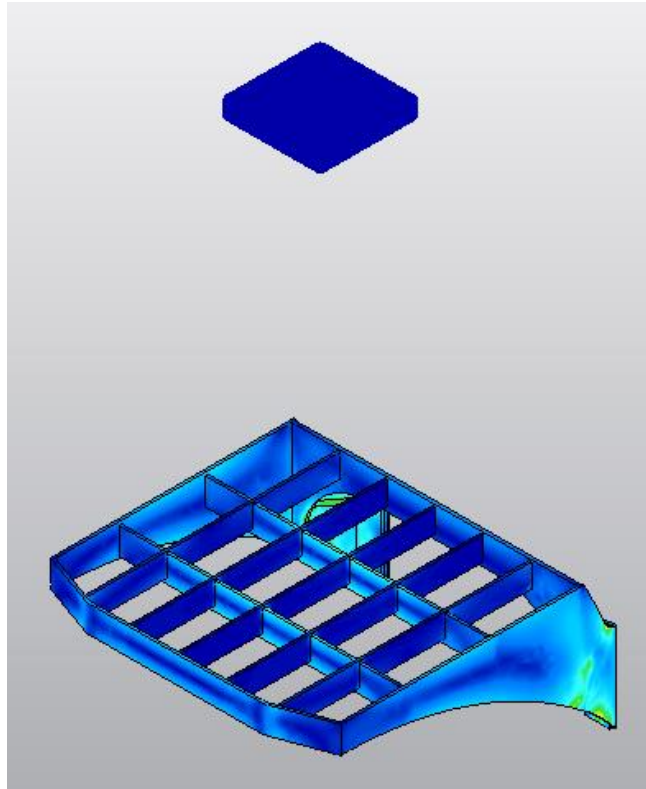
# Our technical approach



## Requirements

After both tests have been simulated, the guard shall not show

- fracture
- separation of parts
- permanent vertical deformation exceeding 20mm, measured in correspondance to the centre point of the operator's seat.



## Results

- Correct modelling was applied, respecting the conditions required by the Standards.
- Static structural analysis and Dynamic impact test analysis were performed.
- The results provide confirmation that the Standards requirements are satisfied.

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*The **best solution** for your masts*

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