

Test report summary

NTF Stainless Steel Competition Line

Report No. TR-15-011

Date: 2015-05-21

Place: Troax Test Centre

Purpose

To document the effect of a high energy impact test from inside the hazard zone with NTF Competition Line Stainless Steel machine guard system.

Test material

Panel: Stainless steel mesh panel without frame A003-002, 1870x923 mm

Post: Stainless steel post A003-025, 2000 mm

Fixing: Stainless steel bolt and plastic spacer

Floor fixing: Bolted to the test rig

Test procedure

The test was performed in accordance with the pendulum test method stated in ISO 14120:2015 Annex C. Panels and posts of the Competition Line system were assembled and fastened to the test rig. The pendulum of 100 kg was adjusted so the impact hit the panel at 1466 mm above the floor, i.e. 1336 mm from the bottom of the panel (with a 130 mm floor gap). To reach the energy of 1600 J the 100 kg pendulum was raised 1629 mm from the starting point.

Impact energy

Pendulum mass: 100 kg

Pendulum speed: 20 km/h

$$E = \frac{mv^2}{2} = \frac{100 * (\frac{20}{3,6})^2}{2} = 1543 J$$

$$E = mgh = 100 * 9,82 * 1.629 = 1600 J$$

Results

The Competition Line wall performed well in the test and withstands the high energy impact. The centre panel and the posts absorb all energy and obtain a remaining deformation. The total deflection of the panel and the posts was approximately 315 mm. Despite the high energy impact there was no penetration and no parts departed.



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