Impact test report
Quick-Guard® Standard - Door

Date: 2016-03-07
Place: Kungsbacka, Sweden
Testing Company: ABB Jokab Safety

Report No: QG-TR-93
Test method: Test method stated in EN ISO 14120:2015 Annex C

Test object data

<table>
<thead>
<tr>
<th>Test object</th>
<th>Infill material / panel</th>
<th>Panel fixation</th>
<th>Post profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick-Guard Standard</td>
<td>JSM YPC5A9</td>
<td>JSM PL3</td>
<td>JSM A44A</td>
</tr>
<tr>
<td>Door</td>
<td>Polycarbonate 5mm</td>
<td>Panel lock</td>
<td>Aluminum profile 44x44</td>
</tr>
</tbody>
</table>

Test object height: 2000 mm
Test object width: 1056 mm

Other

Test equipment and conditions

<table>
<thead>
<tr>
<th>Test method</th>
<th>Impact body</th>
<th>Impact side</th>
<th>Height of impact point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pendulum test</td>
<td>Hard body</td>
<td>Inside hazard zone</td>
<td>1340 mm</td>
</tr>
<tr>
<td>Body mass</td>
<td>Drop height</td>
<td>Calculated impact energy [J]</td>
<td>Floor fixation</td>
</tr>
<tr>
<td>34 kg</td>
<td>1500 mm</td>
<td>500 J</td>
<td>M10x68 expander shell bolts</td>
</tr>
</tbody>
</table>

Pendulum speed: 19,5km/h (5,4m/s)

\[ E = mgh = 34 \times 9,82 \times 1,5 = 501 \text{ J} \]

or

\[ E = \frac{mv^2}{2} = \frac{34 \times 5,4^2}{2} = 496 \text{ J} \]

Where:
E is the calculated impact energy in Joule [J]
m is the pendulum mass [kg]
g is 9,82 m/s² (constant)
h is the drop height in meters [m]
v is the pendulum speed [m/s]

Test result

Result:
The fence/door absorb and resist the energy impact caused by the pendulum body, and obtain a remaining deformation. Total deflection of the fence was approximately 205 mm, no penetration or parts departed.