



TEST REPORT - ST20

Belt conveyor system, 1600 Joules

Report No. TR-21-035A
Date: 2021-09-02
Place: Troax Test Center



TEST MATERIAL

Panel: ST20 2050x1200 mm
Tube: 60x40 mm
Fixing: Conveyor fix system
Mounting: Beam mounting plates

PURPOSE

To document the effect of a high energy impact test on the belt conveyor system mounted on a beam from inside the hazard area.

TEST PROCEDURE

Pendulum mass: 140 kg
Pendulum speed: 17,21 km/h
Impact energy: 1600J

The test was performed in accordance with the pendulum test method stated in ISO14120:2015 Annex C. Panels and posts were assembled with the Belt Conveyor system according to the assembly instruction. The pendulum was adjusted so the impact hits the panel 1466mm above the floor, 2/3 of the total wall height of 2200 mm. To reach the energy of 1600 J the pendulum was raised 1164 mm from the starting point.

RESULTS

The ST20 panel, Conveyor fixings and posts successfully withstand the high energy impact with no parts departing, successfully preventing penetration from the hazard area. The system absorbs all energy and obtain a remaining deformation. The total deflection was 351 mm. The conveyor fixings retained to hold on the ST20 panel throughout the high energy impact, successfully preventing access to the hazard area. The brackets deformed slightly in the direction of the impact with the top bracket clip remaining unparallel to the bracket after the impact.



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