3291055 (Issue 4)-Test Report.

bsi.

Test Report 3291055 (Issue 4). Transdelta Int Ind LLC/BR

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bsi. Introduction.

3291055 (Issue 4)-Test Report.

This report has been prepared by Lucie McGill and Alex Honeywell and relates to the activity detailed below:

Job/Registratio	n Details	Client Details
Job number: Job type: Start Date: Test type: Sample ID: Registration: Scheme: Protocol: Scheme Mgr:	3291055 Testing Samples Submitted 24/03/2021 Type 10193270 VC 736277 Cable Management PP625 Holly Rossington	Transdelta Int Ind LLC/BR Industrial Area Al Jurf 1 Ajman 22104 United Arab Emirates

Issue 4 - This issue supersedes all previous issues. The amendment giving rise to the issue of this report was due to a typographical error detailed on page 3.

The report has been approved for issue by Floyd Merrison - Laboratory Manager

Approved For Issue Issue Date: 9 June 2022

Objectives. Type test for product certification

Product Scope.

Cable Ladders and Trays

Report Summary.

The samples were received on 19/03/2021 and the testing was started on 24/03/2021. The testing to clauses 10.3, 10.8.1 and 10.9 were subcontracted to LVT Test Laboratories.

The samples submitted complied with the requirements of the test work conducted.



Test Samples.

Sample	Id	ER Number	Description
1		10193270	Cable ladders, trays + fittings

Description of Test Samples.

Sample Description
150 x 100mm ² – 2.0 Thick cable ladder
450 x 100mm ² – 2.0 Thick cable ladder
900 x 100mm ² – 2.0 Thick cable ladder
100 x 50mm ² - 1.2 Thick cable tray
450 x 50mm ² - 1.5 Thick cable tray
900 x 50mm ² - 2.0 Thick cable tray



Test Requirements.

BS EN 61537:2007 + Results Table - Cable management. Cable tray systems and cable ladder systems

Clause	Requirements	
6	Classification – See page for details	-
7	Marking and documentation	PASS
8	Dimensions	N/A
9	Construction	PASS
10	Mechanical Properties	
10.2	SWL test procedure	PASS2
10.3	Test for SWL of cable tray lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans	PASS2
10.8	Test for SWL of support devices	
10.8.1	Test for SWL of cantilever brackets	PASS2
10.9	Test for impact resistance	PASS2
11	Electrical properties	
11.1	Electrical continuity	PASS
12	Thermal properties	N/Ap
13	Fire hazards	N/Ap
14	External influences	
14.2	Resistance against corrosion	
14.2.2	System component made of steel with metallic coating or stainless steel and detailed in Table 1.	PASS
Results	Actual test results	
table	See Table A - BS EN 61537 2007 Full Format	

Glossary of Terms.

PASS: Complies. Tested by BSI engineers at BSI laboratories.

PASS2: Complies. Tests carried out by subcontractor; results accepted by BSI.

N/A: Not assessed. For information only.

N/Ap: Not applicable to type of product.



Conditions of Issue.

This Test Report is issued subject to the conditions stated in current issue of 'BSI Terms of Service'. The results contained herein apply only to the particular sample(s) tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of BSI, who reserve the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.

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Note: Where a statement of conformity is reported the decision-rule is simple acceptance unless stated otherwise.



Table A - BS EN 61537:2007 Full Format

Clause 6 - Classification.

Clause	Classification of product supplied
6.1 According to material	Metallic system components
6.2 According to resistance to flame propagation	Non-flame propagating system components
6.3 According to electrical continuity characteristics	With electrical continuity characteristics
6.4 According to electrical conductivity	Non-conductive
6.5 According to resistance against corrosion	System component made of steel with metallic finishes or stainless steel
6.6 According to temperature	Minimum temperature is -5°C
	Maximum temperature is +60°C
6.7 According to the perforation in the base area of cable tray	C
6.8 According to the free base area	Υ
6.9 According to impact resistance	20J

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3291055 (Issue 4)-Test Report.

Marking.

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7. **Marking and documentation** 7.1

Each channel shall be durably and legibly marked with:

- The manufacturer's or responsible vendor's name or trademark or identification mark
- a product identification mark

Actual Marking

The client sent through a label that would be applied to all products, see below for example

Ladders and trays: Sample label:



Embossed:

Note: The client sent through a photograph stating that the products would be embossed 'DELTA'.

The marking was easily legible



Test Results.

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8.

DIMENSIONS (FOR INFORMATION ONLY)

Dimensions detailed ⁽¹⁾ were recorded for information only.

150 x 100mm² – 2.0 Thick Ladder

Dimension	Stated	Actual
External depth	-	103.8 mm
Internal depth	-	99.4 mm
External width	-	194.4 mm
Internal width		152.1 mm
Overall envelope of	-	20173.8 mm ²
X-Sectional area		
Rung Width	-	41.2 mm
Rung Depth	-	22.3 mm
Centre line spacing	-	300.2 mm
Large Perforation Width	-	12.4 mm
Large Perforation Length	-	29.4 mm
Large Perforation Spacing	-	49.9 mm

900 x 100mm² – 2.0 Thick Ladder

Dimension	Stated	Actual
External depth	-	104.1 mm
Internal depth	-	100.1 mm
External width	-	941.0 mm
Internal width		899.0 mm
Overall envelope of	-	93612.9 mm ²
X-Sectional area		
Rung Width	-	41.2 mm
Rung Depth	-	21.9 mm
Centre line spacing	-	300.0 mm
Large Perforation Width	-	12.5 mm
Large Perforation Length	-	29.4 mm
Large Perforation Spacing	-	50.0 mm



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8.

DIMENSIONS (FOR INFORMATION ONLY)

Dimensions detailed ⁽¹⁾ were recorded for information only.

100 x 50mm² - 1.2 Thick Tray

Dimension	Stated	Actual
External depth	-	52.8 mm
Internal depth	-	49.7 mm
External width	-	102.0 mm
Internal width		100.1 mm
Overall envelope of	-	5387.1 mm ²
X-Sectional area		
Large Perforation Width	-	7.7 mm
Large Perforation Length	-	24.5 mm
Large Perforation Spacing	-	43.6 mm

900 x 50mm² – 2.0 Thick Tray

Dimension	Stated	Actual
External depth	-	53.7 mm
Internal depth	-	49.4 mm
External width	-	904.0 mm
Internal width		899.0 mm
Overall envelope of	-	48508.6 mm ²
X-Sectional area		
Large Perforation Width	-	7.7 mm
Large Perforation Length	-	24.5 mm
Large Perforation Spacing	-	44.6 mm

9. Construction

- **9.1** The cable ladders and trays appeared to not have sharp edges, burrs or surface projections which were likely to damage insulated conductors or cables or inflict injury to the installer or user.
- 9.2 The cable ladders and trays appeared to be safe for manual handling



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10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $-5^{\circ}C$

Ladder 150 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 980.67 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
150	3000	1875	1500	310	980.6	7	15	0	7.5	1667	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Ladder 150 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 980.67 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
150	3000	1875	1500	310	980.6	4	15	0	7.5	1667	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $-5^{\circ}C$

Ladder 450 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 1569.06 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
450	3000	1875	1500	610	1569	11	15	2	22.5	3187.5	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Ladder 450 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 1569.06 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
450	3000	1875	1500	610	1569	8	15	2	22.5	3187.5	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $-5^{\circ}C$

Ladder 900 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 3334.26 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection (≤1/20 of span) (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
900	3000	1875	1500	1058	3334	10	15	3	10	5667	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable ladder lengths and cable ladder lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable ladder lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Ladder 900 x 100mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 3334.26 N/m Sample test length: 3m The loads were applied at increments.

Cable ladder	Cable ladder	End span	Inter media	Cantil ever	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	(0.4L or increa sed slightl y) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection (≤1/20 of span) (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
900	3000	1875	1500	1058	3334	9	15	3	10	5667	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of -5° C

Tray 100 x 50mm² - 1.2 Thick

Test type: III Required SWL stated by the client: 735.5 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} span)$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
100	3000	1875	1500	130	735.5	7	15	0	5	1250.3	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Tray 100 x 50mm² - 1.2 Thick

Test type: III Required SWL stated by the client: 735.5 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
100	3000	1875	1500	130	735.5	7	15	1	5	1250.3	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $-5^{\circ}C$

Tray 450 x 50mm² - 1.5 Thick

Test type: III Required SWL stated by the client: 882.6 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)	deflecti	al mid-span on at SWL		on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowanc e deflection $(\leq 1/20 \text{ of} \text{ span})$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
450	3000	1875	1500	490	882.6	10	15	7	22.5	1500.4	Pass



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10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Tray 450 x 50mm² - 1.5 Thick

Test type: III Required SWL stated by the client: 882.6 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection $(\leq 1/20 \text{ of} span)$ (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
450	3000	1875	1500	490	882.6	8	15	4	22.5	1500.4	Pass



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10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $-5^{\circ}C$

Tray 900 x 50mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 1216.03 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection (≤1/20 of span) (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
900	3000	1875	1500	940	1216	11	15	7	45	2067.2	Pass



CLAUSE

10. MECHANICAL PROPERTIES

10.3 Test for SWL of cable tray lengths and cable tray lengths mounted in the horizontal plane running horizontally on multiple spans

The test was carried out on cable tray lengths to verify the declared SWL when mounted over multiple spans with the cable trays in the flat and horizontal plane. The test was carried out in accordance with 10.2 at a temperature of $+60^{\circ}$ C

Tray 900 x 50mm² – 2.0 Thick

Test type: III Required SWL stated by the client: 1216.03 N/m Sample test length: 3m The loads were applied at increments.

Cable tray	Cable tray	End span	Inter media	Cantilev er (0.4L	SWL (N/m)		al mid-span on at SWL	Transve deflecti	erse on at SWL	1.7 times	Sample held
width (mm)	length (mm)	(L or X) (mm)	te span (L) (mm)	or increas ed slightly) (mm)		Max either span (mm)	Max allowable deflection $(\leq 1/100$ of span) (mm)	Max either span (mm)	Max allowable deflection (≤1/20 of span) (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
900	3000	1875	1500	940	1216	11	15	7	45	2067.2	Pass



10. MECHANICAL PROPERTIES (CONTINUED)

10.8.1 Test for SWL of cantilever brackets

The test was carried out on cantilever brackets to verify the declared SWL. The test was carried out in accordance with 10.2.

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 4718.61 N/m Sample test length: 310 mm The load was applied, and the deflection was measured.

Total length of cantilever bracket	SWL (N/m)	Defi Measured (mm)	ection at SWL Allowable deflection (≤1/20 of span) (mm)	1.7 times SWL (N/m)	Sample held increased load without collapsing
(L) (mm) 310	4718.61	2	15.5	8021.63	(Pass/Fail) Pass There was no deformation

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 4365.45 N/m Sample test length: 610 mm The load was applied, and the deflection was measured.

Total length of cantilever	SWL (N/m)	Defl Measured (mm)	ection at SWL Allowable deflection (≤1/20	1.7 times SWL	Sample held increased load without
bracket (L) (mm)			of span) (mm)	(N/m)	collapsing (Pass/Fail)
610	4365.45	3	30.5	7421.26	Pass
					There was no deformation

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 3462.93 N/m Sample test length: 1058 mm The load was applied, and the deflection was measured.

Total length of cantilever bracket (L) (mm)	SWL (N/m)	Defi Measured (mm)	ection at SWL Allowable deflection (≤1/20 of span) (mm)	1.7 times SWL (N/m)	Sample held increased load without collapsing (Pass/Fail)
1058	3462.93	5	52.9	5886.98	Pass There was no deformation



10. MECHANICAL PROPERTIES (CONTINUED)

10.8.1 Test for SWL of cantilever brackets

The test was carried out on cantilever brackets to verify the declared SWL. The test was carried out in accordance with 10.2.

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 5640.75 N/m Sample test length: 130mm The load was applied, and the deflection was measured.

Total	SWL	Deflection at SWL		1.7 times	Sample held
length of cantilever bracket (L) (mm)	(N/m)	Measured (mm)	Allowable deflection (≤1/20 of span) (mm)	SWL (N/m)	increased load without collapsing (Pass/Fail)
130	5640.75	5	6.5	9.589.27	Pass There was no deformation

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 1716.75 N/m Sample test length: 490mm The load was applied, and the deflection was measured.

Total length of	SWL (N/m)	Deflection at SWL Measured Allowable		1.7 times	Sample held increased load
cantilever bracket (L) (mm)	(,,	(mm)	deflection (≤1/20 of span) (mm)	SWL (N/m)	without collapsing (Pass/Fail)
490	1716.75	1	24.5	2918.47	Pass There was no deformation

Model of cantilever bracket: Wall Type

Required SWL stated by the client: 1764.8 N/m Sample test length: 940mm The load was applied, and the deflection was measured.

Total length of cantilever bracket (L) (mm)	SWL (N/m)	Defi Measured (mm)	ection at SWL Allowable deflection (≤1/20 of span) (mm)	1.7 times SWL (N/m)	Sample held increased load without collapsing (Pass/Fail)
940	1765.8	9	47	3001.86	Pass There was no deformation



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10. Mechanical properties

10.9 Test for impact resistance

The ladders and trays were conditioned at -5° C for a minimum of 2 hours. The samples showed no signs of deformation

Test Sample	Impact Energy (J)	Number of failures
150 x 100 x 2mm Ladder	20 J	0
450 x 100 x 2mm Ladder	20 J	0
900 x 100 x 2mm Ladder	20 J	0
100 x 50mm ² -1.2 Thick Tray	20 J	0
450 x 50mm ² -1.5 Thick Tray	20 J	0
900 x 50mm ² – 2.0 Thick Tray	20 J	0

11 Electrical properties

11.1 Electrical continuity

The systems were tested in accordance with the methods described in this clause.

The calculated impedances of the body of the ladders and trays were as follows:

	Specified	Actual
150x100mm ² -2.0 Ladder (mΩ)	50 max	0.34 max
900x100mm ² – 2.0 Ladder (m Ω)	50 max	0.43 max
100x50mm ² - 1.2 Tray (mΩ)	50 max	0.50 max
900x50mm ² - 2.0 Tray (mΩ)	50 max	0.42 max

The calculated impedances of the ladders and trays were as follows:

Specified	Actual
5 max	0.54 max
5 max	0.54 max
5 max	0.88 max
5 max	0.50 max
	5 max 5 max 5 max



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- 14. External influences
- 14.2 Resistance against corrosion
- 14.2.1 System component made of steel with metallic coating or stainless steel and detailed in Table 1

The thicknesses of the zinc galvanizing of the ladders and trays were measured in accordance with ISO 2178. The declared minimum thickness was not stated.

_	Stated	Actual
150x100mm² - 2.0 Ladder coating thickness (µm)	55 min	66.7
900x100mm² -2.0 Ladder coating thickness (µm)	55 min	76.9
100x50mm² - 1.2 Tray coating thickness (μm)	55 min	74.9
900x50mm² - 2.0 Tray coating thickness (µm)	55 min	75.5

*** End of Report ***