

TEST REPORT

Lucideon Reference: 151911 (QT36361/1/DT)/Ref. 1/Supp1

Project Title: Testing of KeeGuard Freestanding Guardrail System, including Safety Gate, in Accordance with BS EN 14122-4:2004

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1 INTRODUCTION

Lucideon were requested by the client, Kee Safety Logistics Ltd, to witness testing on their KeeGuard freestanding guardrail system, including Safety Gate, in accordance with BS EN 14122-4:2004 Safety of machinery – Permanent means of access to machinery – Part 4: Fixed ladders.

2 SYSTEM DETAILS

One design of guardrail was supplied by Kee Safety for testing which was fitted with a Safety Gate.

The general construction of the KeeGuard freestanding guardrail system with Safety Gate is shown in Plates 1 to 3 and Figure 1.

3 TEST POSITIONS

The test positions are as follows:

- Intermediate Upright.
- Free End Upright.
- D Return.
- Gate Slam Plate.
- Gate Hinge Position.
- Mid Span Between Uprights.

The test positions are shown in Figure 1.

4 TEST METHOD

Testing was carried out in accordance with Clause 8 of BS EN ISO 14122-3:2001+A1:2010 Safety of machinery – Permanent means of access to machinery – Part3: Stairways, stepladders and guard-rails. A total of six tests were completed on the specimen supplied.

The specimen was fastened to a simulation of a roof bearing construction via the two stanchions to which the gate was fixed. The two ends of the guardrail system were restrained by means of KeeGuard base weights.

The samples were located on the laboratory floor and the lateral load applied to the relevant locations by means of a pulley and deadweight system (see Plate 2). The load was applied perpendicular to the handrail. Deflection was measured by means of an LVDT located at the same point.



A preload of 25% of the service load was applied to the handrail. This load was maintained for one minute and then removed. The service load of 300 Nm^{-1} was then applied and held for one minute, deflections being recorded at the beginning and end of the one minute period. The load was then released and the residual deflection recorded after a period of one minute.

5 RESULTS

The system tested complied with all requirements stated in Clause 8 of the BS EN ISO 14122-3:2001+A1:2010

The full results are shown in Table 1.

NOTE: The results given in this report apply only to the samples that have been tested.

END OF REPORT



Table 1 - Results of Load Tests on Kee Safety's KeeGuard Freestanding Guardrail System, including Safety Gate

Force Applied (N)	Deflection (mm) at Test Location					
	1	2	3	4	5	6
150 ¹	-	-	4	-	-	-
150 (after 1 min)	-	-	4	-	-	-
260 ²	-	-	-	7	5	-
260 (after 1 min)	-	-	-	8	5	-
300	5	8	-	-	-	6
300 (after 1 min)	5	10	-	-	-	6
Recovery	1	3	0	2	1	2
Allowed Limit	30	30	30	30	30	30

Note 1 – Load applied to free end of system, 0.5 m long

Note 2 – Load applied to Safety Gate, 0.87 m wide



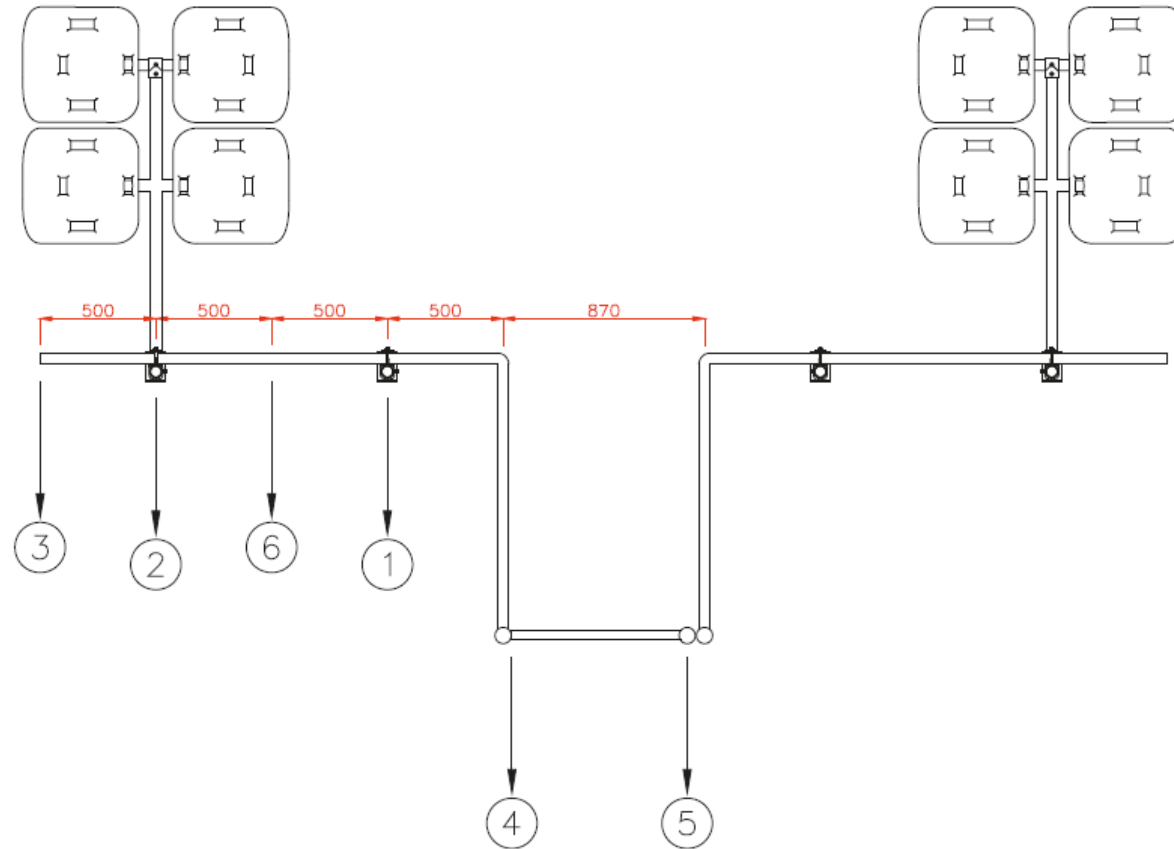
Plate 1 - General View of KeeGuard Freestanding Guardrail System Including Safety Gate



Plate 2 - Load Application and Deflection Measurements System



Plate 3 - Safety Gate Detail



DWG.N° Figure 1	SCALE: NOT TO SCALE	DATE: 20/05/2015	DRAWN BY: A BELLAMY
TITLE: Detail and dimensions for barrier tests			