Document: Technical Construction File

File No：TCF(15)-621- GPSD

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Product: STEEL BUNK BED

MODEL : AS-044

According to

Directive 2001/95/EC General product safety Directive

presented by

LUOYANG ANSHUN OFFICE FURNITURE CO.,LTD

PANGCUN INDUSTRIAL ZONE,LUOYANG CITY,CHINA

Technical File No.	Issue Date	Prepared by	Approved by
TCF(15)-621-GPSD	DEC. 09, 2015		

Content

Part I：General

1.1 General description

The product is a STEEL BUNK BED.

As for the compliance of General product safety risk, the inspection and test report carried out according to the European standards of EN 747-1-2007 EN 747-2-2007 .

1.2 List of applicable regulations and standards

Regulations:
Directive 2001/95/EC GPSD

Standards.
EN 747-1-2007
EN 747-2-2007
DIN EN 747-1：2012
DIN EN 747-2：2012

Part II：Test report

3.1 EN 747-1-2007 test report

Technical Construction File

File No.: TCF(15)-621-1-GPSD

Type of Equipment:	**STEEL BUNK BED**
Model No.:	**AS-044**
Issued Date:	**2015-12-09**
Brand Name/ Trade mark:	
Directive(S)	**Directive 2001/95/EC General product safety Directive**
standard(s):	**EN 747-1-2007**

CE

Presented by

LUOYANG ANSHUN OFFICE FURNITURE CO.,LTD

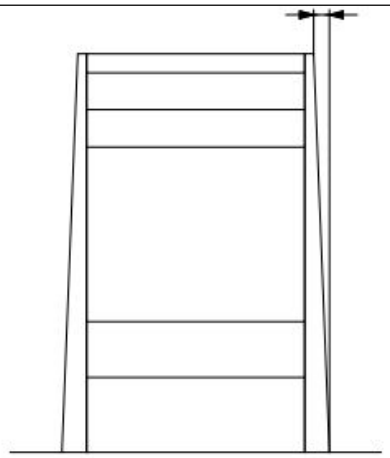
PANGCUN INDUSTRIAL ZONE,LUOYANG CITY,CHINA

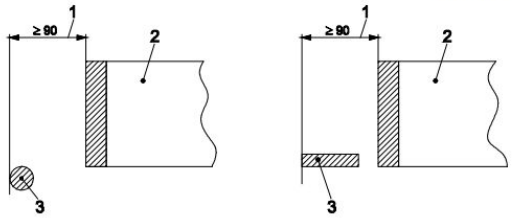
	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
1	Scope	-	
	This European Standard specifies requirements for the safety, strength and durability of bunk beds and high beds for domestic and non-domestic use. It applies to bunk beds with a height to the upper surface of the top bed base of 600 mm or more above the floor and to high beds with a height to the upper surface of the bed base of 600 mm or more above the floor. The loads and forces in the strength and durability tests apply to beds with an internal length greater than 140cm and a maximum bed base width of 120 cm. The dimensional requirements are intended to minimise the risk of accidents, particularly to children. The strength and durability requirements are intended to represent use by one occupant per bed. Safety requirements for other products included in a bunk bed/high bed, for example a table or storage furniture, are not included in this standard. This European Standard does not apply to bunk beds and high beds used for special purposes, including but not limited to prison, the military and fire brigades.	This machine is within this scope.	P
2	Normative references	-	-
3	Terms and definitions	-	-
4	Significant hazards	-	-
4.1.1	General	-	-
	Accessible edges and corners shall be rounded or chamfered and free from burrs or sharp edges.There shall be no open ended tubes. All assembly and pilot holes shall be made by the manufacturer. Vertically protruding parts on the top of the upper bed shall either: a) have an uninterrupted minimum horizontal dimension of 300 mm without any other vertical protrusion, or b) have an uninterrupted vertical dimension of at least 600 mm measured from the highest adjacent part, or c) where the largest dimension is 50 mm or more , have a maximum height at which a line,drawn at 45° touches it, of not more than 5 mm above at least one adjacent/adjoining horizontal component; the maximum vertical protrusion above that component shall not	Comply with the requirement	P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	exceed 20 % of the largest horizontal dimension of parts , or d) where the largest dimension is less than 50 mm, have a maximum height at which a line, drawn at 45° touches it, of not more than 5 mm above at least one adjacent/adjoining horizontal component; the maximum vertical protrusion above that component shall not exceed 10 mm of parts . It shall not be possible to dismantle the bed or its components without the use of a tool. The dimensional requirements apply both before and after testing without re-tightening.		
4.1.2	Accessible holes gaps and openings	-	-
4.1.2.1	General	-	-
	There shall be no accessible holes, gaps or openings with a diameter/width greater than 7 mm and less than 12 mm, unless the depth is less than 10 mm when tested according to 5.3 of EN 747-2:2012+A1:2015. Additionally, accessible holes, gaps and openings in safety barriers, bed bases and treads, shall fulfil the requirements specified in the respective clauses, i.e. 4.1.3 Bed base(s), 4.1.4 Safety barriers and 4.1.5 Ladder or other means of access. All other accessible holes, gaps or openings shall be either: a) at least 12 mm but not more than 25 mm, when tested in accordance with 5.3 of EN 747-2:2012+A1:2015; or b) at least 60 mm but not more than 75 mm, when tested in accordance with 5.3 of EN 747-2:2012+A1:2015; or c) at least 200 mm.	Comply with the requirement	P
4.1.2.2	Head entrapment on the outside of the bunk bed/high bed	-	P
	The following requirements apply only to openings, where the lowest part is ≥ 600 mm from the floor. Partially bound, V and irregular shaped openings shall be constructed so that: a) portion B of the template shall not enter the opening to the full thickness of the template when tested in accordance with 5.3.2 of EN 747-2:2012+A1:2015; or b) the apex of portion A of the template shall contact the base of the opening when tested in accordance with 5.3.2 of EN 747-2:2012+A1:2015.	This requirement has been complied with.	P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
4.1.3	Bed base(s)	-	-
	The bed shall have a means (e.g. fastening) of preventing the side rails from bending outwards. This requirement is fulfilled if the bed base(s) or its elements do not fall down when tested with the horizontal outwards force specified in 5.4.2 of EN 747-2:2012+A1:2015. All gaps between the bed base and the side or ends shall not exceed 25 mm when measured in accordance with 5.3 of EN 747-2:2012+A1:2015. All gaps between bed base components, (e.g. slats or springs) shall not exceed 75 mm when measured in accordance with 5.3 of EN 747-2:2012+A1:2015. When tested in accordance with 5.4.3, 5.4.5 and 5.4.4 of EN 747-2:2012+A1:2015, the bed base and/or its elements shall not break, fall down or become detached. The distance between the upper surface of the lower bed base and the underside of the upper bed base shall be at least 750 mm. The bed base shall allow ventilation. ! This requirement is fulfilled if there is a minimum ventilation area of 35 cm2 . The openings shall fulfil the requirements in 4.1.2.	Comply with the requirement	P
4.1.4	Safety barriers		P
	Any upper bunk bed or high bed shall be equipped with continuous safety barriers all around the bed, with the exception of an opening for access, which shall be located on one long side only. Gaps between the ends of the safety barrier and the bed end structures shall not exceed 7 mm, when tested according to 5.3 of EN 747-2:2012+A1:2015.In non-domestic use only, the structure of the building can act as a safety barrier, provided that the bed is fastened to it in accordance with the manufacturer’s instructions. The safety barriers shall be secured against unintentional loosening. This requirement is fulfilled if the safety barriers do not become damaged or loosened when tested in accordance with 5.4.2 of EN 747-2:2012+A1:2015. The distance between the upper edge of the safety barriers and the upper surface of the bed base shall be at least 260 mm.	Comply with the requirement	P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	The top of the mattress shall be at least 160 mm below the upper edge of the safety barriers. The maximum thickness of the mattress shall be permanently marked . With the exception of the upper corners of the safety barrier, which may end in a maximum radius of 85 mm, the opening for access shall have a width between 300 mm and 400 mm from the maximum mattress thickness mark to 160 mm above it . With the exception of the long side, where the ladder or other means of access shall be mounted, the horizontal distance between the outside of the top safety barrier and the vertical projection of the outermost point of the legs/posts/panels, shall not exceed 55 mm nor shall be more than 230 mm . With the exception of the opening for access, the safety barrier shall be designed so that in at least one direction the clear space between two adjacent retaining elements (e.g. bands, filler bars) is either ≤ 5 mm or is at least 60 mm and not more than 75 mm when tested in accordance with 5.3 of EN 747-2:2012+A1:2015.		
4.1.5	Ladder or other means of access	-	-
	The ladder or other means of access shall be either vertical or shall have a positive inclination towards the upper bed. The distance from the floor to the upper surface of the first tread shall not exceed 400 mm. The distance between the upper surfaces of two successive treads shall be (250 ± 50) mm. The distance between the upper surfaces of the treads shall be equal with a tolerance of ± 5 mm. The distance between the top tread and the point of access shall not be more than 500 mm. The clear distance between two successive treads shall be at least 200 mm. The usable width of the treads shall be at least 300 mm. The front edges of all treads shall lie on a straight line within ± 20 mm. The gap between any tread and any part of the bed frame shall be: a) less than 7 mm; or b) at least 12 mm but not more than 25 mm; or c) at least 60 mm but not more than 75 mm; or	Comply with the requirement	P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	d) at least 200 mm. The effective step depth shall be at least 90 mm .Frame parts of the bed, situated in the vicinity of treads, shall not interfere with the usable area of the tread.		
	 — Distance between the top safety barrier and the vertical projection	Comply with the requirement	P
4.2	Strength of ladder or other means of access: Attachment, deflection and strength	-	P
	The bed shall be provided with a means of access which shall not break, become detached or deform permanently by more than 5 mm when tested in accordance with 5.6 of EN 747-2:2012+A1:2015.	Comply with the requirement	P
4.3	Strength of frame and fastenings		-
	The frame and structural fastenings shall not be damaged or malfunction; nor shall any part detach when tested in accordance with 5.4.2 and 5.5 of EN 747-2:2012+A1:2015.	Comply with the requirement	P
4.4	Stability	-	-
	When tested in accordance with 5.7 of EN 747-2:2012+A1:2015, the bed shall not overturn.	Comply with the requirement	P
4.5	Fastening of the upper bed to the lower bed	-	-
	The upper bed shall be connected to the lower bed in such a manner that it does not disconnect when tested in accordance with 5.8 of EN 747-2:2012+A1:2015.	Comply with the requirement	P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	Dimensions in millimetres  Key 1 Step depth 2 Frame part 3 Tread Figure 2 — Gaps and step depth – Example of constructionFigure 4 — Gaps and step depth – Example of construction		P
5	Instructions for use	-	-
	All beds which claim compliance with this standard shall be provided with instructions for use in the official language(s) of the country where the bed is sold. The instructions shall be headed: IMPORTANT – READ CAREFULLY – RETAIN FOR FUTURE REFERENCE The instructions for use shall include at least the following information: a) WARNING "High beds and the upper bed of bunk beds are not suitable for children under six years due to the risk of injury from falls"; b) WARNING "Bunk beds and high beds can present a serious risk of injury from strangulation if not used correctly. Never attach or hang items to any part of the bunk bed that are not designed to be used with the bed, for example, but not limited to ropes, strings, cords, hooks, belts and bags" c) WARNING “Children can become trapped between the bed and the wall, a roof pitch, the ceiling,adjoining pieces of furniture (e.g. cupboards) and the like. To avoid risk of serious injury the distance between the top safety barrier and the adjoining structure shall not exceed 75 mm or shall be more than 230 mm”; d) WARNING Do not use the bunk bed/high bed if any structural part is broken or missing; e) always follow the manufacturer’s instructions; f) the recommended size of the mattress(es); g) a statement that ventilation of the room is necessary in order to keep the humidity low and to prevent mould in and around the bed; h) all bunk beds and high beds intended to be assembled		P

	EN 747-1-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	by other than the manufacturer or his/her representative shall include assembly instructions including a list of the parts supplied and details of any tools required to assemble the bed; i) instructions regarding positioning and connection of the means of access; j) the maximum thickness of the mattress (see 4.1.4) as well as information regarding the mattress maximum thickness marking; k) a statement to check regularly that all assembly fastenings are properly tightened; l) the number and year of this European Standard.		
6	Marking	-	-
	All beds which claim compliance with this standard shall be clearly and permanently marked with the following information: a) name, registered trade name or registered trade mark of either the manufacturer, distributor or retailer; b) maximum thickness of the mattress to be used with the bed. This can be in the form of text, a line on the Hbed at the correct height, or by other means; c) either a text or a pictogram visible when in use as follows: Text on high beds: This high bed is not suitable for children under six years; or Text on each upper bed: This upper bed is not suitable for children under six years Pictogram at least 15 mm x 15 mm		P

3.2 EN 747-2-2007 test report

Technical Construction File

File No.: TCF(15)-621-2-GPSD

Type of Equipment:	**STEEL BUNK BED**
Model No.:	**AS-044**
Issued Date:	**2015-12-09**
Brand Name/ Trade mark:	
Directive(S)	**Directive 2001/95/EC General product safety Directive**
standard(s):	**EN 747-2-2007**

CE

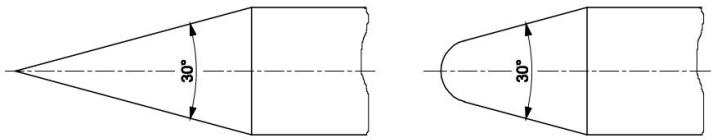
Presented by

LUOYANG ANSHUN OFFICE FURNITURE CO.,LTD

PANGCUN INDUSTRIAL ZONE,LUOYANG CITY,CHINA

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
1	Scope	-	
	This European Standard specifies test methods for the safety, strength and durability of bunk beds and high beds for domestic and non-domestic use. The loads and forces in the strength and durability tests apply to beds with an internal length greater than 140 cm and a maximum bed base width of 120 cm. The tests are designed to be applied to a bed that is fully assembled and ready for use. The applicable safety requirements are given in EN 747-1.	This machine is within this scope.	P
2	Normative references	-	-
3	General test conditions	-	-
3.1	Preliminary preparation	-	-
	For furniture that includes hygroscopic materials, at least one week in normal indoor conditions shall have elapsed between manufacturing (or assembly) and testing. For all other furniture, at least 48 hours in normal indoor conditions shall have elapsed prior to testing. The sample shall be tested as delivered. If the sample is a knock-down type, it shall be assembled according to the instructions supplied with it. If the instructions allow for different combinations, the most adverse combination shall be used for each test. Samples intended to be fastened together in pairs or attached to the structure of a building shall be tested as single, free-standing samples unless the instructions specifically require attachment to another sample or the building structure. The test shall be carried out in indoor ambient conditions at a temperature between 15 °C and 25 °C. If, during a test, the temperature falls outside of the range of 15 °C to 25 °C, the maximum and/or minimum temperature shall be recorded in the test report. Knock-down fittings shall be tightened before testing and shall not be re-tightened throughout the testing procedures. The tests shall be carried out on the same sample and following the order of the clauses of EN 747-1. If a test cannot be carried out as specified in this standard, e.g. because a loading pad cannot be used for the application	Comply with the requirement	P

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	of a force due to the design of the product, the test shall be carried out as closely as possible to the specified procedure.		
3.2	Application of forces		P
	The test forces in durability and static load tests shall be applied sufficiently slowly to ensure that negligible dynamic load is applied. The forces in durability tests shall be applied sufficiently slowly to ensure that kinetic heating does not occur. Unless otherwise specified, static loads shall be maintained for (10 ± 2) s. Unless otherwise specified, durability loads shall be applied for (2 ± 1) s.	Comply with the requirement	P
3.3	Tolerances	-	-
	Unless otherwise stated, the following tolerances are applicable to the test equipment: — all forces shall have an accuracy of ± 5 % of the nominal force; — all masses shall have an accuracy of ± 1 % of the nominal mass; — all dimensions shall have an accuracy of ± 1 mm of the nominal dimension; — all angles shall have an accuracy of ± 2 ° of the nominal angle. The tolerance for the positioning of loading pads shall be ± 5 mm. The forces may be replaced by masses. The relationship of 10 N = 1 kg shall be used.	Comply with the requirement	P
4.	Test equipment	-	-
4.1	General	-	-
	The test forces may, unless otherwise stated, be applied by any suitable device, as results only depend on correctly applied forces and loads and not on the apparatus. The equipment shall be capable of following the deformation of the unit/component during testing so that the loads are always applied at specified points and in specified directions.	Comply with the requirement	P
4.2	Measuring cones	-	P
	Cones with an angle of (30 ± 1)° made of plastic or some other hard, smooth material (see Figure 1). There shall be six cones with the diameters 5 mm, 7 mm, 12	Comply with the requirement	P

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	mm, 25 mm, 60 mm and 75 mm. The 5 mm, 7 mm, 25 mm and 75 mm cone diameters shall have tolerances of (0/-0,1) mm. The 12 mm and 60 mm cone diameters shall have tolerances of (0/+0,1) mm.		
	 Figure 1 — Examples of measuring cones	Comply with the requirement	P
4.3	Bed base impactor	-	-
4.3.1	Bed base impactor	-	-
	Approximately 200 mm in diameter, separated from the striking surface by helical compression springs and free to move relative to it on a line perpendicular to the plane of the central area of the striking surface. The body and associated parts minus the springs shall have a mass of (17 ± 0,1) kg and the whole apparatus, including mass, springs and striking surface, shall have a mass of (25 ± 0,1) kg.	Comply with the requirement	P
4.3.2	Springs	-	-
	Springs shall be such that the combined spring system has a nominal spring rate of (7 ± 2) N/mm and the total friction resistance of the moving parts is less than 1 N. The spring system shall be compressed to an initial load of (1 040 ± 5) N (measured statically), and the amount of spring compression movement available from the initial compression point to the point where the springs become fully closed shall not be less than 60 mm.		
4.3.3	Striking surface		-
	Rigid and circular object, 200 mm in diameter, the face of which has a convex spherical curvature of a 300 mm radius with a 12 mm front edge radius	Comply with the requirement	P
4.4	Loading pads	-	-
4.4.1	Rigid and circular object, 200 mm in diameter, the face of which has a convex spherical curvature of a 300 mm radius with a 12 mm front edge radius	-	-
4.4.2	Rigid and cylindrical object, 100 mm in diameter, having a flat, smooth, hard surface and rounded edge with a radius of 12 mm.	-	-
4.5	Test mattress	-	-
	Soft polyether foam sheet with a thickness of 100 mm, a bulk density of (30 ± 2) kg/m3, an indentation hardness	Comply with	P

<table>
<tr><th></th><th>EN 747-2-2007</th><th></th><th></th></tr>
<tr><th>Clause</th><th>Requirement</th><th>Remark</th><th>Verdict</th></tr>
<tr><td></td><td>index of (170 ± 20) N in accordance with A 40 of EN ISO 2439:2008, and with dimensions more or less the same as those of the bed base tested. The test mattress may have a cover, in which case it shall have the following characteristics:
— composition: pure cotton;
— weave in plain: 1/1;
— mass per unit area: 100 g/m² to 120 g/m²;
— warp and weft: 20 threads/cm to 30 threads/cm;
— finishing: washed, no finishing agents;
— cover make up: tight fit, but with no restrictions on the foam.
The same part of the test mattress shall not be re-used within 30 min and the mattress shall be replaced if damaged, or after 20 tests.</td><td>the requirement</td><td></td></tr>
<tr><td>4.6</td><td>Stops</td><td>-</td><td>-</td></tr>
<tr><td></td><td>Stops, to prevent the bed from sliding but not tilting, no higher than 12 mm, except in cases where the design of the bed necessitates the use of higher stops, in which case the lowest that will prevent the bed from sliding shall be used.</td><td></td><td>N</td></tr>
<tr><td>5</td><td>Test procedures</td><td>-</td><td>-</td></tr>
<tr><td>5.1</td><td>Inspection before testing</td><td>-</td><td>-</td></tr>
<tr><td></td><td>Prior to the test, visually inspect the bed for defects.</td><td>Comply with the requirement</td><td>P</td></tr>
<tr><td>5.2</td><td>Inspection of product</td><td>-</td><td>-</td></tr>
<tr><td></td><td>Inspect the sample to determine whether exposed edges, screws, bolts, zips and other fittings are rounded or chamfered and free of burr and sharp edges.</td><td></td><td>N</td></tr>
<tr><td>5.3</td><td>Measurements</td><td>-</td><td>-</td></tr>
<tr><td>5.3.1</td><td>Holes, gaps and openings</td><td>-</td><td>-</td></tr>
<tr><td></td><td>Check all holes, gaps and openings according to EN 747-1:2012+A1:2015 of this standard as follows:
Table 1 — Cones and forces
<table>
<tr><th>EN 747-1:2012+A1:2015, clause</th><th>Force</th><th>Cones</th></tr>
<tr><td>4.1.2, 4.1.4</td><td>With force</td><td>7 mm</td></tr>
<tr><td>4.1.4</td><td>With force</td><td>5 mm and 75 mm</td></tr>
<tr><td>4.1.2, 4.1.3</td><td>Without force</td><td>60 mm</td></tr>
<tr><td>4.1.2, 4.1.5</td><td>With force</td><td>25 mm and 75 mm</td></tr>
<tr><td></td><td>With force</td><td>7 mm, 25 mm and 75 mm</td></tr>
<tr><td></td><td>Without force</td><td>12 mm and 60 mm</td></tr>
</table>
Where required, press the 5 mm and 7 mm cones into the gap with a force of 30 N and the 25 mm and 75 mm cones with a force of 100 N. Record whether or not the cone passes through the gap.
All other gaps shall be measured with the appropriate equipment.</td><td>Comply with the requirement</td><td>P</td></tr>
</table>

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
5.3.2	V and irregular shaped holes, gaps and openings		
	Check whether portion 'B' of the template enters the opening to the full thickness of the template (45 mm). If the template can be inserted to a depth greater than the thickness of the template (45 mm), apply the 'A' portion of the template, so that its centre line is in line with the centre line of the opening. Ensure that the plane of the template is parallel and applied in line with the opening. Insert the template along the centre line of the opening until its motion is arrested by contact with the boundaries of the opening. Check whether the apex of portion A of the template contacts the base of the opening.	Comply with the requirement	P
5.4	Strength tests	-	-
5.4.1	Positioning of the bed	-	-
	If the sample tends to move during the tests specified in 5.4.2, 5.4.3, 5.4.4 and 5.4.5, the sample shall be positioned on the floor with all legs against stops	Comply with the requirement	P
5.4.2	Static load on safety barriers	-	-
	For each test, place the test mass (see 4.6) on the upper bed base where it is most likely to prevent overturning. If this mass is not sufficient to prevent overturning, additional mass(es) shall be placed on the bed until overturning is prevented. The additional mass(es) may be placed on any suitable part of the bed.Apply the following forces separately: — vertical upwards force of 200 N; — horizontal force outwards of 500 N; — horizontal force inwards of 500 N. The forces shall be applied to the centre and to one end of the top safety barrier using the loading pad (see 4.4.2). The loading point shall be 50 mm below the top edge of the structure at each position.When the construction or fastening of the top safety barrier differs between ends, both ends shall be tested. Apply the forces 10 times, each time for 30 s, in each position. Apply a vertical downwards force of 1 000 N to the top safety barrier. Apply the force 10 times for 30 s each time. The loading point shall be at the top of the safety	Comply with the requirement	P

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	barrier, 250 mm from the intersection point of the centre lines of the adjacent side and end members. Repeat the test on each top safety barrier. Where the construction or fastening of other elements of the safety barrier differs from the top safety barrier, apply the forces at the point most likely to cause failure.		
5.4.3	Upwards and downwards static load on bed base	-	-
	Place the test mattress (see 4.5) on the bed base.Apply a vertical force of 1 200 N downward using the loading pad (see 4.4.1) as shown in Figure 3. Apply the load 10 times for 30 s at any point on the bed base where failure is considered likely to occur. This test shall be carried out on both the upper and lower bed if the constructions differ." Apply a vertical force of 500 N upwards using the loading pad (see 4.4.1) as shown in Figure 3. Apply the load 4 times for 30 s at any point on the bed base where failure is considered likely to occur. If the bed tends to lift from the floor during this test, it shall be prevented from lifting without loading the bed base.	Comply with the requirement	P
5.5	Durability test of frame and fastenings		
	This test does not apply to bunk beds and high beds that are intended to be fixed to the structure of the building. Restrain the sample with stops in all directions at the bottom of each corner. Position the test mass at the centre of the base of the upper bed. The loading points shall be at the height of the upper bed base, 50 mm from the intersection point of the centre lines of the adjacent side and end members.	Comply with the requirement	P
5.6	Ladders or other means of access	-	-
5.6.1	Vertical static load on treads	-	-
	Position the sample on the floor with the legs against stops but without restraining the upright components of the means of access. Apply by means of the loading pad (see 4.4.2) a 1 200 N vertical downwards force to the tread most likely to cause failure. The load application shall be at the mid-point of the tread. The load shall be applied 10 times for 30 s each time.	Comply with the requirement	P
5.6.2	Horizontal static loads on treads	-	-
	Apply a 1 000 N load vertically downward to the centre	Comply with	P

	EN 747-2-2007		
Clause	**Requirement**	**Remark**	**Verdict**
	of the mid-tread, or in the case of an even number,500 N to each of the two mid-treads together with horizontal static loads of 500 N, one after the other. The loads shall be applied to the side members of the ladder at the height of the top tread, or, if this is not possible, just above the top tread (the uppermost horizontal ladder component).	the requirement	
5.6.3	Durability of treads	-	-
	Using the loading pad (see 4.4.2) apply a vertical load of 1 000 N to the tread nearest the centre of the ladder with the ladder in its intended position, for a total of 10 000 cycles at a rate not more than 24 loads per minute.		N
5.6.4	Tread impact test	-	-
	Set the ladder or means of access in its position of use. Position the tread impactor on the longitudinal centreline of the tread and as close to one side as possible, so that it can be dropped freely onto the tread. with a drop height of 150 mm. The tread impactor shall not be allowed to bounce. Carry out the test 10 times. Repeat the test at the middle of the tread. Test the top and bottom treads as well as the most central one.	Comply with the requirement	P
5.7	Stability test	-	-
	This test does not apply to bunk beds and high beds that are intended to be fixed to the structure of the building. The stability test shall be carried out without mattress(es). Position the sample on the floor with the legs against stops . The tilting tendencies shall not be restrained. Apply by a horizontal force of 120 N at those points most likely to cause overturning.	Comply with the requirement	P
5.8	Fastening of the upper bed to the lower bed	-	-
	Apply an upward vertical static force of 500 N for 30 s at any position most likely to cause the beds to separate. The load duration shall be 30 s. If the lower bed tends to lift from the floor during this test, place a load on the lower bed sufficiently heavy to prevent it from lifting.	Comply with the requirement	P