Checklist
for inspectors checking playgrounds

Playground location:
Number of playground (if known):

1.	**Inspection of the equipment documentation – applies to each and every equipment.**		
1.1	Name:		
1.1.1	Identification of a product	Individual number:	Type/ catalogue number:
1.1.2	Manufacturer	Name:	Address:
1.1.3	Service, inspection and maintenance manuals handed-over by the supplier.	□ yes □ no	Remarks:
1.1.4	Dimensions of minimal space and requirements for using the surface provided by the supplier.	□ yes □ no	Remarks:
1.1.5	The technical documentation presenting the structure of the equipment.	□ yes □ no	Issued by: Date:
1.1.6	Inspection reports or other documents which confirms compliance with standards.	□ yes □ no	Issued by: Date: Remarks:

1.2	**Name:**		
1.2.1	Identification of a product	Individual number:	Type/ catalogue number:
1.2.2	Manufacturer	Name:	Address
1.2.3	Service, inspection and maintenance manuals handed-over by the supplier.	□ yes □ no	Remarks:
1.2.4	Dimensions of minimal space and requirements for using the surface provided by the supplier.	□ yes □ no	Remarks:
1.2.5	The technical documentation presenting the structure of the equipment.	□ yes □ no	Issued by: Date:

1.2.6	Inspection reports or other documents which confirms compliance with standards.	□ yes □ no	Issued by: Date:

2.	**The inspection of playground documentation deposited by the administrator.**		
2.1	General data	Individual number:	District: Address:
2.2	Management unit	Unit/person responsible for playground condition:	Address of the responsible unit/person:
2.3	Risk assessment was provided	□ yes □ no	Date: Remarks:
2.4	The results of risk assessment are available	□ yes □ no	Issued by: Date: Remarks:
2.5	Action taken on the basis of risk assessment results	□ yes □ no	Remarks:
2.6	The playground scheme showing the location of particular equipments	□ yes □ no	Issued by: Date:
2.7	The list of equipment is available	□ yes □ no	Issued by: Date:
2.8	The inspection and maintenance plan is available	□ yes □ no	Issued by: Date:
2.9	Plan of conduct in case of accident, emergency or fire	□ yes □ no	Issued by: Date:

2.10	The register of previous inspections and maintenance is provided by manager/owner	□ yes □ no	Remarks:
2.11	Documents concerning inspection provided by the competent authorities	□ yes □ no	Remarks:
2.12	Documents confirming sand exchange	□ yes □ no	Remarks:

3.	**The background of the inspection.**	
3.1	Type of inspection	Remarks *(e.g. have previous recommendations been fulfilled?)*
3.2	Planned inspection	□ yes
3.3	Based on a complaint	□ yes
3.4	Re-inspection	□ yes

4.	**Marking**		Remarks
4.1	Rules and regulations	Playground rules	□ yes □ no
		Information containing data of management unit (Contact to administrator, emergency telephone number, etc.)	□ yes □ no
		Name and address of the playground	□ yes □ no
4.2	Data plate	□ yes □ no Lack on:	
4.3	Data plate - details	Name and address of the manufacturer	□ yes □ no
		Catalogue/serial number and date of production	□ yes □ no
		The standard applicable with the date of publication	□ yes □ no
4.4	Marking of the surface level	□ yes □ no	Remarks:

5.	**Additional elements.**		
5.1	The playground is fenced	□ yes □ no	Remarks concerning safety:

5.2	Locked entrances	□ yes □ no	Remarks concerning safety:	
5.3	Safe construction of gate and closing mechanism	□ yes □ no	Remarks concerning safety:	
5.4	Fencing material	□ metal netting □ metal railings □ metal construction □ wooden construction □ hedge □ other – what kind of?		
5.5	Trimming	□ safe □ could be dangerous *(e.g. sharp edges, sharp bars, netting with unfinished edges)*		
5.6	Benches	□ yes number of: □ no		Remarks: (e.g. the condition and location of benches guarantee safety)
5.7	Rubbish bins	□ yes number of: □ no		Remarks: (e.g. the condition and location of bins guarantee safety)
5.8	Bicycle racks or other elements	□ yes □ no number of:	Name of the element:	Remarks: (e.g. the condition and location of elements guarantee safety)
5.9	Approach to the playground	□ safe □ could be dangerous – why?		
5.10	There are risks or obstacles in the the surroundings?	□ yes – what kind of? □ no	Remarks:	

6.	**Surface.**	
6.1	Surface[1]	□ lawn □ sand □ gravel □ asphalt □ concrete blocks □ synthetic surface □ other – what kind of?
	Water accumulation?	□ yes □ no

[1] In case the surface is not homogenous, indicate all types used.

6.2	The thickness of the loose fill surface	Details:	
6.3	Inspection reports or other documentation confirming compliance with the surface standard.	□ yes □ no	Issued by: Date: Remarks:
6.4	Unexpected obstacles in the surface	□ yes □ no	Remarks:
6.5	The surface is free from waste	□ yes □ no	Remarks:
6.6	Proper surface for all elements of the equipment[2]	□ yes □ no	Remarks:

7.	**The review of equipment – part I. Faults.**		
	Fault	Name and number of equipment	
7.1	Unexpected obstacles	□ yes	□ no
7.2	Sharp edges and/or welds	□ yes	□ no
7.3	Corrosion of metal elements	□ yes	□ no
7.4	Protruding nuts or threads	□ yes	□ no
7.5	Broken or fractured elements	□ yes	□ no
7.6	Wearing through of the laminate	□ yes	□ no
7.7	Wood is splintering or decomposing	□ yes	□ no
7.8	Wood element of the equipment contact the ground	□ yes	□ no
7.9	Plywood is delaminating	□ yes	□ no
7.10	Deformed or damaged elements	□ yes	□ no
7.11	Elements for catching are revolving	□ yes	□ no

[2] Especially under swings, carousels, cable ways, firemen's poles.

7.12	V shapes < 60°	□ yes	□ no
7.13	Head or neck entrapment	□ yes	□ no
7.14	Clothes entrapment	□ yes	□ no
7.15	Finger entrapment	□ yes	□ no
7.16	Leg, foot or hand entrapment	□ yes	□ no
7.17	Crashing or smashing points	□ yes	□ no
7.18	Pollutions in the sandpit	□ yes	□ no
7.19	Sidle pointing to the sun	□ yes	□ no
7.20	Swings on stalk slings	□ yes	□ no
7.21	Swing or carousels with protecting chains	□ yes	□ no
7.22	Incorrect examples of sets (e.g. swing with slide, etc.)	□ yes	□ no

8.	**Review of equipment – part II. Compliance with the standard.**		
	Compliance with the standard	Name and number of equipment	
8.1	Proper protection of materials	□ no	□ yes
8.2	Water falls down easily	□ no	□ yes
8.3	Appropriate protection of connections	□ no	□ yes
8.4	Proper minimum space of each equipment	□ no	□ yes
8.5	Proper falling space of each equipment	□ no	□ yes
8.6	Proper dimensions of each equipment	□ no	□ yes
8.7	Suitable barriers	□ no	□ yes
8.8	Suitable guardrails	□ no	□ yes
8.9	Suitable handrails	□ no	□ yes

8.10	Proper dimensions of the slipway	□ no	□ yes
8.11	Slipways with anti-sliding surface	□ no	□ yes
8.12	Closed inlets of pipes and profiles	□ no	□ yes
8.13	Internal spaces accessible for adults	□ no	□ yes
8.14	Proper openings in closed areas	□ no	□ yes
8.15	Suitable distance between the surface and movable parts	□ no	□ yes
8.16	Minimal distance of 230 mm between movable and fixed parts	□ no	□ yes
8.17	Ensured suppressing of movement	□ no	□ yes
8.18	Proper dimensions of rungs in the ladder	□ no	□ yes
8.19	Permanent fixing of rugs	□ no	□ yes
8.20	Permanent sloping of steps	□ no	□ yes
8.21	Suitable number and dimensions of steps	□ no	□ yes
8.22	Intermediate ramps in steps (if required)	□ no	□ yes
8.23	Proper dimensions of hanging ropes	□ no	□ yes
8.24	Proper distance between hanging ropes	□ no	□ yes
8.25	Proper fixing of climbing ropes	□ no	□ yes
8.26	Appropriate dimensions of climbing ropes	□ no	□ yes
8.27	Appropriate dimension of chain links	□ no	□ yes
8.28	Proper dimension of swings	□ no	□ yes
8.29	Seats of swings covered with rubber	□ no	□ yes
8.30	Proper dimensions and sloping of slides	□ no	□ yes
8.31	Appropriate crosswise bar, if necessary	□ no	□ yes

8.32	Proper lateral protection	□ no	□ yes
8.33	Appropriate dimensions of cableways	□ no	□ yes
8.34	Appropriate seats of cableways	□ no	□ yes
8.35	Appropriate dimensions of rocking equipment	□ no	□ yes
8.36	Appropriate dimensions and sloping of seesaws	□ no	□ yes
8.37	Appropriate dimensions of spatial networks	□ no	□ yes
8.38	Appropriate protection against falling from spatial network	□ no	□ yes
8.39	Appropriate dimensions and ground clearance of carousels	□ no	□ yes
8.40	The bottom of disc carousel (classical) is smoothly trimmed	□ no	□ yes
8.41	Anchorages of the equipment are stable	□ no	□ yes
8.42	Appropriate depth of foundations	□ no	□ yes
8.43	Appropriate construction of heavy suspended beams	□ no	□ yes

9.	**The list of equipment – summary.**		
	Name of equipment[3]	Condition of equipment/ Faults[4]	Recommendation
9.1	Number.....		
9.2	Number.....		
9.3	Number.....		
9.4	Number.....		
9.5	Number.....		

[3] Every piece of checked equipment should have its own description in an inspection report.

[4] You should choose form EN 1176 (e.g. Water accumulation, Splintering, Corrosion of metal parts, Protruding nails, Projecting wire rope terminations, Pointed or sharp- edged components, Rough surfaces, Access of adults within the equipment, Connections- secured, safeguarded, Wire ropes- made from galvanized or corrosion resistant wire, Falling, Entrapment, Means of access, Ropes, Chains).

9.6	Number.....		
9.7	Number.....		
9.8	Number.....		
9.9	Number.....		
9.10	Number.....		

Manual to the checklist.

Prior to inspection it is advisable to familiarize oneself with the content of the used standards and with the „Handbook for Inspectors", particularly with section 7 and annex H, and to apply its guidelines in respect of conducting the inspection.
In case of the issues regulated by EN 1176 and EN 1177 standards, the key criteria have been drawn up basing on safety requirements provided for in those standards. On the other hand, parts 4, 5 and 6 refer to risks which can be present in the playgrounds but which do not directly concern playing equipment or which have not been included in the abovementioned forms.

Principles of completing a questionnaire:

The questionnaire should be filled in by marking the correct answer or writing information, usually after a colon.
In the case when some section des not apply to the list of the key criteria, the space provided should be filled in by writing "*not applicable".*
In order to exchange some equipment we use its individual number. If there is no such number we use the catalogue number of the producer. If we do not know this number we use the name of the equipment provided in section 1. If there are two devices with the same number or name we additionally describe the location of the device or a technology of its production, e.g. wooden swing or a swing near the slide.

Preliminary information.

For easier identification please write the address and number of the playground, inspection date, name and surname of the inspector and the address of the inspection unit at the top of the list of the key criteria.

1. Inspection of the equipment documentation – applies to every equipment

Basing on the criteria included in this part, the inspection may apply to products in sale and equipment assembled in the playground.
Every leisure device in the playground should be controlled according to section 1. Because sometimes it is not known how many devices are there in the inspected playground, it is advisable that the administrator of the object should previously copy the documentation described in this section. During preparations to the inspection one should ask the administrator to prepare such documents. It may be helpful for the analysis of documents in office conditions.

1.01.1 Name. Please write the name of the equipment.

1.1.1 Identification of the product (individual number if known): Every equipment in the playground should be explicitly marked and described. It is recommended to use individual numbering for each device.

Type / **catalogue number.** Please write the type of device according to the EN 1176 standard and if it does not apply write other useful information on the type of equipment, e.g. "wooden". After the mark "/" please write the catalogue number of the device, given by the producer.

1.1.2 Manufacturer. Please write the particulars of the producer.

1.1.3 Service, inspection and maintenance manuals handed-over by the supplier. Please write whether the administrator has the abovementioned manuals.

1.1.4 Dimensions of minimal space and requirements for using the surface provided by the supplier. Please write whether the administrator has the abovementioned document. The document can have a graphic form.

1.1.5 The technical documentation presenting the structure of the equipment. The technical documentation should contain information on the structure, dimensions of the devices, used materials and paints. The technical documentation includes the assembly manual.

1.1.6 Inspection reports or other documents which confirms compliance with standards. Such documents are predominantly certificates, declarations of compliance,

certificates, expert opinions etc.

1.2 Repeat the examination as in 1.1. and the same for all examined devices.

2. The inspection of playground documentation deposited by the administrator.

2.1 General data. Individual number: If the playground has not been classified anywhere, its location should be described in as many details as possible, using names of the closest streets, the name of the nearby park etc.

2.2 Management unit. Please write the particulars of the unit responsible for ensuring safety in the playground. It is advisable to appoint specific persons for that purpose.

2.3 Risk assessment was provided. Please write who conducted the analysis and when. Every playground together with the surroundings and administration system should undergo the analysis of risks at least once. The playground in which risks analysis or assessment of compliance with standards have not been conducted, should not be used.

2.4 The results of risk assessment are available. Here you have to specify whether the analysis included all crucial aspects. For this purpose you can use the vital guidelines from the list of the key criteria.

2.5 Action taken on the basis of risk assessment results. The description of undertakings following from conducting the analysis and assessment of preventive and repair measures.

2.6 The playground scheme showing the location of particular equipments. The playground layout is needed for the identification of devices and knowledge about distribution of types of devices which require different surface or special landform features.

2.7 The list of equipment is available. The list of devices may be prepared by the designer of the object, the producer, supplier, owner or unit registering the equipment and the playground. The list should contain the following information:
- name of the device
- picture of the device
- individual number
- name of the producer
- producer's address
- catalogue number of the producer
- number and type of document confirming compliance with standards.

2.8 The inspection and maintenance plan is available. The inspection plan should define frequency and scope of specific inspections, while the maintenance plan should contain the scope and frequency of specific maintenance operations. The latter should specifically inform about the need to:

- remove risks through reparation, conservation or immobilizing of the device,
- secure the place after removal of the device, e.g. by removing the foundations.

2.9 Plan of conduct in case of accident, emergency or fire. The procedure of conduct in case of accident, emergency or fire should include the agreed way of accidents registration. The plan must include the producer's recommendations and country law regulations.

2.10 The register of previous inspections and maintenance is provided by manager/owner. The aim of keeping a registry is to ensure a high level of safety. Apart form inspection documents, maintenance and repairs the registry should include all crucial information concerning the object, e.g. about accidents.

2.11 Documents concerning inspections conducted by the competent authorities. Please describe the results of inspections conducted by inspection bodies and recommendations of these bodies.

2.12 Documents confirming sand exchange. The documents which confirm the exchange may be bills for the exchange service or purchase of sand. It is recommended that each exchange be registered in the playground registry book.

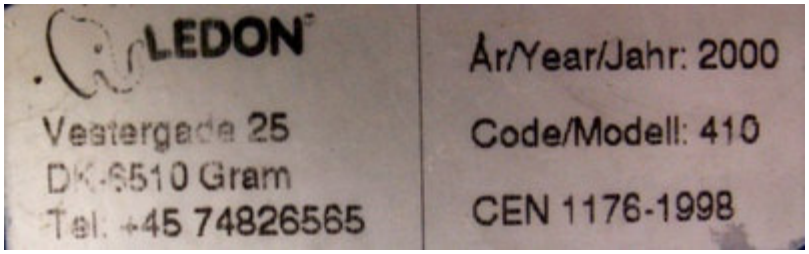
2.03. The background of the inspection. One should mark the correct answer and write comments and remarks**.**

3.0

4.04. Marking. The information board should be situated by every entrance or in the central part of the playground.
The labelling/marking of equipment themselves should be characterized by high durability.

An example of correct and durable labelling done in 2000 and photographed in September, 2008.

4.1 Rules and regulations. The usage principles. The necessary data are: name and



address of the playground, contact data to the administrator and telephone numbers to the rescue services.
Rules of usage can be presented in the form of a picture and should include recommendations concerning using the equipment, as well as principles of behaviour in the playground, e.g. prohibition to climb the summits of houses, play ball and walk pets etc. In the playgrounds or in their parts especially designed for the youngest children (low, simple devices, rockers, sandpit etc.) **it is forbidden to place labels limiting entry for children under 3 years old**. More information to be found in the “Handbook for Inspectors”, section 7.3.1.

4.2 Data plate. Please mark „yes” in the situation when there is at least one board and name devices on which date plates are missing.

4.3 Data plate – details. Please tick the correct answers.

4.4 Marking of the surface level. The producer is obliged to place a permanent labelling, and the administrator is obliged to maintain it properly. The labelling of the level of surface is particularly important with devices assembled on the loose surface. If the label is missing one should try to establish the reason, e.g. impermanence, deliberate destruction, painting over during maintenance works. More information to be found in the “Handbook for Inspectors”, section 7.3.1.

5. Additional elements.

5.1 The playground is fenced. If the playground is fenced, the fence should be in good technical condition and its elements cannot pose a threat for the users. Assessing the level of safety of the fence one should pay particular attention to sharp or rough surfaces, protruding elements, possible jamming places and to the possibility of crawling under the fence or jumping over it (see point 5.6) More information to be found in “Handbook for Inspectors”, section 7.3.2.

5.2 Locked entrances. If the playground is fenced, its entrances should be equipped with gates. The width of the gate should guarantee fast conducting of rescue action if need be.

5.3 The construction of gates and closing mechanism is safe. The gate should be equipped with safe closing mechanism. What is more, one should check whether it does not pose a threat for safety of users, particularly for fingers or toes. More information to be found in the “Handbook for Inspectors”, section 7.3.2.

5.4 Fencing materials. One should mark all kinds of fences and define their location.

5.5 Trimming of the fence. One should tick the correct answer. In case of negative opinion

one should justify it.

5.6 Benches. One should assess safety of benches with particular attention to possible protruding elements, sharp and rough edges and places of possible jamming. Benches should be permanently fixed to the ground and placed at least 1 metre from the fence to make it impossible to use them for jumping over the fence. More information to be found in the “Handbook for Inspectors”, section 7.3.2.

5.7 Rubbish bins. Waste bins should be placed in a distance of 2 metres from the benches and should be connected with the surface permanently. Assessing the level of safety one should pay particular attention to sharp or rough edges and protruding elements. More information to be found in the “Handbook for Inspectors”, section 7.3.2.

5.8 Bicycle racks or other elements. Assessing the level of safety one should pay particular attention to sharp or rough edges, protruding elements, places of possible jamming. Additional elements placed in the playground should not pose a threat for users when they are properly used, so it should be assessed whether, for example bicycle put into a rack will not become an unexpected obstacle.

5.9 Approach to the playground. Please mark the correct answer. In case of a negative decision it should be justified.
One should pay particular attention to protruding flagstones and other elements hindering moving, also on the wheelchair, and hanging branches. More information to be found in the “Handbook for Inspectors”, section 7.3.2.

5.10 There are risks or obstacles in the surroundings. One should assesses whether there are real threats to health and life of users of the playground, e.g. proximity of water bodies, road traffic and/or bicycle traffic of considerable intensity, landfill sites, and toxic plants.

5.06. Surface.

6.1 Surface. One should mark all kinds of surface used. Please make an assessment of the surface condition, with particular consideration of places where water could gather.

6.2 The thickness of the loose fill surface. On should assess and describe the thickness of loose surfaces in different places of the playground, paying particular attention to places where hollows are formed, e.g. under the swings.

6.3 Inspection reports or other documentation confirming compliance with the surface standard. It may be e certificate or a declaration of the producer on compliance of the surface with the EN 1177 standard. It is recommended to make an assessment of agreement of a given type of surface with risks which may appear in the device standing on it. At the same time it should be remembered that EN 1176 allows for using hard surfaces, e.g. asphalt, while an ideal solution would be to ensure a surface which absorbs a fall from the height of 0.6 m on the whole area of the playground (grass, earth, loose and artificial surfaces).

6.4 Unexpected obstacles in the surface. It refers to obstacles on which a child can stumble and fall, such as stones, stumps and roots or bumps, or other damages to the synthetic surface.

6.5 The surface is free from waste. There should not be any dangerous objects like: protruding, metal elements, rubbish, broken glass, bottle caps, cans, butt-ends, dog’s excrements, decomposing leaves or fruit from trees growing nearby.

6.6 Proper surface for all elements of equipment. In assessment the following factors should be taken into account:
- height of free fall?
- the size of falling space?
- guidelines from standards or from the producer on higher requirements for calculating the size and kind of absorbing surface?

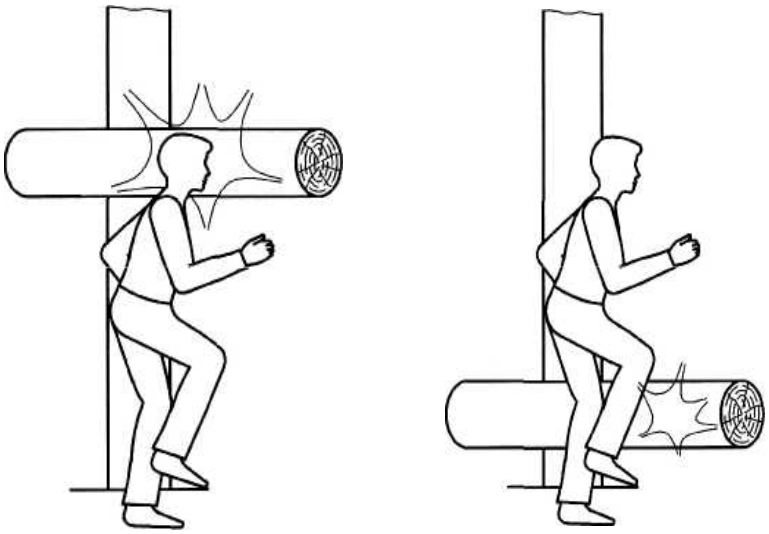
The way of defining the falling space is contained in the standard EN 1176 and in the "Handbook for Inspectors", section 7.3.1. Simplified requirements can also be presented in the form of a table. (dimensions in millimetres):

Kind of surface	Thickness of surface	Height of fall
Turf/soil	300	≤1000
Bark – pieces of 20-80 in size		≤ 3000
Wood shavings – size 5 – 30		
Sand – grain 0.2 - 2		
Gravel – grain 2 - 8		
Other materials	According to examination	

6.07. The review of equipment – Part I. Faults.

7.1 Unexpected obstacles. In the field taken by the user on the equipment or in its surrounding there should not be any unexpected obstacles.

Examples of unexpected obstacles.



7.2 Sharp edges and/or welds. The fault present most often in the metal and laminated elements and splintering wood. All accessible edges should be rounded.

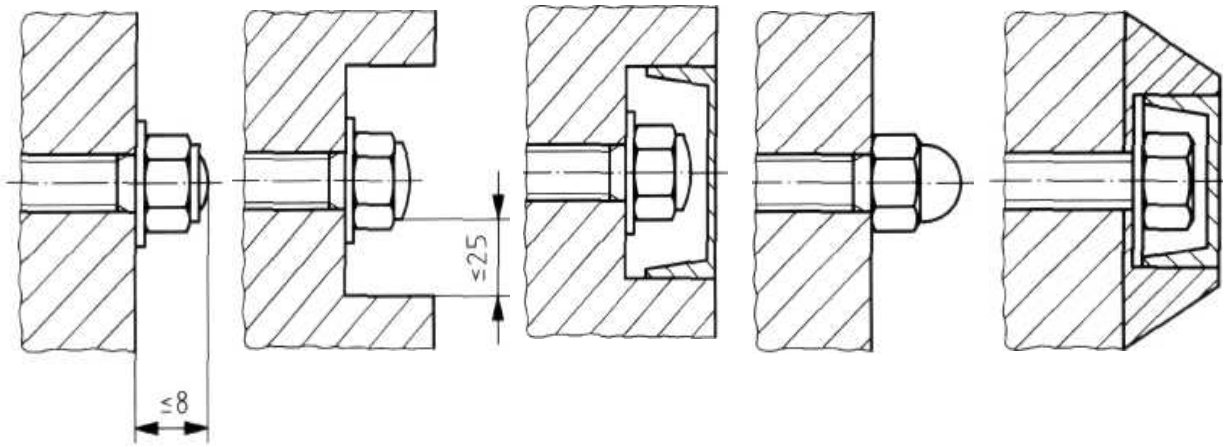
Example of sharp edge of the slide and of the connecting element.

7.3 Corrosion of metal elements. All metal elements should be free of rust. In case of finding a fault, one should indicate which element it concerns and how advanced corrosion is - an examination using the screwdriver or a wire brush. The examination should also apply to anchorage elements!

7.4 Protruding nuts or threads. There should be no exposed threads on the devices.

The nuts can protrude 8 mm, on condition that they do not have sharp edges. The following kinds of protection are allowed:

1. **2.** **3.** **4.** **5.**



In solutions 1 and 2 one should pay attention to protruding threads.

7.5 Broken or fractured elements. A break means a division of the element into two parts. One should distinguish a fracture of wood from its splinting. Splinting is a longitudinal delaminating which does not have much influence on resistance, while a fracture happens across the fibres and usually means weakening of the element which can lead to its breaking. In order to find the fault, one should inspect the elements closely, on every possible side, paying particular attention to parts which sustain the weight of the user. In places of fractures and breakings there often occur sharp edges and splinters. Steel usually breaks near welds. The broken laminate creates additional risk of injury with very sharp edges.

7.6 Wearing through of the laminate. Laminate elements are vulnerable to wearing through to a bigger extent than steel. If the surface layer of a laminate is worn through, the glass fibre nets are becoming visible. Such a device should not be used until exchanging the worn out element.

7.7 Wood is splintering or decomposing. Splintered wood undergoes quicker

biodegradation so the vitality of a device will be shorter since the device may not withstand the load. What is more, it can pose a threat connected with occurrence of sharp edges.

7.8 Wooden elements of equipment contact the ground. One should check whether assembly of the device and later maintenance ensure proper separation of wood from the ground.

7.9 Plywood is delaminating. Since delaminating of plywood usually starts on borders one should carefully inspect these areas. The delaminated plywood can form sharp edges.
Example of plywood where bad protection of the border caused internal delaminating.

7.10 Deformed or damaged elements. During examination one should take into consideration the irregularities caused by wearing through, as well as unintentional or deliberate operations, e.g. cut ropes, damages to wooden elements which occurred during grass cutting and other operations, damages caused by animals or by usage of equipment which violates their destination. Please, write only those faults which have not been included in other sections!

7.11 Elements for catching are revolving. Revolving elements are one of the most dangerous faults. Using the equipment a child expects that the grip will ensure a solid support and if it is not the case, there is high probability of a fall. Improper grips can be found in climbers and dexterity elements such as climbing walls.

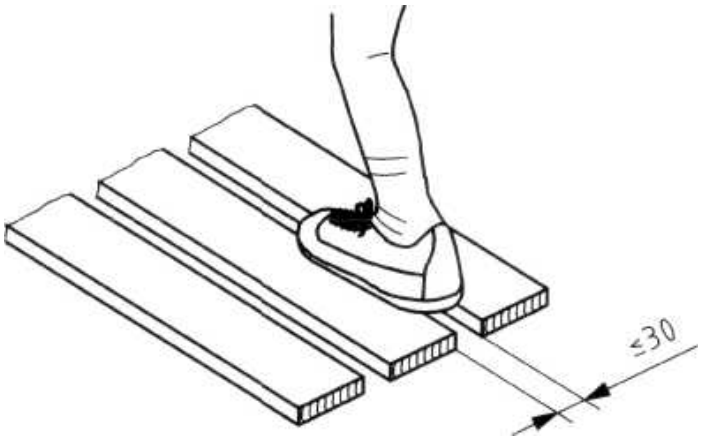
7.12 Parts convergent downwards at the angle <60° (V shapes). Occurrence of such elements poses a threat of foot, arm, head, neck or clothes jamming. Such cases are especially dangerous when they appear at heights exceeding 600 mm or on carousels. We conduct the examination using a set square.
Typical places of jamming: at joints of two diagonal rungs (the picture was taken during examination of possibility of head jam) and at the end of steps.

7.13 Head and neck entrapment. Head and neck jamming can be examined above 600 mm, and on carousels, for two types of openings: open and close type.
The examination is described in detail in annex H to the „Handbook for Inspectors".

7.14 Clothes entrapment. Clothes jamming can be examined in the situations of forced movement such as sliding, going round and swinging. One should pay attention particularly to V-shape cracks. The way of examining such cracks is described in detail in annex H to the "Handbook for Inspectors".

7.15 Finger entrapment. Finger jamming should be examined in the situation of forced movement or in open endings of pipes and profiles. Examination procedure is described in detail in annex H to the "Handbook for Inspectors."

7.16 Leg, foot or hand entrapment. Apart from openings described in section 6.12, foot jamming should be examined in platforms designed for running and walking. To prevent jamming, the crack should be up to 30 mm wide. This size is measured in the way presented in the picture, when the angle ≤ 45°.



7.17 Crushing or smashing points. Crushing or smashing points occur in a situation where movable elements are assembled too close to each other, or too close to permanent elements in such a way that they create changeable cracks which can be reduced to zero under load. Presence of such points is usually signalled by characteristic wearing through of materials. Presence of smashing point can cause such accidents as cutting of fingers or serious fractures in case of the crushing point.

7.18 Pollution in the sandpit. The most common pollutants in the sandpit are: pets' excrements, glass, butt-ends, and broken pieces of plastic toys (sharp edges).

7.19 Slide pointing to the sun. It is advisable for the slides which are located in a shaded place to be pointing approximately north, so as not to pose a threat of sunburns. The examination is made using a compass.

7.20 Swings on stalk slings. Swings with stiff suspension enable very high swinging which can cause damage to the equipment while in use ("coming out" of mine anchors). The consequences of a fall or hitting by such a swing can be much more serious due to seats used in it which do not absorb the impact in any way – like wooden or metal ones.

7.21 Swings and/or carousels with protecting chains. The purpose of using protecting chains in swings and carousels is to protect the users from falling. Such a solution however, poses a threat of being hit by the chain when it is not fixed, which can result in, for example, eye injuries. What is more, using a chain can give a deceptive feeling of security even in a situation when the chain is not stiff enough. In case of a child sliding down from such a seat there is a risk of head and neck jamming.

7.22 Incorrect examples of sets. The most common irregularity in sets is combination of swings with other elements. Swings can be used in sets only in case when additional security measures are provided. Such measures include ensuring additional security zone, of one and a half-meter, between the swing and the remaining part of the device, or fencing the

swing by using additional barriers protecting against other users running into the swing zone. It is not allowed to place a swing as a central element of multifunctional device.
Another common case of improper connection is assembly of the slide in a sandpit. This creates a threat for children which play in it. Spatial network with a swing is also unacceptable.
7.0

8.08. Review of equipment – part II. Compliance with the standard.

8.1 Proper protection of materials. Materials used in the playgrounds located in open air should be protected against atmospheric conditions. This applies mainly to materials vulnerable to biodegradation such as steel, wood and plywood. Lack of proper means of protection can be evidenced by: rust, decay, and change of wood or plywood shapes.

8.2 Water falls down easily. One should control whether water falls down easily from the devices. Special example of irregularity is gathering of water in the exiting part of slides, on swings' and carousels' seats.

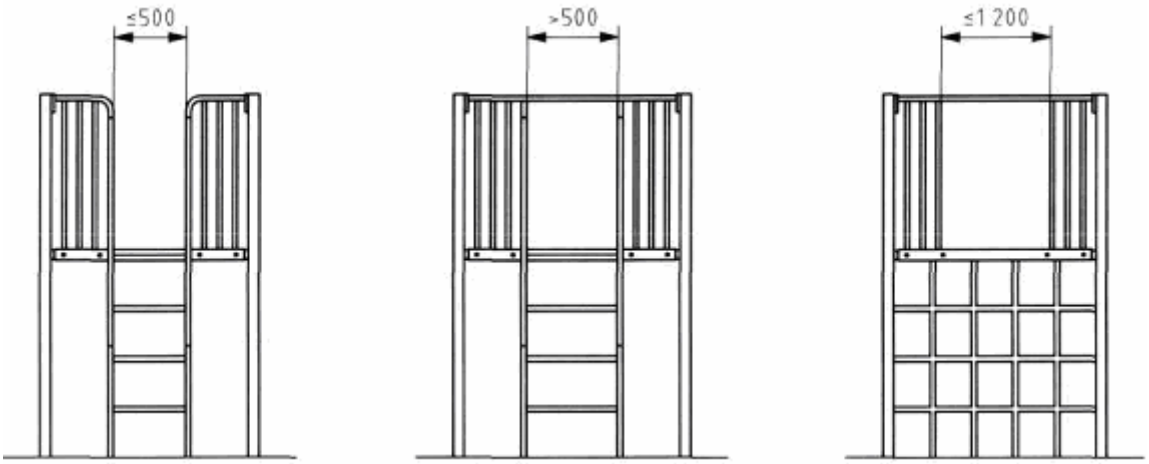
8.3 Proper protection of connections. Playground equipment should be assembled using permanent connections, so that it is impossible to unscrew them without tools. Using different solutions can cause additional risks: springy pads have limited efficiency and can create sharp edges, welding of nuts prevents its unscrewing, etc.

8.4 Proper free space of each equipment. The free space is defined in annex B to the "Handbook for Inspectors".

8.5 Proper falling space of each equipment. Falling space is defined in annex B to the "Handbook for Inspectors".

8.6 Proper dimensions of each equipment. In this section one should write information concerning possible suspicions as to improper structure of a device – e.g. bridges with supports span of more than 2 meters. In such situation a detailed examination should be conducted by authorized laboratory.

8.7 Suitable barriers. Barriers should be used in easily approachable devices from the height of 600 mm, and from the height of 2 meters in devices which are more difficult to approach. The barriers should not contain horizontal elements which enable climbing. There should not be any possibility of passing under, or over the barrier. The barrier should be minimum 700 mm high. In place of access, breaks of 500-1200 mm can be used. In case of breaks wider than 500 mm, additional protecting shields which prevent falling should be fixed on the top, between the barriers. *The principles are illustrated with the following figures.*



8.8 Suitable guardrails. Shields used as an exclusive way of protection against fall should be used only in devices which are hard to approach with the free fall height between 1 and 2 meters. Shields do not protect the user passing under. The shields should be assembled on the height of 600 – 850 mm form the platform.

8.9 Proper handrails. Handrails should:

- be assembled at the height of 600-850 mm from the platform,

- meet the requirements for a grip – a diameter up to 60 mm.

8.10 Proper dimensions of the slipway. Slipways should be sloping at the maximal angle of 38°. Platforms of bigger sloping angle can also be used but these will no longer be slipways. Slipways leading to a platform which is located not higher than 600 mm should be equipped with side protections.

8.11 Slipways with anti-sliding surface. The best way of protecting the user against fall is using feet supports. Anti-sliding surfaces can also be used.

8.12 Closed inlets of pipes and profiles. All inlets of pipes and profiles must be closed.

8.13 Internal spaces accessible for adults. Access for adults means openings in entrances whose diameter does not exceed 0.5 m.

8.14 Proper openings in closed spaces. It should be assessed whether tunnels have proper size. Proper openings do not allow for jamming of the user and they facilitate escape from the device if need be.
Tunnels open at one end must not be sloping at an angle bigger than 5°. Tunnels with both ends open must not be sloping at the angle bigger than 15°, unless their diameters is 750 mm and the tunnel has additional supports for climbing. For tunnels open at both ends and sloping angle not exceeding 15°, the following values are assumed: for a length of up to 1 m – the minimal diameter is 400 mm, for a length of 2 m – the minimal diameter is 500 mm, for a length of more than 2 m – the minimal diameter is 750 mm.

8.15 Suitable distances between the surface and the movable parts. Distances between the ground and movable parts should be minimum 400 mm, unless stated otherwise in separate provisions for a given device.

8.16 Minimal distance of 230 mm between movable and fixed parts. The distance between movable and fixed parts can be examined with and without a load.

8.17 Ensured suppressing of movement. Each forced movement, performed by the user should be suppressed. This particularly applies to rocky equipment, slipways and runways.

8.18 Proper dimensions of rungs in ladders. Rungs in ladders should meet requirements for a grip. If not, the ladder should be equipped with handrails which meet the requirements for grips. What is more, rungs should be distributed evenly and levelled, with a maximum angle of sloping of 3°.

8.19 Permanent fixing of rungs. Rungs in a ladder should be fixed in such a way which prevents their revolving.

8.20 Permanent sloping of steps. Steps should be designed so that they have permanent sloping angle. Steps leading to the platform at a height of over 1 meter cannot be sloping at an angle bigger than 45°.

8.21 Suitable number and dimensions of steps. Stairs should be equipped with at least 3 steps. Minimal depth of the step cannot be less than 110 mm. The distance from on step to another cannot exceed 140 mm (measured horizontally).

8.22 Intermediate ramps in steps (if required). Intermediate ramps are required in steps leading to platforms higher than 2 meters. Such a set of steps should meet adequate requirement of the EN 1176 standard.

8.23 Proper dimensions of hanging ropes. Ropes fixed with one end should have a diameter of between 25 and 45 mm and those fixed with two ends should not have a possibility of looping.

8.24 Proper distances between hanging ropes. Ropes fixed with one end, with a length of 2 meters, should be hung at a distance of 600 mm from permanent parts and 900 mm

from movable parts.

8.25 Proper fixing of climbing ropes. Climbing ropes, e.g. in the form of grating, should be fixed to the structure so as to give a secure support (they should not revolve etc.)

8.26 Proper dimensions of climbing ropes. Climbing ropes, e.g. in a form of gratings should be designed and assembled so as not to pose a threat of head and limbs jamming.

8.27 Appropriate dimensions of chain links. Chains should be examined for the risk of finger jamming. The examination should be conducted for the situation of forced movement. The examination is described in details in annex H to the "Handbook for Inspectors". In examination the standard for short link chains – ISO 1834 should be used.

8.28 Proper dimensions of swings. Swings should have the following dimensions:
- from the seat to side structure elements ≥ 20% of the band length + 200 mm
- between seats: ≥ 20% of the band length + 300 mm
- chain span on the top ≥ bottom span (measured by the seat) + 5%.

Flat seats should be hung at the height of at least 350 mm from the ground, tire seats should be assembled horizontally and cradle seats – at least 400 mm, while tire seats assembled vertically – at least 100 mm from the ground.

8.29 Seats of swings covered with rubber. All seats used in swings and carousels of A type should guarantee proper absorbing of collisions.

8.30 Proper dimensions and sloping of slides. Slides are divided into a starting part, sliding part and exiting part. One should control the dimensions of individual parts and their sloping according to the guidelines:
- starting part: minimal length of 350 mm and the sloping of 0-5° in the direction of sliding.

- sliding part: maximal sloping of 60° (40° on average); if the length of the sliding part exceeds 1.5 metre, its width must be at least 700 mm or more than 950 mm; the height of sides **p** depends on the height **h**, as shown in a table.

- exiting part: Dimensions of the exiting part are defined in a table.

Length of the sliding part	**Length of the exiting part**		**The end height of the exiting part**
	Type 1 sloping ≤10°	**Type 2 sloping ≤ 5°**	
≤ 1500		300	≤ 200
> 1500 ≤ 7500	> 500	> 0.3 x length of the sliding part	≤ 350

h	**p**
≤ 1200	≥ 100
> 1200 ≤ 2500	≥ 150
> 2500	≥ 500
easily approachable > 2000	≥ 500

8.31 Appropriate crosswise bar, if required. Slides with the starting part at the height of more than 1 m should be equipped with a crosswise bar, at the height of 600-900 mm.

8.32 Proper lateral protections (sides). In the starting part of the slide there should be

proper sides ensured. In case of free standing slides they should be at least 700 mm high and in combined slides – at least 500 mm high.
Top edges of sides should be constructed in a continuous way, from the beginning of the starting part to the top edges of sides of the sliding part. All changes of the sloping angle of sides, measured in any point should have a radius of at least 500 mm.

8.33 Appropriate dimensions of the cableway. The EN 1176-4 standard contains a range of guidelines concerning dimensions of runways in respect of: starting point, the slide section, seat, grip, connecting rope, resistance bumpers, gantry, free sag and a load-bearing rope. One should pay particular attention to a proper bottom clearance.

8.34 Appropriate seats of the cableway. Seats used in runways should be round, made from rubber and have a collision certificate.

8.35 Appropriate dimensions of rocking equipment. During the assessment of dimensions in rocking equipment it should be remembered that:

- all changes in the shape of the main profile should have a radius of at least 20 mm.

- diameter of grips in rockers should equal 25-45 mm,

- endings of grips and footrests should be examined in respect of eye damage, according to the procedure described in annex H to the “Handbook for Inspectors”.

8.36 Appropriate dimensions and sloping of seesaws. One should control the dimensions of see-saws and their sloping according to the guidelines:
- bottom clearance should have at least 230 mm
- sloping of the beam should not exceed 20 degrees
- the height of free fall from the point of the biggest sloping should no exceed 1.5 m.

8.37 Appropriate dimensions of spatial networks. A circle of maximal radius of 420 mm may be inscribed into the opening in the net, examined without loading. The requirement refers only to three-dimensional sets of two or more rope structures put one on another.

8.38 Appropriate protection against fall from spatial networks. A cylinder 650 mm wide and 1.8 m tall, positioned vertically, unless proper absorbing surface is provided.

8.39 Appropriate dimensions and ground clearance of carousels. A carousel of A type (with seats) should not be wider than 2 m. The superstructure in a carousel of B type (with disc) should not be wider than the disc.
In type A carousels there should be a minimal bottom clearance of 400 mm ensured. In disc carousels assembled on synthetic surfaces, the bottom clearance should not be bigger than 8 mm, or the carousel should be assembled at the height of 60-110 mm. The second dimension applies also to carousels assembled on loose surfaces. For carousels assembled at the height which exceeds 110 m, one should use different ways of trimming the bottoms, according to requirements of EN 1176-5:2008, sections: 5.2.4, 5.2.6.

8.40 The bottom of disc carousel is smoothly trimmed. If the carousel is assembled at the height of 60 – 110 mm, its bottom should be trimmed smoothly at a depth of 500 mm from the edge of the platform.

8.41 Anchorages of the equipment are stable. All equipment used in public playgrounds should be fixed stably to the ground. Fixing should prevent moving of the equipment which could influence minimal zones of equipment.

8.42 Appropriate depth of foundation. No fragments of foundations must protrude from the surface level. For loose surfaces the top edge of the foundation should be 400 mm under the surface level unless the foundation is entirely covered by the equipment or has a special shape, according to EN 1176-1:2008, section 4.2.14.

8.43 Appropriate construction of heavy suspended beams. The name “heavy, hanging beam” refers to movable beams weighing more than 25 kg. The bottom clearance should be at lest 400 mm. Changes in the shape of the beam should be conducted with a radius of minimum 50 mm; horizontal movements should not exceed 100 mm on one side.

9. List of equipment, summary.
In point 8 one should summarize in detail the course of inspection.
In the second column (name of device) one should enter the required data.
The third column (condition of device/ Faults) should include an assessment of the device condition and enumeration of faults.
In column four (Recommendations) one should assess the risk following from the fault of a given element. It is recommended to apply the given gradation which is the basis for the assessed time for reaction to the risk:
- low risk – time for reaction can exceed 1 week – in low risks it can be recommended to perform more frequent inspections of the faulty element, or its observation during utilization;
- medium risk – time for reaction – up to a week – e.g. lack of foundation of short, heavy elements or wearing through of a chain, bigger than 40%
- high risk – immediate reaction – the element poses a direct threat to health of the user, e.g.: unstable structure of high elements, holes in platforms; in case when there is no possibility of fixing, the equipment should be excluded form use, until the fault is removed.

Weather conditions and other. At the end of inspection one should describe what conditions there were which could have influenced its results, e.g. in rain or snow the risk of a fall is higher. It is not recommended to conduct an inspection in conditions of limited visibility, e.g. after dawn.

Was the playground used during the inspection? Inspection of the playground while it is being used can be helpful in defining some risks or assessment of the playground's risk.