ASSESSMENT CRITERIA FOR SHUTTERING

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1 General principles for formwork assessment

1. This booklet constitutes basis for quality assessment of the equipment returned by a client to the hunnebeck polska sp. Z o.O. Warehouses.
2. Hunnebeck polska sp. Z o.O. Is a company which rents out boardings, shore systems and temporary protection systems. The rented out equipment is generally used previously.
3. A client is responsible for the equipment from the moment of issue until the time when it is returned.
4. Quality assessment of the returned equipment takes place when it is being returned, and a client is informed about the assessment result in the form of a return record.
5. For the quality assessment is authorized warehouse manager of the hunnebeck polska sp. Z o.O., Or another employee authorized by the warehouse manager.
6. The equipment being returned should be cleaned up. If a client returns equipment which is not cleaned, such client will be charged with the cost of cleaning.
7. At the time of returning, the equipment qualified as damaged will be sent for repair. The cost of such repair will be charged to a client.
8. A client is obligated to pay compensation for the equipment lost or not fit for repair (scrap items.)
9. The client will cover cost of utilization of such items if it is required on the basis of the law in force.
10. Value of the elements is established on the basis of the current retail price list. Cost of repairs, cleaning and utilization is calculated according to the rates specified in the general trade conditions document.

Example of equipment damage

All equipment damages shown in this booklet are presented in the following way: photograph of an element or an example of given damage; name of the damage or the element being assessed; description of damages and the resulting follow up actions.

Photo 1 Example photograph of a damage

Name of damage/name of assessed element

Fit – regular maintenance

Description of a damage, which qualifies an element as fit and to be sent out for regular maintenance.

Repair

Description of a damage, which qualifies an element for repair.

Plywood replacement

Description of a damage, which qualifies a plywood for complete replacement.

Utilization

Description of a damage, which results in sending a product out for utilization.

Cleaning

Description of impurities on a given element.

2 Assessment criteria for panel formwork

2.1 Frame damages

2.1.1 Cracked welds

Repair

An element will be qualified for repair, providing the cracking is not accompanied by other damages, which qualify the element for utilization.

Utilization

An element will be qualified for utilization if there are more than 4 welding points damaged in the internal corners and two welding points along the longitudinal axis.

2.1.2 Missing panel frame elements

Utilization

Should an element be returned with structural frame elements missing, it will be qualified for utilization.

2.1.3 Repairs made by a client

Utilization

Repairs made by a client are strictly prohibited. An element showing signs of such repairs will be sent out for utilization.

2.1.4 Lack of right angle between arms of an internal corner

Fit – regular maintenance

An element will be qualified as fit and sent out for regular maintenance, if the inflection of the attached with a stud arm of a corner from a right angle does not exceed 3 mm.

Repair

An element will be sent out for repair if the inflection of the attached with a stud arm of a corner from a right angle exceeds 3 mm, providing it is not accompanied by other damages, which qualify the element for utilization.

Utilization

An element will be sent out for utilization if the inflection of a right angle does not allow the angle restoration, or it is accompanied by other damages, which qualify the element for utilization.

⚠ ATTENTION	**ATTENTION** The above criteria do not apply to adjustable corners.

2.1.5 Damages to frame profile quoins

Utilization

In the case of deformation in the area of a frame quoin, an element will be sent out for utilization.

2.1.6 Damages of more than two frame profiles

Utilization

In the case of deformation in the area of a frame quoin, an element will be sent out for utilization.

2.1.7 Sectional bulges and indentations on frame profile

Fit – regular maintenance

If the sectional bulges and indentations occur on a limited area and do not appear on the joint/working surfaces, an element will be sent out for regular maintenance.

Repair

An element will qualified for repair if a frame profile damages do not exceed 10 mm in depth, 10 cm in diameter and are located at a distance of at least 20 cm from a frame's corner.

Utilization

Utilized will be elements, where the damages exceed 10 mm in depth, 10 cm in diameter and are located at a distance of less than 20 cm from a frame's corner. For utilization will also be qualified elements with damages which disturb rectilinear shape of a frame profile edge.

2.1.8 Frame profile damages on large area

Utilization

In the case of frame profile damages occurring on a large area, an element will be sent out for utilization.

ATTENTION

ATTENTION
In the case of frame profile damages occurring on a large area, an element will not be sent out for repair.

2.1.9 Damages of profile ribs

Repair

In the case, where a frame ribs can be straightened, an element will be sent out for repair.

Utilization

An element will be sent out for utilization in the case of ribs missing or their deformation to the extend which makes their straightening impossible.

2.1.10 Deformation of a panel's corner

Utilization

If a panel frame's corner has been deformed (for example it is bent up or down), an element will be qualified for utilization.

2.1.11 Panel bent or broken

Utilization

If a panel frame is bent or broken, an element will be qualified for utilization.

2.1.12 Frame twisted or deformed which causes loss of its geometry

Utilization

An element will be qualified for utilization if just one of its frame profiles shows more than 1.5 Mm/running meter deviation from a measuring bar placed next to it.

Notes

2.2 Damages of plywood

2.2.1 Hole from nail or screw

Fit – regular maintenance

Plywood will be sent out for regular maintenance if a diameter of a hole made by a nail or screw is up to 4 mm.

Repair

Plywood will be sent out for repair if a diameter of a hole made by a nail or exceeds 4 mm, and the occurring cavities may be repaired with the repair discs 40/60 mm.

Plywood replacement

Plywood will be replaced with a new one if it may not be repaired with the repair discs 40/60 mm, and if on 1 m^2 of plywood there are more than 12 spots to repair.

2.2.2 Scratch on a surface of plywood

Fit – regular maintenance

In the case of scratches up to 1 mm in depth and with a diameter not exceeding 10 mm, the plywood will be sent out for regular maintenance.

Repair

In the case of scratches deep from 1 to 3 mm and diameters from 10 to 20 mm, the plywood will be sent out for repair with the 40 mm repair discs. In the case of scratches exceeding 3 mm in depth and with diameters from 20 mm to 40 mm, the repair is made with the use 60 mm repair discs.

Plywood replacement

If a scratch diameter exceeds 40 mm, and in the case, where to repair 1 m^2 of a plywood it is necessary to use more than 8 discs, or there are 12 spots to repair, the plywood will be replaced with a new one.

2.2.3 Openings/holes in plywood

Repair

If an opening can be covered with a 40 mm or 60 mm repair disc, the plywood will be sent out for replacement.

Plywood replacement

In the case, where diameter of an opening makes it impossible to repair with a disc, or if per 1 m^2 of a plywood there is more than 8 cavities, and if a distance between the openings is less than 3 cm, the plywood will be sent out for replacement.

⚠ ATTENTION	**ATTENTION** Making openings in a plywood is prohibited. Exceptions are allowed only in situations, where the Hunnebeck Polska Sp. z o.o. explicitly agrees to making the openings.

2.2.4 Missing sillicone between edge of plywood and frame profile

Fit – regular maintenance

In the case, where the space between a plywood's edge and frame profile is not severely soiled with concrete, the plywood will be sent out for regular maintenance and the silicone will be replenished.

Repair

In the case, where the space between a plywood's edge and frame profile is severely soiled with concrete, the plywood will be sent out for repair.

Plywood replacement

If, as a consequence of the missing seal, a plywood is pushed out or damaged, the plywood will be replaced.

2.2.5 Excessive wear and tear of plywood

Plywood replacement

When a plywood shows signs of serious wear and tear, it will be qualified for replacement.

⚠ ATTENTION	**ATTENTION** In such case a client will not be charged for the plywood replacement.

2.2.6 Repairs made by a client

Utilization

Repairs made by a client are strictly prohibited. An element showing signs of such repairs will be sent out for utilization.

2.2.7 Breaks of plywood

Plywood replacement

Should a plywood break, it will be replaced with a new one.

2.2.8 Tie socket ripped out

Plywood replacement

In the case, where the tie socket is ripped out, the plywood will be replaced with a new one.

2.3 Cleaning

2.3.1 Product new or after an overhaul

Fit – regular maintenance

If a panel shows no signs of usage, it will be sent out for regular maintenance and re-marking.

2.3.2 Contaminated panel

Cleaning

A panel will be sent out for cleaning, if to remove the dirt manual tools are required.

2.3.3 Panel slightly contaminated

Fit – regular maintenance

A panel will be sent out for regular maintenance only in the case, where the external plywood surfaces and/or frame profiles are contaminated with just cement wash and no aggregate grains.

⚠ ATTENTION	**ATTENTION** The contamination must allow its removal during a one pass through a cleaning machine belonging to the Overhaul Group of Hunnebeck Polska Sp. z o.o.

2.3.4 Excessive contamination of plywood and/or frame with concrete

Plywood replacement

In the case, where a concrete layer makes it impossible to make a technical assessment of the plywood condition, it will be qualified for replacement.

Utilization

In the case, where a concrete layer makes it impossible to make a technical assessment of the frame condition, the whole panel will be sent out for utilization.

2.3.5 Panel contaminated with anti-adhesive oil

Cleaning

In the case, where a panel covered with anti-adhesive oil is returned, the whole element will be sent out for cleaning.

⚠ ATTENTION	**ATTENTION** A client will be individually charged for cleaning of the whole panel.

Notes

2.4 Frame panels' accessories

2.4.1 Bracket for catwalks manto, rasto-takko, ronda

Fit – regular maintenance

An element will be sent out for regular maintenance if it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Repair

An element will be sent out for repair if it is bent to a degree which allows its straightening, a wooden insert is worn out or missing, and all the welds are intact.

⚠ ATTENTION	**ATTENTION** Pins fitting the bracket to a panel are not subject to the straightening procedure.

Utilization

An element will be sent out for utilization if it is bent to a degree which does not allows its straightening, fitting pins are bent and the welds cracked.

RASTO HOOK

MANTO HOOK

PLATINUM HOOK

2.4.2 Transportation hooks rasto-takko, manto and platinum

Fit – regular maintenance

A hook will be sent out for regular maintenance if it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Repair

A hook will be sent out for repair if its nameplate or review confirmation is missing.

Utilization

A hook will be sent out for utilization if fitting it to a panel is not possible or in the case, where after checking on matrix and measuring with calliper, its critical dimensions are exceeded.

2.4.3 Locks manto and rasto

Fit – regular maintenance

A lock will be sent out for regular maintenance if it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Repair

A lock will be sent out for repair it its tightening bolt or a jaw need a replacement or in the case, where its structure is only slightly deformed (no creases,) and the straightening is possible.

Utilization

A lock will be sent out for utilization if straightening of its structure is not possible and the welds are cracked.

2.4.4 Nut worn out or damaged

Fit – regular maintenance

If an element was returned as a whole and its condition allows its further, smooth operation, it will be sent out for regular maintenance.

Repair

If an element shows signs of natural, excessive wear, it will be sent out for repair. **A client will not be charged with the cost of such repair.**

Utilization

If an element is damaged or worn out to a degree which does not allow its repair, and is heavily corroded, **a client will not be charged with the utilization cost.**

If an element is damaged or worn out to a degree which does not allow its repair, and is not heavily corroded, **a client will be charged with the utilization cost.**

If the returned equipment shows signs of a deliberate damage, **a client will be charged with the utilization cost.**

2.4.5 Incomplete nut

Fit – regular maintenance

If an element was returned as a whole and its condition allows its further, smooth operation, it will be sent out for regular maintenance.

Repair

If both parts of a nut are returned, it will be sent out for repair. **A client will be charged with the cost of such repair.**

Utilization

If only one part of a nut is returned, the element will be qualified for utilization. **A client will be charged with the utilization cost.**

Notes

3 Assessment criteria for shore structures

3.1 Ceiling shore

3.1.1 Deformed sheet metal on shore foot

Fit – regular maintenance

A shore structure will be qualified for regular maintenance if a sheet metal on its foot is deformed up to 1 cm.

Repair

A shore will be sent out for repair if a sheet metal on its foot is deformed in excess of 1 cm.

3.1.2 Indentations on internal pipe

Fit – regular maintenance

A shore will be sent for regular maintenance if the deformation allows its operation on the full length.

Repair

A shore will be sent out for repair if indentations on its internal pipe occur on a distance not greater than 1/3 of the pipe's circumference and not more than 30 cm from the foot of the shore.

Utilization

A shore will be sent out for utilization if indentations on its internal pipe occur on a distance greater than 1/3 of the pipe's circumference, are deeper than 2 cm, and are located more than 30 cm fabove the foot of the shore.

⚠ ATTENTION	**ATTENTION** Repair of an indentation on an internal pipe up to 30 cm from the foot applies only to shores **DB-DIN**. In the case of shores **EUROPLUS** , an indentation repair of up to 30 cm is not possible due to their structure. In this case indentation repairs will made only within a close vicinity of the foot.

3.1.3 Cracked fillet weld next to shore foot

Repair

A shore will be sent out for repair if the weld crack does not constitute complete separation of a sheet metal from the foot.

Utilization

A shore will be sent out for utilization if the weld crack does constitute complete separation of a sheet metal from the foot.

3.1.4 Any impurities and concrete or concrete wash leftovers

Fit – regular maintenance

A shore will be sent out for regular maintenance if it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Cleaning

A shore will be sent out for cleaning if it is covered with a concrete to a degree, which makes it impossible to operate properly.

3.1.5 Crumpling of internal pipe or external shore impossible to get straightened

Utilization

A shore will be sent out for utilization if a crumpling of internal pipe cannot be straightened.

3.1.6 Damage of thread on internal pipe making it impossible to move a nut on the whole length of thread

Utilization

In the case, where the thread on an internal pipe is damaged to a degree which makes it impossible to move a nut on the whole length of the thread, a shore will be sent for utilization.

3.1.7 Worn out wings of a nutzniszczone skrzydełka nakrętki

Utilization

In the case, where the wings of a nut are damaged, the whole shore will be sent for utilization.

3.1.8 Fitting cotter pin or a knob missing

Repair

In the case, where a cotter pin or a knob are missing, the shore will be sent out for repair and the missing elements wil be replaced.

3.2 Raking shore

Fit – regular maintenance

A shore will be sent out for regular maintenance if there are no components missing, and it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Repair

A shore will be sent out for repair if it does not operate properly on the whole length or is incomplete.

Utilization

A shore will be sent out for utilization if a bent of internal or external pipe cannot be straightened.

3.3 Vertical alignment shores manto and rasto

Repair

An element will be sent out for repair in the case its pins, spring or bend out stoppers are missing.

Utilization

An element will be sent out for utilization in the case it is returned with the short arm missing.

ATTENTION

ATTENTION
The criteria for vertical alignment shores are same as for the ceiling shores (Chapter 3.1.)

3.4 Shore head

3.4.1 Any impurities and concrete or concrete wash leftovers on the shore head surface

Fit – regular maintenance

A head will be sent out for regular maintenance if it is covered with a thin layer of a concrete deposit, which does disrupt its proper operation.

Cleaning

A shore will be sent out for cleaning if it is covered with a concrete to a degree, which makes it impossible to operate properly.

3.4.2 Bent or wrenched away head rods

Repair

If a head's rods are bent, it will be sent out for repair.

Utilization

In the case, where the head's rods are wrenched out, the whole element will be sent out for utilization.

3.4.3 Head sheet metal bent

Repair

In the case, where a head's sheet metal is bent, the whole element will be sent out for repair.

3.4.4 Bent or ripped off head handle

Repair

In the case, where a head's handle is bent or ripped off, the whole element will be sent out for repair.

3.5 Topec head

Fit – regular maintenance

A head will be sent out for regular maintenance if it is returned complete dirty only a layer of a concrete deposit, which does not disrupt the its proper operation.

Repair

A head will be sent out for repair, if it is returned incomplete – pin missing.

Utilization

A head will be sent out for utilization in the case it is returned with ripped off or partially broken mandrel.

3.6 Tripod stand of the shore

3.6.1 Stand legs bent

Fit – regular maintenance

An element will be sent out for regular maintenance if deviation from the tripod legs' rectilinear shape is up to 2 centimetres.

Repair

An element will be sent out for repair, if deviation from the tripod legs' rectilinear shape is between 2 and 5 centimetres.

Utilization

An element will be sent out for utilization if deviation from the tripod legs' rectilinear shape is more than 5 cm centimetres.

3.6.2 Any impurities and concrete or concrete wash leftovers on the surface of the stand

Fit – regular maintenance

A stand will be sent out for regular maintenance if a layer of a concrete deposit does not disrupt the element's proper operation.

Cleaning

A stand will be sent out for cleaning if a layer of a concrete deposit does disrupt the element's proper operation.

3.6.3 Ripped off or cracked stand handle

Repair

In the case, where a stand handle is ripped off or cracked, the element will be sent out for repair.

3.6.4 Fitting bolts missing

Repair

In the case, where a stand fitting bolts are missing, the element will be sent out for repair and the missing parts will be replaced.

3.6.5 Stand leg broken

Repair

In the case, where a leg of a stand is broken, the whole element will be sent out for repair, and the damaged parts will be replaced.

4 Assessment criteria for girders

4.6.1 Cavities in the material on horizontal surfaces of a girder shelf

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if a cavity does not exceed the size of 3 x 1 cm at the length of up to 30 cm.

Repair – cutting down to smaller dimension

A girder will be sent out for cutting down if a cavity is larger than 3 x 1 cm, or there are several cavities on the length of up to 30 cm.

Utilization

A girder will be sent out for utilization if, as a result of cutting down, it is impossible to get the next, smaller size of a girder on offer.

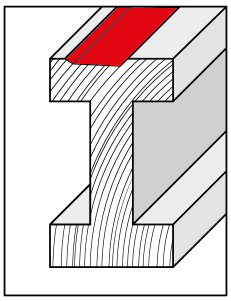

Fig. 1. Drawing of cavity in the material on a horizontal surface of girder shelf.

4.6.2 Cavities in the material on vertical surfaces of a girder shelf

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if a cavity does not exceed the allowed size of 4 x 1 cm at the length of up to 30 cm.

Repair – cutting down to smaller dimension

A girder will be sent out for cutting down if a cavity is larger than 4 x 1 cm, or there are several cavities on the length of up to 30 cm.

Utilization

A girder will be sent out for utilization if, as a result of cutting down, it is impossible to get the next, smaller size of a girder on offer.

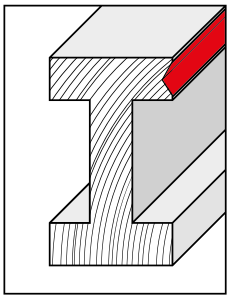

Fig. 2. Drawing of cavity in the material on a vertical surface of girder shelf.

4.6.3 Cavities in the material on both, horizontal and vertical surfaces of a girder shelf

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if a cavity does not exceed the allowed size of a triangle with a side of 2.5 X 2.5 Cm at the length of up to 30 cm.

Repair – cutting down to smaller dimension

A girder will be sent out for cutting down if a cavity is larger than 2.5 X 2.5 Cm, or there are several cavities on the length of up to 30 cm.

Utilization

A girder will be sent out for utilization if as a result of cutting down it is impossible to get the next, smaller size of a girder on offer.

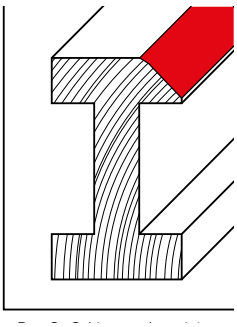

Fig. 3. Drawing of cavity in the material on a vertical and horizontal surface of girder shelf.

4.6.4 Holes in girder shelf

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if there is a hole in it with diameter of up to 8 mm, located in the vicinity of the shelf's centre, and at a distance greater than 20 cm from another hole. The hole must not cause disruption of grains in the girder.

Examples: drilled out holes or those left by nails.

Repair – cutting down to smaller dimension

A girder will be sent out for cutting down if the holes in it have diameter greater than 8 mm, or the holes are at the distance of less than 20 cm from each other. Holes located on edges should be considered cavities in a material.

Utilization

A girder will be sent out for utilization if as a result of cutting down it is impossible to get the next, smaller size of a girder on offer.

4.6.5 Notch made on girder shelf

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if it has notches deep for up to 3 mm.

Repair – cutting down to smaller dimension

A girder will be sent out for cutting down if it has notches deep for more than 3 mm. One notch is considered one damage at the length of 30 cm.

Utilization

A girder will be sent out for utilization if as a result of cutting down it is impossible to get the next, smaller size of a girder on offer.

4.6.6 Holes in girder web

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if it has holes with a diameter of up to 22 mm. The allowed number of holes is 2 per 1 running meter of a girder.

Utilization

A girder will be sent out for utilization if it has holes with a diameter grater than 22 mm, and if there is more than 2 holes per 1 running meter of a girder. A girder will be also sent out for utilization if the holes' edges are jagged.

4.6.7 Cracks in girder shelf

Repair – cutting down to smaller size

A girder will be sent out for cutting down if, as a result of the procedure, it will be possible to get the next, smaller size of a girder on offer.

Utilization

A girder will be sent out for utilization if, as a result of cutting down, it is impossible to get the next, smaller size of a girder on offer.

4.6.8 Scratches after drying out

Fit – regular maintenance

A girder will be assessed as fit and sent out for regular maintenance if it cannot be split in two manually, and a length of any one scratch does not exceed 30 cm.

Repair – cutting down to smaller size

A girder will be sent out for cutting down if it can be split manually without using excessive force, and if, as a result of cutting down, it is possible to get the next, smaller size of a girder on offer.

Utilization

A girder will be sent out for utilization if it can be split manually without using excessive force, and if, as a result of cutting down, it is impossible to get the next, smaller size of a girder on offer.

4.6.9 Concrete leftovers

Cleaning

A girder will be sent out for cleaning if a concrete wash covers a distance of 30% of the girder's length.

4.6.10 Cracks in girder structure

Utilization

If a girder has cracks which are transverse to its grain, it will be sent out for utilization.

4.6.11 Missing or damaged pvc end piece

Fit – regular maintenance

In the case, where the pvc end piece is missing or damaged, a girder will be qualified as fit and sent out for regular maintenance.

4.6.12 Bolts, nails and other fitting elements i girder

ATTENTION

ATTENTION
Returning girders with fitting elements is strictly prohibited.
A girder having such elements will be sent out for cutting down to a smaller size, and if not possible, for utilization.

5 Assessment criteria for shore structures id 15*new*

5.1.1 Damages of frame id connectors

Fit – regular maintenance

An element will be qualified as fit and sent out for regular maintenance if it is clean and shows no signs o damages.

Repair

A regular frame will be sent out for repair if deformations of connectors have no impact on the geometry of the whole frame, and the repair is possible.

Utilization

A frame will be sent out for utilization if damages of connectors cannot be repaired, or if they have an impact on the geometry of the whole frame

5.1.2 Loss of geometry in regular and ending id frames

Utilization

In the case of damages resulting in loss of geometry, the element will be sent out for utilization.

⚠ ATTENTION	**ATTENTION** Loss of geometry in regular or ending frame in the system ID 15*new* , always means sending the element out for utilization.

5.1.3 Missing components

Repair

In the case, where an incomplete element is returned, – i.A. Missing chocks – such element will be sent out for repair and replacement, providing it has no other damages, which qualify it for utilization.

5.1.4 Damages to id strutting

Repair

An element will be sent out for repair if all deviations from standard may be straightened out.

Utilization

An element will be sent out for utilization if any deviations from standard may not be straightened out, or if the strutting has been broken.

Notes

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