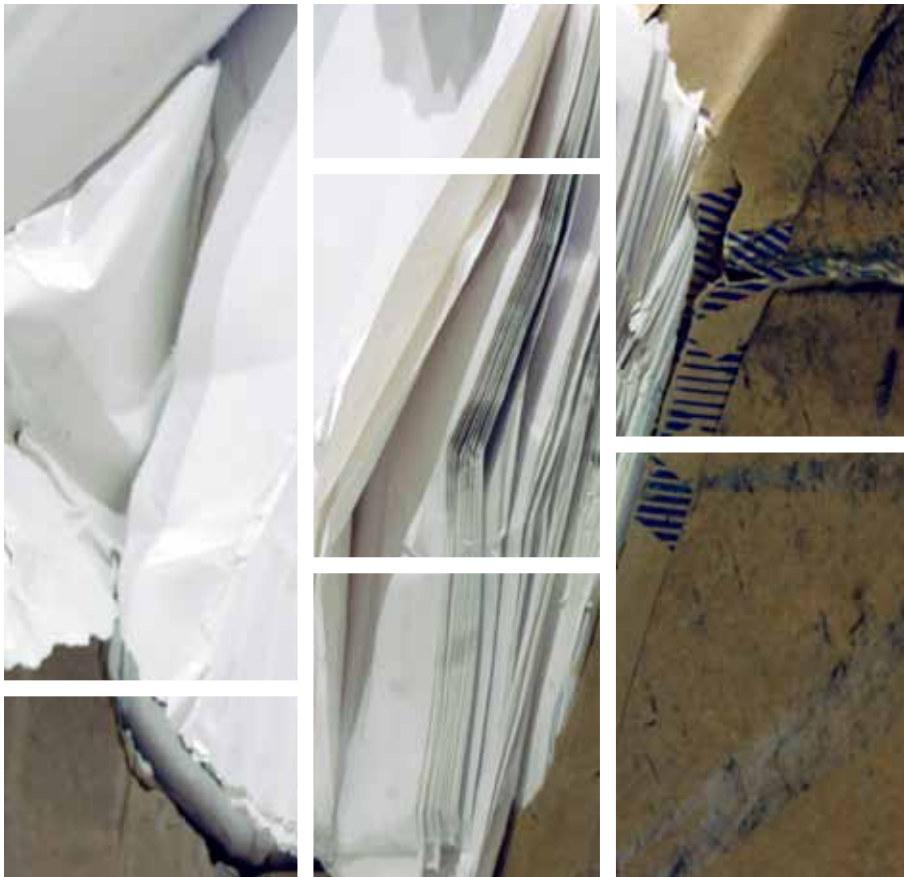


2 Inspect, Report, Evaluate & Repair



CONTENTS

TAKING DELIVERY

INCOTERMS® FOR DELIVERY

DAMAGE REASONS AND CODES

6 Report — Repair or Reject?

7 Evaluation

TYPE OF ROLL DAMAGE

8 01 Edge Damage

9 02 Side Damage

03 End Damage

10 04 Wrapper Damage/Broken Pallet Base

05 Core Damage

06 Deformation/Out-of-Roundness

11 07 Water Damage

08 Dirt & Contamination

12 Other Handling Damage Issues

TYPES OF SHEET DAMAGE

14 01 Edge Damage

02 Side Damage

03 End Damage

04 Broken Pallet Base

06 Deformation

15 07 Water Damage

08 Dirt & Contamination

16 Tolerance Guidelines (06)

IMPORTANT NOTICE!

A general guide cannot take into account the specificity of all products, procedures, laws and regulations. We therefore recommend that this guide be used only as a complement to information from suppliers, whose safety, operating and maintenance procedures along with applicable local legal regulations always take precedence over this guide. This guide is and is intended to be a presentation of the subject matter addressed. Although the authors have undertaken all measures to ensure the correctness of the material, it does not purport to list all risks or to indicate that other risks do not exist. The authors, contributors, the represented associations and participating companies do not give any guarantee thereof and no liability is assumed by reason of this guide as it is only advisory in nature and the final decisions must be made by the stakeholder. It shall not be applied to any specific circumstance, nor is it intended to be relied on as providing professional advice to any specific issue or situation.

⚠ Always check machine is in its specified safe position before working on any component (e.g. with compressed air, electrical power and gas disconnected). Only trained maintenance personnel adhering to safety regulations should perform maintenance work.



Best Practice



Poor Practice



Safety Issues



Environmental & Economic Impact

Taking Delivery



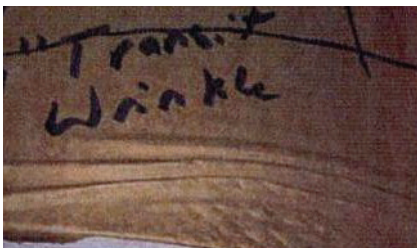
*If when opening the doors of the delivery vehicle the load is in poor condition then immediately take photographs before unloading.
Source: Idealliance IA-D 65.*



Foreign object in roll end. Source: Bolzoni Auramo.



Damaged pallet. Source: Stora Enso.



*Write damage information on roll then take photo.
Source: Idealliance IA-D 19*



Burst airbags. Source: Idealliance D58

Paper Arrival

The commercial invoice confirms the value of the goods, shows the delivery terms and who has the risk during the transport and consequently the right to compensation under the transport (cargo) insurance.

The way bill proves that the transport has been made and includes the name of the carrier. A remark must be made on it to prove the condition of the goods at the time of delivery into the custody of the buyer/receiver. If there is no remark on the way bill, it is considered that the goods were delivered in sound condition. The remark has to be made for visible damage or damage that should have been visible if a control had been carried out.

✓ Paper should be inspected upon arrival and any visible defects noted on the delivery documents (both the in the carriers and receivers copy). Any damage should also be digitally photographed while the paper is still on the loading floor of the vehicle and/or carrying equipment (trailer, container, rail wagon). The location of the damage should be noted — top, bottom or side.

€² Failure to note damage on the delivery documents could result in a claim for damaged paper being rejected. Neither does it allow a fault analysis to be made to identify and resolve the cause of damage.

Take Digital Photos of Damage

Any damaged products not notified on the transport document should be digitally photographed before handling them and while they are still on the loading floor of the vehicle and/or carrying equipment. Photograph also the identity number of the trailer, SECU, container, railway wagon/ car.

✓ Writing useful damage information on the rolls before taking the photo is a great help.



End damage from poor handling. Source: UPM.



Stacked sheet paper tends to tilt or move within the smallest cargo gap when subjected to maximum impacts (sharp braking of a truck, railway shunting, or bad weather at sea). Source: FMS Use No Hooks!



Rolls toppled in transit. Source: IGP.



Rolls shifted from continuous brief impacts during rail or sea transport. Source: FMS Use No Hooks!

Defining Delivery Responsibility

Incoterms®

After damage or loss has been identified and reported, the next step is to determine responsibility. This depends upon where the loss or damage occurred in the transport chain and who has the risk for the goods at that point.

Goods are not always inspected at the different points where their risk is transferred. To avoid disputes over where the loss or damage has incurred, it is recommended to use agreed terms of delivery where one party bears the risk for the goods during the entire transport. The possible insurance liability is also defined by these terms.

Incoterms® has been developed by the International Chamber of Commerce (ICC) to provide clarity of delivery terms. When making an agreement based on Incoterms®, it is advisable to state the agreed terms of delivery in the contract of sale and commercial invoices, e.g. "FOB Gothenburg, Incoterms® 2010". This avoids problems with interpretation that may arise in countries having their own definitions of delivery terms. The use of Incoterms® 2010 for international shipments is strongly recommended in preference to creating own delivery terms. It is always advisable to state the version, e.g. Incoterms® 2010, because there are some differences over previous versions.

Monitoring devices

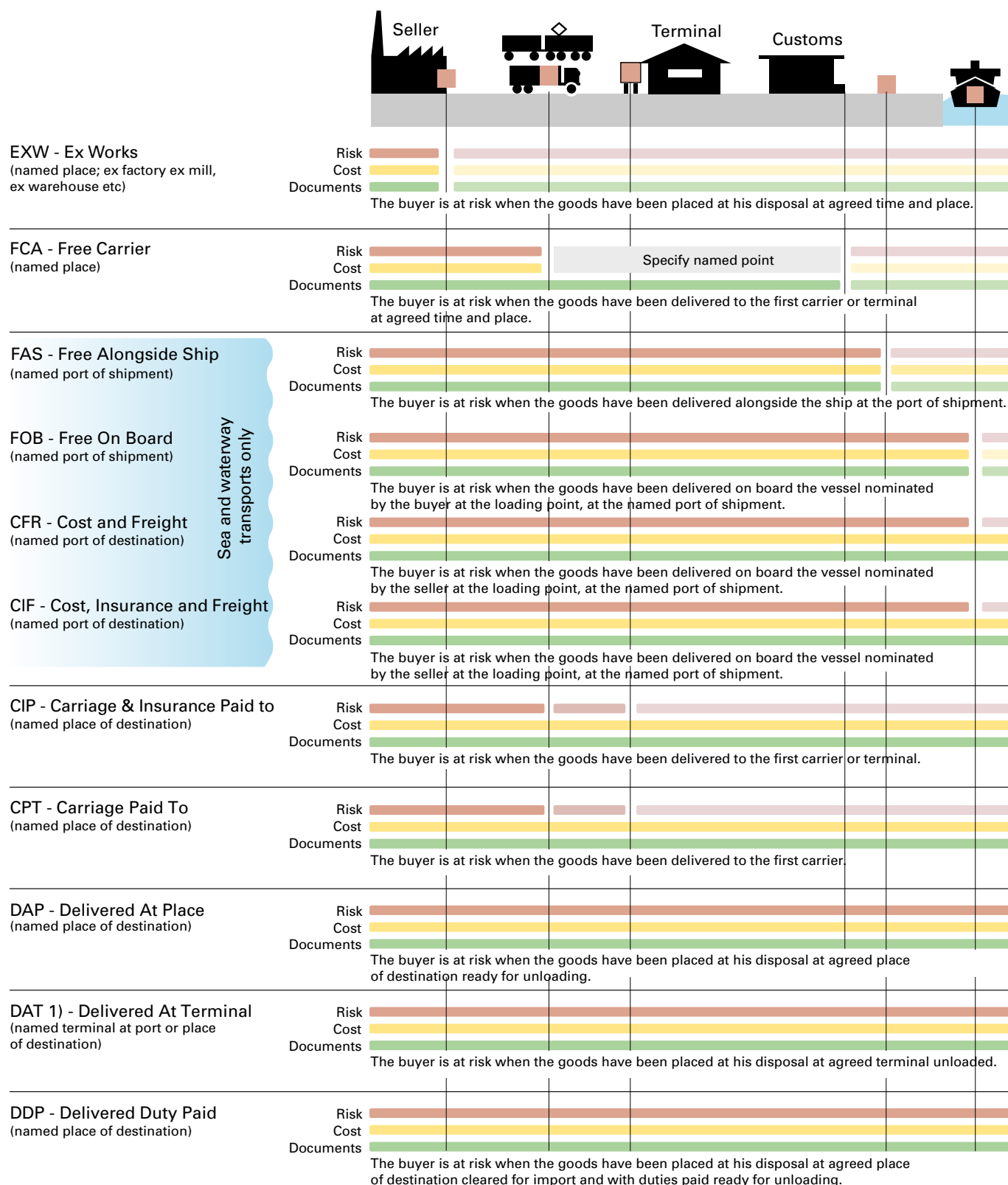
Unknown source(s) of repetitive paper damage across the logistics chain can be diagnosed by inserting a small monitoring device into the roll core. This determines the time, date and possible cause of handling damage due to excessive accelerations from dropping, hitting or other accidents.

Notice of Loss and Periods of Limitation

Applicable rules	Notice of loss		Limitation
	Apparent loss or damage	Non-apparent loss or damage	
1. Carriage by sea: Haag-Visby Rules	Upon receipt of goods	3 days	1 year
2. Carriage by air: Montreal Convention	Upon receipt of goods	14 days	2 years
3. Carriage by rail: CIM Convention	Upon receipt of goods	7 days	1 year
4. Carriage by road: CMR/TKSL	Upon receipt of goods	7 days	1 year

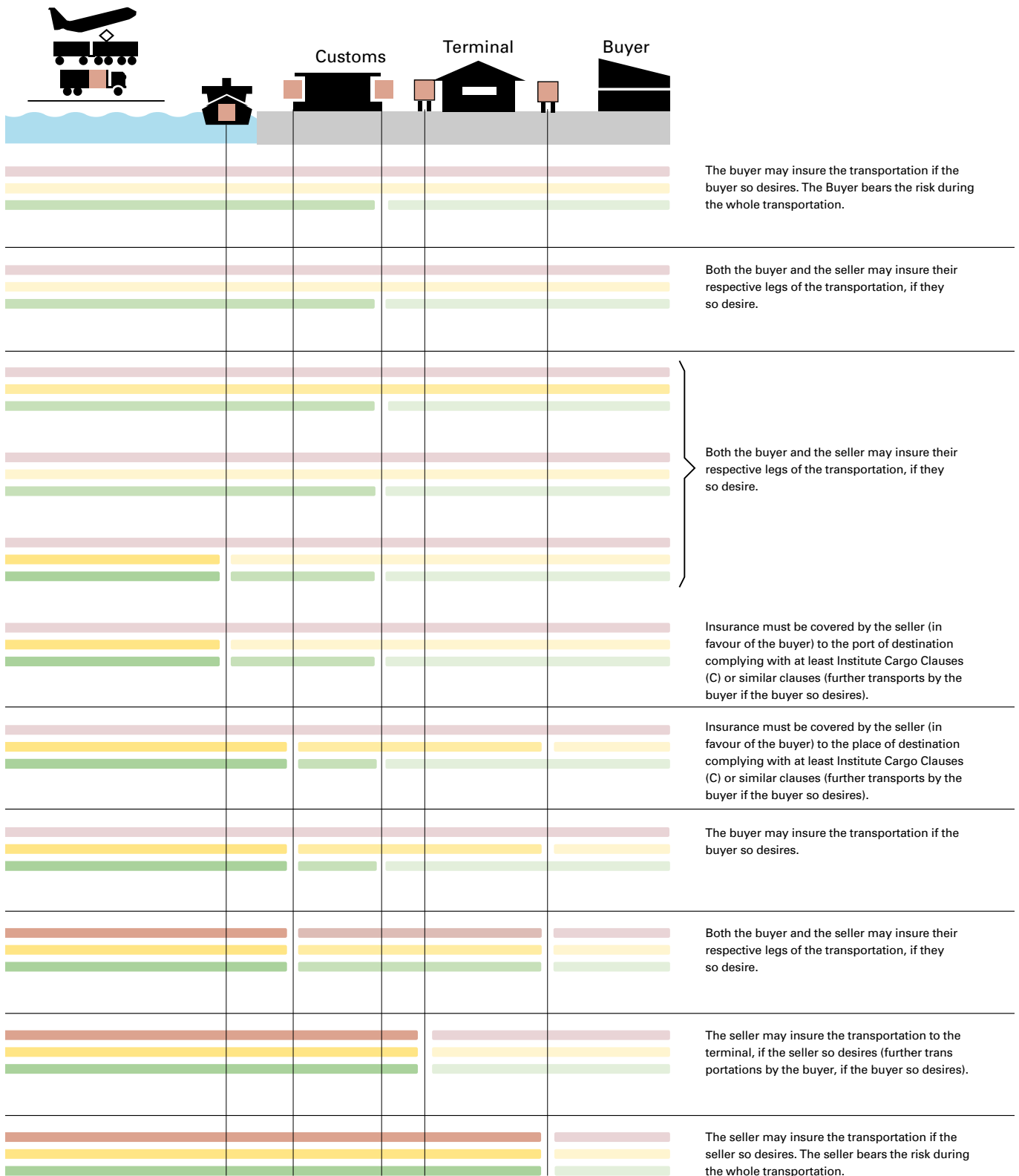
For each of these types of carriage there is a limitation of liability in international transports, usually expressed as price per kilogram. Source: IF.

Incoterms® for Delivery



Source: IF P&C

1) "Named terminal" includes such as quay, warehouse, container yard, road-, rail- or air cargo terminal at named port or place of destination.



Damage Reasons and Codes

“Any change in the presentation of a unit after leaving the production site that requires remedial actions is recorded as damage.” These codes and instructions are based on ‘Inspection Instructions for Defining Damage of Forest Products’ developed by Finnliness, Finnsteve, Hangö Stevedoring, LHG, Metsä, Herman Andersson, Pohjola, Rauma Stevedoring, P&C, Steveco, Stora Enso, Transfennica, UPM.

When faults occur it is essential to make a Damage Report to define the problem and its cause in order to prevent its repetition. The report, including a description of the fault, where it occurred, and the damage illustrated with photos, should be sent to the paper supplier as soon as possible. The same approach is used both for rolls of paper and sheet products on pallets:

1. Any visible damage needs to be reported at every transit point.
2. Paper is then sent for evaluation, repair if possible, or re-pulping if written off.
3. It is important to know who has responsibility for the paper at each transit point.

Where	What	How
Place of damage — mandatory		
● At place of inspection		
● Before place of inspection		
Notice point of damage — mandatory	Type of damage — mandatory	Cause of damage — if clearly identified
● 00 Mill	● 01 Edge damage	● Handling
● 01 Pre transport	● 02 Side damage	● Transportation
● 02 Port of loading (storage & handling)	● 03 End damage	● Warehousing
● 03 Port of loading (stowage & unitising)	● 04 Wrapper damage/broken pallet base	● Deficiencies of handling equipment
● 04 In vessel	● 05 Core damage	● Deficiencies of transport facilities
● 05 Discharge port (discharge, storage)	● 06 Deformation / Out-of-roundness	● Deficiencies of warehouse
● 06 Discharge port (loading & delivery unitising)	● 07 Water damage	● Insufficient packing
● 07 Terminal or Inland warehouse	● 08 Dirt and contamination	● Insufficient lashing
● 08 Delivery transport	● 09 Shortage, non-delivery	● Condensation
● 09 Printer	● 00 Other, spoiling, mould, rust, etc	● Other



Wrapper damage less than two hands wide patched with tape. Source: UPM. (CRM 4.4.8)

Report — Repair or Reject?

Damaged paper should be placed in a dedicated and marked holding area for evaluation and reporting:

1. Any and all damaged product and packaging is reported (total or partial).
2. Collect data defined in the Damage Report and digital photos of damage.
3. Use standardised codes where possible.
4. Send Damage Report, transport document and digital photos to the paper supplier.

After inspection, the damaged roll will be either reconditioned or rejected according to the instructions received. If unclear, then contact the paper supplier. Paper may be reconditioned at any qualified point in the supply chain.

Rejection & Reconditioning Guideline

Nature of damage	Wrapper	Wrapper	Roll	Roll	Roll
	damaged	damaged	damaged	damaged	damaged
	< 2 hands	> 2 hands	< 10 mm	10-40 mm	> 40 mm
	wide	wide	0,4 in	0,4-1,5 in	1,5 in
Action	Tape	Rewrap	Tape	Refurbish	Reject

Roll Evaluation

Paper that has visible damage should be placed into a specific area for evaluation (in a printing site this will include rolls rejected from the press). This area should be properly protected to avoid possible further damage. A report should then be sent to the paper supplier or, for reconditioned or sheeted rolls, to the converter. If the printer has contracted to collect their paper, then they should contact their transport company.

Criteria for Rejecting a Roll:

1. Oval or crushed core that cannot be straightened.
2. Oil stained, wet, or otherwise contaminated.
3. Foreign smell with the product.
4. End, side or edge damage

Place a damage sticker on any rejected goods.

Criteria for reconditioning a roll: If damage is less extensive than above —

1. White showing — if the paper can be seen, then tape the roll. Taping is not allowed if there is any damage to the product itself. Tape used must have the identification of the operator.
2. Multi-packed rolls (more than one roll in same package, no pallet) should be considered as an individual roll with normal reconditioning limits. If only one of the rolls inside a packet is rejected, then the others can be delivered after repackaging.

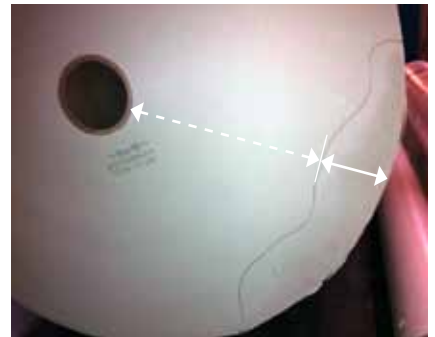
✓ **Before repacking ensure:** package is free of dirt, dust, or particles; packaging material is clean and suitable with correct tightness; put the label on the unit; check and update stock control and Damage Report to ensure traceability.

Staff in the reconditioning area must ensure that it is clean, hand hygiene routines for food and liquid packaging products are followed, and working clothes are clean and in good condition.

Rolls that have had damaged paper removed need to be reweighed and a new label placed over the old one. For paper roll repair information [see Module 7-30](#).



Device used to test core deformation. Source: UPM.



The extent of the edge damage is expressed in depth (mm/inches) measured from the roll edge towards the core. Alternatively, the number of damaged paper layers should be counted. Source: FMS Use No Hooks!

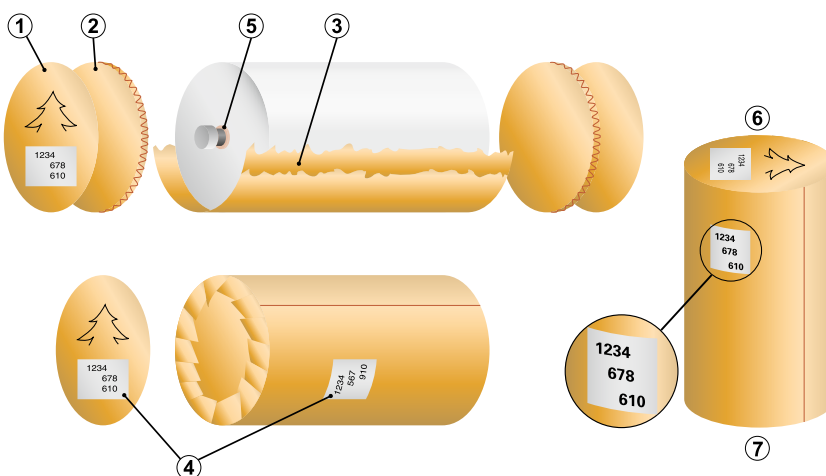


Ultrasonic technology can be used to quickly and accurately measure roll roundness without disturbing its wrapping. The results can be viewed on an LCD display and exported to a data management system. Source: Bolzoni Auramo.

- 1 - Outer end shield
- 2 - Inner end shield
- 3 - Belly wrapper or side
- 4 - Label & Barcode
- 5 - Core
- 6 - Top
- 7 - Bottom

Source: WOCG/icmPrint.

Damage Location



Note if damage is on the top or the bottom of the roll. **The top is when the label is in a horizontal readable position when the roll is standing on its end** (roll core pointing to the sky). The top usually has a small label.

Types of Roll Damage



Edge damage.
Source: Stora Enso.



Edge damage.
Source: WOCG/icmPrint.



Crimped edge/elephant toes.
Source: Stora Enso.



Dropped roll.
Source: Idealliance (IA-D 41)

01 Edge Damage (edge crack)

Damage: A cut, imprint or tear in the edge of the roll. A crimped edge may cause shockwaves in the roll. Out-of-roundness can negatively affect splice operation.

Causes: Multiple causes include —

Incorrect clamping: This is shown by side-to-side tearing of the roll wrap and white paper. Damage risk increases if the roll is not high enough before rotating, lowering it non-parallel to floor, pushing it on the floor, or incorrect mast tilt angle. Slack lifting chains increase damage risk when the roll is released from clamping. (IA-D 47-49)

Crimped edge/elephant toes: Typically happens when the roll is lowered edge first causing crimping damage seen as a wave formation on the edge. Alternatively, too low clamp force allows the roll to slide inside the wrapper and the bottom then carries more weight, which rounds the lower corners of the wrapper and crimped edges appear. The roll may be used after checking edges for cuts and there is no risk to running behaviour.

Impact: Roll pushed against a hard object. Clipped roll shows a tear in an upward direction at the bottom of a roll or downward on the top of the roll (not side-to-side as it would appear with clamp damage). Clamp truck impact can be seen when paint from the clamp truck is obvious on the rolls. (IA-D 50-51-52)

Lipping: Overlapping edges that are impacted, particularly when unloading stacks. This can occur at both the top and bottom of rolls. (IA-D 53-54)

Skinned roll: The wrapper cracks and “skins” (peels) off the roll due to insufficient clamp weight capacity or loose wrapping of the roll. Frequently happens when handling combines large rolls with small clamp trucks. The amount of damage to the white paper varies and will be extensive if the roll is dropped. (IA-D 43)

Dropped roll: Seen as an accordion pleat in a semi-circle area on the bottom edge, or on top if another roll is dropped on it during loading. Damage extends into the white paper as deeply as the height of the pleating on the outside of the roll. The uniform size “ridges” do not intersect (transit wrinkles are similar but the wrinkles are much smaller in width and tend to overlap one another). (IA-D 41)

Cuts and dents: Cut edge damage from contact with a sharp edge in the truck trailer, hold or railway wagon. Corrugated panel or side indentation damaged edges occur when the roll is pressed against corrugated trailer panels. (IA-D 45, 56-57)

Loading and stacking: Oblique stacking; inadequate space between roll stacks; stacking with too low lift height. Mixed diameter loads may lead to a variety of damage — always report “multiple diameters in the load” if there is significant damage. Rolls on pallets may suffer edge damage if they overhang the pallet or are on a damaged pallet. (IA-D 60-55)

Packing materials: Dunnage* packing may cause a flat spot, straight line or wrinkling on the bottom edge of a roll; it can also transfer a pattern to the roll wrapper. A piece of flattened dunnage might creep under the roll to damage it. (*Dunnage is an inexpensive or waste material used to load and secure cargo during transportation.)

Deflated or burst air bag: A gap can be created in the load when an air bag fails. Rolls then shift into each other causing a variety of damage. A properly inflated air bag is very hard; a deflated air bag retains some air but is soft to touch; a burst air bag with a definite rip in the outer layer is an indication of mishandling and usually results in rolls shifting and edge damage. (IA-D 58-59)

Improper blocking or bracing: A common cause of edge damage. Can be overcome by using friction mats under the rolls, and to load rolls tightly against a wall. (IA-D 61)

ACTIONS

Send to evaluation area.

✓ Slab down a maximum 3 cm (1,25”) of roll diameter.

✓ Use fine-grain abrasive paper to sand smooth the visible damage.

Prevention: Ensure correct roll clamp truck handling techniques and maintenance.

02 Side Damage (belly)

Damage: Both the wrapper and the product are damaged on the side of the roll.

Causes: Clamping arms insufficiently opened when clamping the roll; incorrect or poor contact pad condition; clamping force too low; incorrect clamp size for the roll dimensions; clamping too deep; lifting mast overly tilted during clamping; roll not lifted high enough and collides with another roll; roll dropped too hard or towed; rolls dropped or are ejected when braking; pivot arm clamps — smaller rolls with contact pads only — have no contact against the frame; sliding arm clamps roll against the push plates; clamping the roll at the bottom exposes the roll wrapper to stress; using the clamp to push the roll; roll in contact with a dirty floor.

ACTIONS

Send to evaluation area.

- ✓ Slab down affected layers.
- ✓ Before use, check core roundness and inner core wall for broken areas; if damaged, reject the roll.

Prevention: Ensure correct roll clamp truck handling techniques and maintenance. Variables are the wrapper type, the condition of the contact pads, and their friction surface. Some types of wrapper are more sensitive to handling damage, particularly if incorrect contact pad friction surfaces are used.



Side damage (belly) caused by a clamp truck's counter weight. Source: UPM.

03 End Damage (head damage)

Damage: Damage through or under roll end cap.

Causes: A loose end cap, or impact and tears, or cut at the end of the roll; dent on roll end side from hard object; water damage on ends; debris embedded into bottom of the roll visible on the outside; debris under the header or by mill handling before the roll is wrapped. (IA-D 6)

Poor handling, including roll lowered onto an uneven or unclean surface; bottom of roll dragged across an object or gouged on top by a clamp truck removing a roll sitting on top of it; roll end sliding on the floor that abrades the header and usually marks the white paper; rolls handled by forklift instead of clamp truck. Roll walking out of header is rare and mostly occurs with tall rolls caused by loose wrapping or loose loading (not due to transport vibration if there is no excessive scuffing on wrapper). (IA-D 8-12)

ACTIONS

Send to evaluation area. Note if damage is on the top or bottom of the roll.

- ✓ Deep side damage can be removed with a grinder; if flat, use abrasive paper
- ✓ Slab off damage if it is less than 7 cm (3") inside roll diameter, otherwise reject.

Prevention: Ensure correct roll clamp truck handling techniques and clean floors.



End damage. Source: Stora Enso.



End damage. Source: W0CG/icmPrint.



Damaged outer end shield. Source: UPM.



Wrapper damage. Source: Stora Enso

04 Wrapper Damage

Damage: Typically looks like side damage (03) but only the wrapper is damaged.

Causes: Roll not tightly wrapped, or air trapped during packaging — when the wrapper is poorly glued, or not glued at all; or when the roll slips inside the clamping pads due to insufficient grip or clamping force.

ACTIONS

✓ If damage is less than two hands wide, patch with tape; if damage area is over two hands wide then send roll to evaluation area.

If the roll wrapper and shields are frequently damaged in many rolls from one supplier, then the cause may be that the wrapper and its materials are inadequate.



Core damaged beyond repair. Source: UPM.

05 Core Damage

Damage: Crushed or out-of-round core.

Causes: Roll dropped hard, or too high clamp pressure.

ACTIONS

⚠ **Safety risk:** Do not use damaged cores because there is a danger to life and equipment.

✓ At press, remove dust from inside cores before loading onto paster. Cut off paper inside core wall if chuck does not penetrate.

✓ Send to evaluation area if core is too distorted or damaged to use on press.

Prevention: Ensure correct roll clamp truck handling techniques and maintenance.



Deformed roll. Source: UPM (CRM 4.4.9)

06 Deformation/Out-of-Roundness

Damage: Excessive out-of-roundness may only be noticed when printing. In extreme cases the whole roll can be deformed and the core may be crushed. Depending on the clamping force, paper quality and general roll properties it may be seen as a total deformation or, alternatively, more locally concentrated under the clamp contact pads.

⚠ High speed printing presses have a maximum out-of-roundness tolerance of around 2 mm; beyond this may lead to problems on the paster, web breaks, poor printing quality and reduced speed.

Causes: Roll clamps overlap two rolls, or have too high clamp pressure; or if roll is pushed against a fixed object.

ACTIONS

✓ Reduce press speed one minute before the splice and during splice cycle.

✓ Reject roll and send to evaluation area.

Prevention: Use clamp force recommended on roll label. Ensure clamp plates are clean, undamaged and correctly positioned on roll. Check clamp pressure; use larger clamp plates and/or high friction clamp coverage.

See pages 19-20 for more information on tolerances for roll shape.

07 Water Damage

Damage: Roll exposed to water or condensation, with the wrapper showing water stains.

Causes: Roll was placed in a wet area; or if water penetrates the wrapping during transport inside trucks or containers with damaged walls. Condensation in ships and containers may occur in autumn and winter during rainy weather or with snowmelt.

ACTIONS

- ✓ If roll end shows layer gaps and feels dry, then slightly wet the side with a water spray.
- ✓ Cut off the wet area to a maximum 3 cm (1,25") deep.
- ✓ Reject and send to evaluation area.
- ✓ Condensation on wrapper will normally dry off without damage by following these storage steps:

Leave enough space between rolls/stacks to ensure good airflow

Ensure maximum air ventilation inside the warehouse by leaving its doors open.

If there is enough space, place rolls one-high in a lying position to avoid condensation leaking down the wrapper.

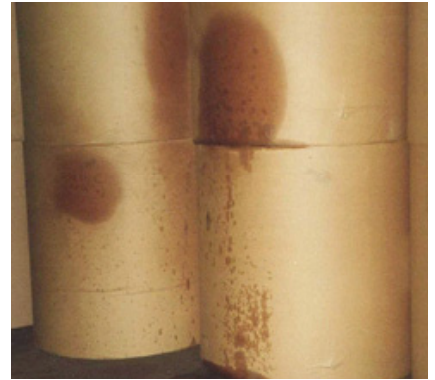
If rolls are stacked standing, then scatter enough saw dust around bottoms of stacks to soak-up moisture.

Leave enough time for the rolls to dry out. In general, the best way to avoid problems with cold rolls is to let them warm-up to a 'good enough' temperature of +10 °C or more.

✗ Do not open the wrapper while rolls are 'sweating' as this causes water damage to top and bottom of the roll.



Water damaged roll. Source: Stora Enso



Contamination damage visible on wrapper. Source: Stora Enso.



Roll with about 20% water damage. Source: Stora Enso.



Rolls showing condensation. Source: Stora Enso.

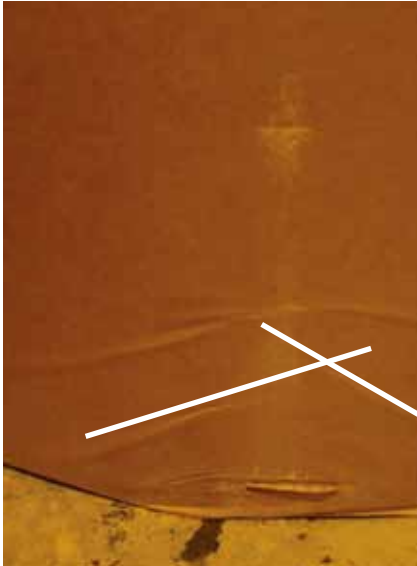
08 Dirt & Contamination

Damage: Contamination or staining of the roll.

Cause: Contact with oil or chemicals, etc. Possibly a mechanical problem on the clamp or lift truck.

ACTIONS

- ✓ Send to evaluation area.
- ✓ Cut off the contaminated part.



Transit wrinkle lines intersect.
Source: Idealliance (IA-D 17)



A transit wrinkle can occur even with wall dunnage. This "wear strip" is caused by the wall dunnage that protected this roll otherwise there would be paint on the roll. Source: Idealliance. (IA-D 18)



Wall chafe. Source: Idealliance.

Other Handling Damage Issues

Telescoping: Can occur when the paper roll is loosely wound or with an unwrapped roll of slippery paper, and when clamping force is too low. Typically, the only way to prevent a roll from telescoping is to increase the clamping force so that the friction between the paper layers inside the roll increases to prevent the problem (check the clamp capacity does not exceed the maximum hydraulic pressure).

Transit wrinkles: Occur on top and bottom of rolls over 1500 mm (60") in rail shipments, particularly if rail wagon walls are bowed and there is swaying movement. Rolls with transit wrinkles are normally the bottom tier, at the bottom of the roll where it touches the railcar wall (look for paint on the roll from the wall — if there is paint on the rolls it means no dunnage was used). They look similar to a dropped roll, but the wrinkled area is much smaller and the ridges tend to intersect with one another.

Wrapper wrinkles: Poor wrapping can create multiple straightline wrinkles around the roll that appear as hard creases or folds in the wrapper. Typically, there is no paint, chafing, or handling marks on the wrapper near wrinkles. Normally, there will be no transit damage in the white paper beneath the wrinkles. (IA-D 20)

Dunnage transit wrinkle: If the wall dunnage is too hard (not compressible) the rolls can be imprinted with its honeycomb pattern. The white paper will be marked and must be slabbed off. (IA-D 21)

Incomplete layer pinch wrinkle: A single tier blocking roll creates a pinch wrinkle at the bottom of the second tier roll and/or the top of the blocking roll. (IA-D 22-24)

Chafe & Flat Spots

Roll-to-roll chafe: The wear strips show no paint, the ink marks show where rolls rubbed against the label of another roll. Roll-to-roll chafe may appear like white paint but it is only wear on the kraft wrapper. (IA-D 26-27)

Wall chafe: Shown by the white paint on the roll. It is hard to tell the difference between wall and door chafe from pictures alone. Label chafe can create a white mark like wall chafe. (IA-D 32)

Door chafe: Rolls not loaded on centre line or one side, or loaded too close to the door, causes chafing. (IA-D 28-30)

Flat spots: The area will be indented and flat as though it was hit hard by another roll or pushed against a wall. They do not exhibit any pinched areas. (IA-D 33)

Rail Transport Edge Damage

Doorpost rolls: Doorposts can lead to a variety of damage caused by poor doorpost protection or unloading difficulties. It is important to report if the damaged rolls were located at the doorpost and write “doorpost” on the roll before photographing. (IA-D 35-37)

Doorpost risers: In some load configurations, the doorpost roll cannot be clamped without dragging/pushing it to the centre of the rail wagon. If this roll is on a floor riser it can sustain edge damage when moved. (IA-D 39-40)

Kissing roll: Caused by rolls “kissing” or jumping at some point during transit. Look for impact damage on the top edge of a first tier roll that matches with bottom edge damage on the second tier roll. The damage may not be perfectly aligned because the rolls can rotate during transit. (IA-D 42)

Wrong type of railcar: Excessive edge damage can occur when fine paper rolls are shipped in a Rigid Under Frame (RUF) car. Only a Cushioned Under Frame (CUF) car should be used — these have a coupler that allows movement to facilitate the cushioning device (a rigid car has a fixed or immovable coupler). (IA-D 63)

Other Rail Handling Damage

Rail handling – humped/hit rail wagon: Excessive rail wagon handling can result in significant damage. Wood chocks or unusual material on or in a wagon usually indicates the car has had a problem in transit. (IA-D 65)

Rail handling/toppled rolls: Toppled rolls are a safety hazard that should be thoroughly investigated. Photos of toppled rolls are critical in dealing with rail handling or mill loading mistakes. (IA-D 66)

Rail handling vibration loads — minor chafe damage: Occurs on rail or inter-modal shipments. Rolls will show chafe damage around the entire circumference. Wrapper shows evidence of spinning. There may be shavings on the floor. Usually the result of a mechanical problem with the wagon; other causes are cores too long or rolls loaded very loosely against each other. White paper is usually undamaged but roll appearance is poor. Report rail wagon for vibration problems. (IA-D 67)

Rail handling vibration loads — major chafe damage: Vibration can lead to severe damage if rolls can spin so violently that the wrap is removed and the white paper exposed. Shavings from the rolls are left behind as evidence. Note the light brown dusting and the white shreds of paper on the railcar floor. Spinning of the roll can also cause rolls to “walk” out of their headers. Report rail wagon for vibration problems. (IA-D 68-71)



Indicate on photo report if origin is wear against another roll (left) or paint from wall (right).
Source: Idealliance. (IA-D 26)



Toppled rolls. Source: IGP.



Rail handling vibration loads. Source: Idealliance.

Types of Sheet Damage



Source: UPM (CRM 4.4.11)

01 Edge Damage

Damage: A cut, imprint or tear in the edge of the package.

ACTIONS

- ✓ Send to evaluation area.



Source: UPM.

02 Side Damage

Damage: Wrapper and product damaged.

ACTIONS

- ✓ Send to evaluation area.



Source: Stora Enso.

03 End/Top Damage

Damage: Impact dents in the top of the pallet that damage the product inside.

ACTIONS

- ✓ Send to evaluation area.



Source: Stora Enso.

04 Broken Pallet Base, Lid or Straps

Damage: Pallet blocks, bottom or edge of the pallet are damaged or missing.

ACTIONS

Replace with new elements.



Source: UPM (CRM 4.4.12) Source: FMS Use No Hooks

Damage: Flat band/strap damaged, broken, loose or missing.

ACTIONS

Must be replaced with new one(s).



Source: UPM (CRM 4.4.13)

06 Deformation

Damage: The package is out of its original shape.

ACTIONS

- ✓ Send to evaluation area.



Source: Stora Enso.



Source: UPM (CRM 4.4.14)

07 Moisture Water Damage

Damage: The pallet is exposed to water or condensation. The wrapper is water stained.

ACTIONS

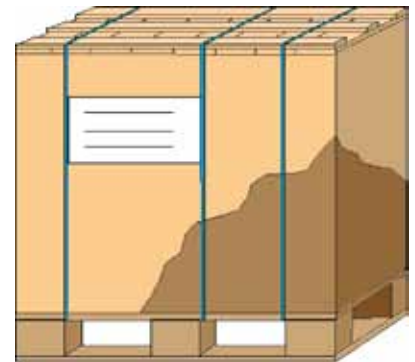
- ✓ Send to evaluation area.

08 Stains & Contamination

Damage: The wrapper is contaminated by oil, chemicals, etc.

ACTIONS

- ✓ Send to evaluation area.



✓ Pallets Rejection/Reconditioning Criteria

Pallet bases must be intact — repair the pallet or its leg if damaged.

All broken bands must be replaced.

Bands must be tight.

Wrapping — if torn it must be taped immediately (place plastic under the tape); a new plastic foil must be provided for large exposed areas. The product must be intact.

Stack must be straight.

Any dirt on the packaging must be cleaned — paper should not be dirty or have scratches.

Loose sheets and ream wrapped sheets on pallets (bulk packed):

Reject —

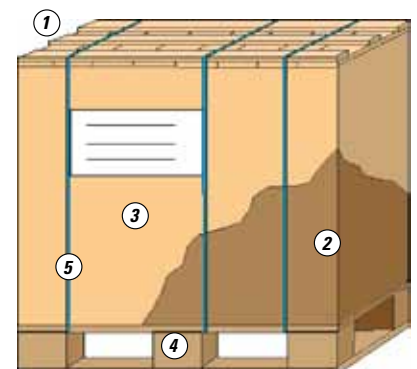
- All product damage caused by forks.
- Shifted sheets or moved sheets from pallets (no restacking).
- Capsized pallets.
- Paper in boxes in addition to loose sheets.
- Damaged boxes (if more than one damaged pallet, similar boxes can be replaced from another pallet).

Narrow rolls on pallet — Core and cupboard pallets

With damage on individual rolls up to 50 mm of the radius, each roll can be individually reconditioned by removing the damaged layers. If more than half of the rolls on a pallet are damaged in this way, then all of the rolls on the pallet are to be slabbed-off to a uniform diameter.

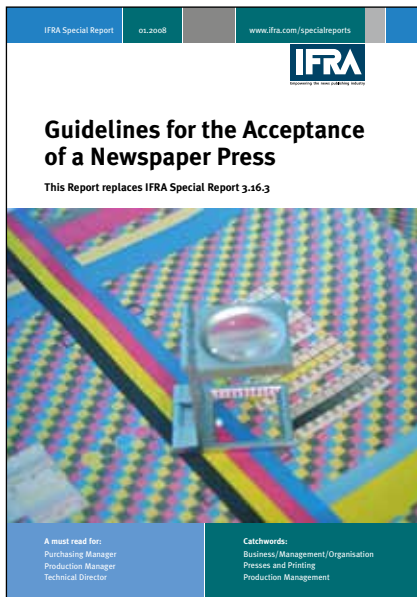
Rolls must be centred on the pallet.

Palletised paper in reams, sheets, rolls or customer packages is normally packed in a waterproof wrapper on a pallet.



1. Lid,
2. Corner protection,
3. Wrapping,
4. Pallet base,
5. Straps.

Source: UPM (CRM 4.4.14)



Special Report 3.16.3 includes quality parameters for newsprint paper rolls to be met when performing press acceptance tests. Source: WAN-IFRA.

Tolerance Guidelines for Deformation/Out-of-Roundness (06)

These tolerances were established by a WAN-IFRA cross industry working group for the Special Report 'The Guidelines for the Acceptance of a Newspaper Press' published in 2008.

The tolerances are guidelines but are not contractually binding without a detailed written agreement between the paper supplier and printer. They are appropriate only to bulky paper grades like newsprint, WFU, book papers and some packaging grades for all printing processes. Dense papers like SC, LWC, WFC do not normally change shape drastically.

WAN-IFRA 'The Guidelines for the Acceptance of a Newspaper Press'

Appendix 2: Newsprint quality requirements

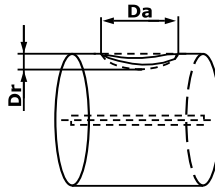
The following quality parameters for newsprint rolls must be met when performing any of the described tests:

- Core specifications according to → WAN-IFRA Special Report 1.8
- Winding hardness → amphoric resonance
- Conditioning of roll(s) within climate of press hall → > 24 h
- Storing of splice prepared roll → < 12 h
- Paper properties → according DIN 19306-4 (2005)
- No mill splices in test rolls

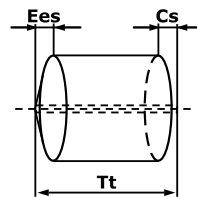
Roll deformations:	Acronym	Tolerance	Illustrations
Flattening	Fl	< 5 mm (0,20")	
Cone deformation	$Cn = D2 - D1$	< 10 mm (0,40")	
Concave deformation	$Cc = D2 - D1$	< 10 mm (0,40")	
Convex deformation	$Cv = D2 - D1$	< 10mm (0,40")	
Skewness (axial) Ska		< 300 mm (11,81")	
(radial) Skr		< 2 mm (0,08")	

Roll deformations:	Acronym	Tolerance	Illustrations
--------------------	---------	-----------	---------------

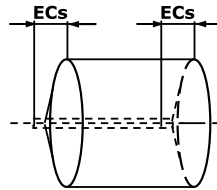
Dent (axial)	Da	< 300 mm (11,81")
(radial)	Dr	< 2 mm (0,08")



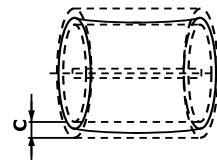
Evenness, end surface	Ees	< 5 mm (0,20")
Core shift	Cs	< 5 mm (0,20")
Total tolerance	Tt	+ 13 mm / - 3 mm



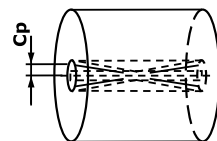
Evenness + core shift	ECs	< 5 mm (0,20")
-----------------------	-----	----------------



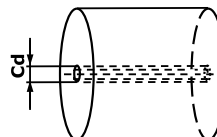
Concentricity	C	± 5 mm (0,20")
---------------	---	----------------



Core position	Cp	< 5 mm (0,20")
---------------	----	----------------



Core diameter	Cd	+ 0.4 mm (0,16")
---------------	----	------------------



Roll (width)	Ww	± 3 mm (0,12")
(diameter)	Ra -	30 mm (1,18")

