**220 IICL Questions and Answers**

Accumulated scratches due to normal use of container.

DV & OT = No repair

All corner posts, front and rear (Any single deformation such as bend, bow, dent, etc.) // Repair if

more than 20 mm (13/16 in), regardless of length or location

All corner posts, front and rear (OUTWARD deformation.) // Repair if

more than 5 mm (3/16 in) beyond plane of end surfaces or 10 mm (3/8 in) beyond plane of side surfaces of corner fittings

All corner posts, including j-bars // Repair if

Holed, cut, torn or cracked; broken component and/or weld

All of the following procedures are required EXCEPT

A. Weld smoke, spatter, etc. must be removed to permit adhesion of paint

B. The damaged component(s) must be restored as close as possible to original size and profile

C. Welds must be examined using radiographic or magnetic particle non-destructive testing equipment

D. Replacement steel components must be painted with coating compatible with that originally applied to the container

C. Welds must be examined using radiographic or magnetic particle non-destructive testing equipment

All rails, including side rails, headers and sills // Repair if....

Holed, cut torn or cracked; broken component and/or weld // Missing or loose parts or fasterners

All roof panels (DOWNWARD) deformation such as bend, dent, etc. // Repair if

IF more than 40 mm (1-9/16 in ) below top surfaces of top side rails

All roof panels (UPWARD) deformation such as bend, dent, etc. // Repair if

IF more than 40 mm (1-9/16 in ) above top surfaces of top side rails

All side/front panels // Repair if

Holed, cut, torn or cracked; broken component and/or weld

Missing or loose parts or fasteners

INWARD deformation such as bend, dent, etc. (if more than 35 mm (1-3/8 in), measured on an exterior recessed corrugation)

All welds to corner fittings should be made with

low-hydrogen welding rods or wire in order to minimize any chances of hydrogen embrittlement in the weld. (AWS E7016 and E7018 electrodes)

Anchor profile

A term used to describe the arrangement of tiny peaks and valleys on an abrasive-blasted surface to which paint will be applied

Anti-Rack Device

Hardware normally attached to doors to provide additional strength and stiffness to the door and end frame assembly. Such a device allows containers to withstand greater transverse twisting (racking) forces

As a practical matter, it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to detect differences between instances of delamination and those of rolling-shear failure, unless the surface veneer(s) are broken, without removal of the flooring (which is not done as a normal part of inspection).

not possible

Assuming owner and environmental regulations permit, which of the following procedures is NOT recommended for repairing tarpaulins or open top containers?

A. Cleaning the area to be covered with acetone or mineral spirit

B. Using a heat gun to fuse a patch to the tarpaulin

C. Sewing on a patch of the same material as the tarpaulin

D. Repairing a 6 mm (1/4 in ) pin hole with an epoxy compound

C. Sewing on a patch of the same material as the tarpaulin

AWS

American Welding Society, a maker of rules governing welding

Back-up plate

are temporary fittings on which an insert in a tube-type rail can be rested to ensure easy and accurate positioning of the insert as it is continuously welded into place

Baffles

Projections on the inside of a ventilator cover designed to prevent the entry of water into the container, while allowing air to enter and escape

Because the interior surfaces of doors may be exposed to weather when the doors are open, door repairs on the interior side should be\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

top coated as well as primed

Before cutting out the rail

support the container so that it does not distort when the rail section is cut out

Bend

A deflection in a structural component which causes the component to change direction from that of its original design

Bevel

Cut at an angle other than a right angle

Blade

Hinge component permanently attached by welding or bolting to the door

Blasted surface must be primed within \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ after completion of blasting, to prevent the development of further corrosion due to oxidation.

One hour

Bottom Frame

The lower structural support for the floor, panels and posts

Bottom Side Rail

A structural component running longitudinally along the bottom sides of a container between the end frames

Bottom side rails, front and door sills (Any deformation such as bend, bow, dent, etc. ON A FLANGE) // Repair if

torn, cracked or cut

Bottom side rails, front and door sills (Any deformation such as bend, bow, dent, etc. ON A WEB) // Repair if

More than 50 mm (2 in) deep

Bow

A gradual (not abrupt) deformation of the entire length of the component in a direction perpendicular to the length

Broken

Fractured or shattered into two or more separate pieces

Broken planks \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ require repair.

Always (always caused by damage)

Bushing

A tubular enclosure surrounding a rotating shaft which reduces friction against rotation, and may reduce electrolytic corrosion

Caulking (Sealant)

Material used to seal all joints and riveted seams to ensure watertightness. Caulking is used between wood flooring and board edges, sides and end frame assembly

Center Rail

A steel section, found in many containers with plywood panel flooring, running along the center of the container from the rear sill to the front sill (or to the tunnel bolster) and separating the plywood panels along the longitudinal center line. This component often has a "hat-shaped" section, but a flat bar may also be used in some cases for the same center rail function

Channels

Formed, folded or rolled metal bars with bracket-shaped sections

Chassis

A vehicle built specifically for the purpose of transporting a container, so that when the chassis and container are assembled, the unit produced serves the same function as a road trailer

Common weld

A single weld joining together two adjacent inserts or sections on one side of each

Consolidated Date Plate

A single rectangular marking pate affixed to the door which containers certification information applicable to more than one convention, regulation or other certification

Container

A rectangular structure of standardized dimensions, designed to carry unit loads, packages or bulk cargo, and which is quickly transferable as a complete module between a number of modes of transportation. (Unless otherwise stated, this manual refers to "dry-van" or closed containers, whose cargo space is enclosed and weathertight when the container is carrying cargo.)

Container roofs are made of either self-supporting corrugated panels or flat panels supported by.

Roof bows

A container ventilator consists of a plastic or steel cover approximately

25 mm (1 in) in depth which is fitted over an area of the container side panel in which holes have been drilled

Continuous weld

A single, unbroken bead of weld used to join and seal two steel components together completely

Corner fitting (Corner casting)

A steel component located at each of the container's eight corners (top and bottom) and welded to corner post and rail. The corner fitting (or corner casting) has apertures allowing the container to be handled, stacked and secured.

Corner fittings may be repaired ONLY by

replacement

Corner protection plate (corner gusset)

An additional plate attached to the container roof, adjacent to the top corner fittings, providing protection from misuse of spreader equipment.

Corner protection plates and header extension plates // Repair if

Any deformation such as bend, bow, dent, etc. (IF more than 40 mm (1-9/16 in) below top surfaces of top side rails)

Cracked

Having a break which penetrates the entire thickness of material and causes it to split slightly. In addition, if a weld between two panels or two different metal components has any break in it, even if the entire thickness of the weld material is not penetrated, that weld is considered "cracked".

Crossmember

A transverse component, other than a sill, tunnel bolster or forklift pocket, attached to the bottom side rails and supporting the floor

CSC (International Convention for Safe Containers, 1972)

An international treaty which entered into force on September 6, 1977, requiring safety approval of all containers, the affixing of a safety approval plate ("CSC plate"), inspection at intervals thereafter, and maintenance in safe condition. The CSC is administered by individual governments with the advice of the International Maritime Organization (IMP), a branch of the United Nations.

Cubic Capacity (Cube)

Useable internal load-carrying space within a container, expressed in cubic feet, cubic meters (m3), gallons or liters. Also called "available cube" or simply "cube".

Customer marks that would not be acceptable for shipment of dry-van or open-top cargo.

DV & OT = Spot clean/paint

Customs Plate

A marking plate permanently affixed to the container which indicates compliance with the Customs Convention on Containers

Customs Seal`

A temporary device fitted to the container that prevents the container from being opened without detection

The damaged top rail X below is to be repaired by sectioning. Care must be taken to ensure that damage area X is NOT cut less than a minimum of

A. 50mm (2 in)

B. 100mm (4 in)

C. 150mm (6 in)

D. 200mm (9 in)

C. 150mm (6 in)

Damaged ventilators are usually replaced with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ covers, regardless of the original material.

plastic

Damage to steel components that cannot be repaired by straightening, welding or straightening and welding can, in many cases

be repaired by installing an insert or, in the case of panels, an overlaying patch

Damp oil stain that is transferable and that would damage dry-van general cargo but not open-top cargo.

DV = Hot high-pressure wash // OT = no repair

Decal

A self-adhesive, non-metallic marking permanently attached to the container

Deflection Damage Criteria

Deflection criteria are commonly used for damages such as dents or bows.

This is the most common type of damage inspection criteria. It is based on setting a maximum dimensional limit on how far a component's surface can be permanently deflected from its original position. If the deflection is greater than the limit, repair is required.

Delamination is a failure in glue line(s) of a laminated plank and require repair only if they \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

leak light or result in loose pieces of flooring. (always considered wear)

Dent

A localized depression in a panel or structural member made by pressure or an impact or blow that causes an abrupt change in the shape of a component over a limited area of the component

Dents to panels may be straightened

without heating by using a jack; a flat hammer or mallet and backing plate

Door assembly, including hardware // Repair if

Holed, cut, torn or cracked; broken component and/or weld

Missing or loose parts or fasteners

Any deformation such as bend, bow, dent, etc (If door operation or securement is impaired)

Seized, frozen or stiff (If door operation or securement is impaired)

Not light-tight

Door Gasket (door seal)

A piece of rubber or other flexible material attached to the door edges in order to provide a waterproof seal between the door and the end frame of the container.

Door gaskets // Repair if

Loose or missing

Cut, torn, cracked or burned (If not light-tight or if the outer lips of the top horizontal gaskets are not fully in place and seated against the header)

Door gaskets that are cut may be repaired by using **cyanoacrylate** adhesives to bond together the cut edges of the gasket, PROVIDED

(I) No gasket material is missing

(II) The cut edges of the gasket mate together

(III) The cyanoacrylate adhesive will fill voids that exist at the joint

A. I only

B. I and II only

C. II and III only

D. I, II and III

B. I and II only

Door headers and sills // Repair if

Interference with door closure, securement and/or not light-tight

Door panels // Repair if

Any deformation such as bend, dent, etc (If internal cube intrusion is greater than 35 mm (1-3/8 in))

Dowels

Round wooden pins that fit tightly into holes in wooden boards

Dry adhesive that would not be acceptable to a shipper or lessee fro shipment of cargo.

DV & Ot = Power grind/paint

Dry dust, carton dust, sand, dirt and depot yard dust that is transferable and unacceptable to shippers or lessees for dry-vans and open-tops.

DV = Sweep // OT = Sweep

Dust and dirt on walls that will damage dry-van general cargo but not open-top cargo.

DV = Washing // Ot = No Repair

Each of the following components has a single 30 mm (1 1/4 in) dent. Which one requires repair?

A. Corner post

B. Door panel

C. Roof bow

D. Bottom side rail

A. Corner post

EIR

An abbreviation for "Equipment Interchange Receipt." A document executed at the time of delivery, which attests to the interchange of a container, and which is normally signed by both parties.

End Frame

The components at either end of a container consisting of two corner posts, top and bottom corner fittings, header (top end rail) and sill (bottom end rail). The end frame components include the end frame plus the front wall and the doors, including all door hardware.

Envelope Damage Criteria

Envelope damage criteria are commonly used for out-of-ISO and into-cube damages.

Envelope damage criteria are based on allowing a component to deflect any amount provided the component stays within a reference plane or between a set of reference planes. The reference planes are usually planes that form an envelope on one or both sides of the component. The reference planes are often not physical surfaces on the container. Instead, they are virtual planes positioned in space a specified distance from physical surfaces on the container. When a component is permanently deflected beyond the reference plane, repair is required.

An Equipment Interchange Receipt (EIR), based on an inspection with no damage found, can be evidence of a container's compliance with:

A. Australian Timber Component Treatment Regulations

B. Convention for Safe Containers (CSC) regulations through the ACEP Program

C. Transport under custom's seal (TIR) regulations

D. International Standards Organization (ISO) CEDEX codes regulations

B. Convention for Safe Containers (CSC) regulations through the ACEP Program

Evidence of possible toxic or hazardous material regardless of quantity or transferability.

DV & OT = Container may be rejected at the gate, at the discretion of the depot operator. Otherwise, the container must be segregated and the re-delivery agent contacted to establish the type of contamination present and the appropriate action required.

Excessive amounts of label material remaining (as evidenced by residues from label outer surfaces) that would not be acceptable for shipment of dry-van open-top cargo.

DV & OT = Scrape

Excessive amounts of label residue remaining that would not be acceptable for shipment of cargo.

Reefer = Scrape/spot clean

Fasteners should fit in a hole made by a

6 mm (1/4 in ) drill bit

Flange (bottom and top)

A protruding edge used to strengthen a structural member by resisting tension or compression forces. The bottom flange is below the vertical portion (web) of the member and the top flange is above the web.

Floor and center rail // Repair if

If light leaks, regardless of diameter or hole

Broken component and/or weld; missing, loose or protruding fasteners

Light leakage gaps between boards

Floor screw corrosion that will not damage dry-van cargo or open-top cargo.

DV & OT = No repair

For front corner post inserts

there are no maximum height limitations (full-height front corner post inserts are acceptable)

Forklift pocket

A special transverse component on the base structure of most 20ft and some 40ft containers enabling a forklift truck to insert tines in order to lift and handle the container. The forklift pocket is enclosed with a top plate, sides, and a bottom plate ("strap") at each end of the pocket entrance. It extends through the bottom rails, forming an open "pocket" inside the rails.

For which of the following repairs does IICL recommend the use of pre-blasted steel?

A. Sectioning of a tube-type top side rail 3 m (10 ft ) in length

B. Replacement of a side panel 122 x 244 cm (4 x 8 ft)

C. Inserting of a front corner post 182 cm (6 ft) in length on a high-cube container

D. Full exterior container refurbishment

B. Replacement of a side panel 122 x 244 cm (4 x 8 ft)

Fractures, cracks, cuts or tears in a component or a weld joining components can

be repaired by welding or a combination of straightening and welding;

limitations:

Maximum length of any crack fracture, cut or tear may be welded is 200mm (8 in) and the maximum width of separation is 5mm (3/16in)

Frame

The peripheral structural assembly, including corner fittings, rails and/or posts, around one face of the container

Free hinge pins by lubricating the hinge with

penetrating oil

Front and rear headers // Repair if

Any deformation such as bend, bow, dent, etc (IF more than 35 mm (1-3/8 in) deep, EXCEPT on a header extension plate or corner protection plate

A front corner post insert must be at least

150 mm (6 in) in length, unless it terminates at a corner fitting

A front corner post insert that would terminate within 300 mm (12 in) of a corner fitting

must be extended to the fitting, and must be at least 200 mm (12 in) in length

Front corner posts (opposite from the door end) are shaped differently from the rear corner posts (at the door end) in order to

maximize cubic capacity of the container and the width of the door opening

Front panels // Repair if

OUTWARD deformation, such as bend, bow, dent, etc. (If more than 15 mm (9/16 in) measured on an inside recessed corrugation)

Gooseneck

On a drop-frame chassis, the upper level of the front of the chassis, together with the structure connecting it to the lower level behind it. The gooseneck rails normally fit into a tunnel recess of containers so constructed.

Gouge

A cavity in the surface of flooring with material scooped out. The width of the gouge is the smaller horizontal direction, regardless of the orientation of the gouge

Gray areas, examples of such abusive or improper action include:

Movement by improperly secured "aggressive" cargo, such as scrap metals which may cause scratches on interior walls

Loading of corrosive chemicals or noxious materials

Overloading, causing floor damage

Gusset

A flat insert used to strengthen steel components

Gusset

Reinforcement plate normally welded in place

Hat Sections

Steel profiles in the shape of a hat or the letter Omega

Hazardous Cargo Labels

Labels which are affixed to a container to warn of the presence of hazardous cargo inside during shipment. A list of required labels appears in the IMDG code. These labels are required by the IMDG code to be removed from a container after the cargo has been discharged.

Holdback (tieback)

Piece of hardware or nylon rope to hold door in the open position when loading or unloading

Holes or cuts in tarpaulins may be

patched unless it would be less expensive to replace the tarpaulin and/or the owner requires replacement for other reasons

Holes up to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in diameter may be repaired by inserting a round hardwood dowel into the hole and securing it into place with glue.

13 mm (1/2 in)

Horizontal top gaskets are considered to be watertight if they

do not leak light AND the outer lips of the gaskets are fully in place and seated against the header.

If the parent metal is unknown when welding up a crack

use welding material with a minimum yield point of **46 kg/mm (65,000psi)**

If the type of material in the corner post is not known, the replacement steel must be

high-tensile carbon or Corten steel of the same or greater thickness with a minimum yield point of **34 kg/mm or 50,000 psi**

Infestation such as insects, rodents, etc., which will damage dry-van and open-top cargo.

DV & OT = Hot high-pressure wash

Inserting

To restore a damaged component to its original size, shape and strength by cutting out a portion of the component that is less than the full-profile section and welding or fastening replacement material of the original size, shape and strength in place. The replacement part itself is called an insert

Inserting is not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the inner profile of a rear corner post

permitted

Inserts must be fitted flush with the existing component and should be fabricated to allow **no more than**

2 mm (5/64 in) clearance between adjoining surfaces

The inside of the cover (ventilator) is fitted with horizontal projections called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to permit air interchange while preventing the entrance of water.

baffles

In the Guide for Container Damage Measurement, IICL recommends a standardized procedure using set "reference dimensions" to determine if panel bows exceed ISO tolerances plus an additional IICL tolerance. The reference dimension for an outward bow in a side panel is

A. 5 mm (3/16 in)

B. 10 mm (3/8 in)

C. 13 mm (1/2 in)

D. 18 mm (11/16 in)

D. 18 mm (11/16 in)

A "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_" is defined as the outermost laminate (or outer 3 PLY pack of laminates) on either the top or bottom surface of the plywood.

surface veneer

ISO

Abbreviation for the International Organization for Standardization, an international standards-writing body composed of national standards associations. Headquarters are in Geneva, Switzerland. Technical work is carried out by technical committees (TC's), such as ISO/TC104 (freight container committee).

ISO Markings

Markings placed on a container in conformance with ISO standards

J-bar

The portion of the outer post that extends from the rearmost edge of the rear portion of the corner post and that encircles the door hinges

J-bars // Repair if

Any deformation such as bend, bow, dent, etc. // Door must be able to open fully (270 degrees)

Keeper

Locking bar cam retainer

Knot

A circular, darker cross-section of wood with a grain running differently from that of the wood in which it is imbedded

Lashing Fittings

Cargo tie-down fittings for the attachment of straps or other devices to restrain movement of cargo

Lining (dry van)

Plywood or other material attached to the interior side and end walls and/or roof to protect the cargo

Locking Bar Bracket

A device attaching the locking bar to the top and bottom of a door, usually container a bushing

Locking Bar (rod)

The vertical shaft or rod to which the cam locks are fitted. When rotated, the cams may be locked in the cam retainer, forming an integral part of the door frame assembly

Major paint spillage that would not be acceptable to a shipper or lessee.

DV & OT = Power sanding

Marking plates

Durable plates which are permanently fixed to a container, upon which is contained certification or manufacturer's information

Maximum Gross Weight (MGW)

The sum, as certified by a classification society or manufacturer, of the tare (empty) weight (mass) of a container plus the maximum allowable weight (mass) of its contents (payload or cargo)

Metal loss due to corrosion is the

partial or complete removal of structural strength from the metal due to oxidation.

Methods of cleaning flooring (increasing in aggressiveness)

Sweeping

Washing with water

Washing with detergent

steam cleaning

sanding

Mold and/or mildew. ALL organic materials must be removed.

DV & OT = Hot high-pressure wash

Nails protruding above floor which could damage dry-van general cargo and open-top cargo and could impede the safe loading and operation of the container.

DV & OT = Remove nails

Newer containers are generally equipped with\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rather than \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ventilators.

plastic // steel

No insert in the outer profile section of a rear corner post can

share the same horizontal plane as another insert

Non-conforming repair

is a condition resulting from a repair not being performed in accordance with IICL recommendations. Also called "improper repair"

Non-Repair worthy

Damage or wear defects which do not have to be repaired because they are within all criteria limits specified in this Guide.

Non-transferable wall stains that would not be acceptable to a shipper or lessee for shipment of dry-van general cargo or open-top cargo.

DV & OT = Power grind/paint

Odor due to possible chemicals.

DV & OT = Hot high-pressure wash

Of the following conditions in a dry-van container, which one would require cleaning?

A. Raised mud foot prints in excess of what might normally remain after a sweep out

B. Dry dust covering dried floor stains as might normally be found after a sweep out

C. Coffee beans remaining inside the container as might occur after a sweep out

D. Polyurethane beads as might be expected to lodge in grooves between floorboards after a sweep out

C. Coffee beans remaining inside the container as might occur after a sweep out

Organic residue (EX: coffee beans) remaining inside container. ALL organic materials inside the container must be removed.

DV = Scrape/sweep // OT = Scrape/sweep

Organic residues stuck to caulking. ALL organic materials in the container must be removed.

DV & OT = Scrape

Outrigger

A short crossmember connecting the tunnel rail to the bottom side rail

Paint attack as evidenced by bubbling, blistering and/or peeling that would damage dry-van general cargo and open-top cargo.

DV & OT = Blast/ paint

Paint spills that will not transfer to cargo.

DV & OT = No repair

Patches should overlap the existing panel on the exterior by

13 mm (1/2 in)

Patching

The same as inserting, except that the replacement material is slightly larger than the material being removed, and its edges overlap the parent material. The replacement itself is called a patch. (patching is only allowed for panels, and may substitute for inserting those components. For all other components, patching is not permitted unless otherwise stated in this manual)

Payload (net weight)

The total weight (mass) of the corgo or contents of the container, including removable cargo securement devices, dunnage, etc., but excluding the container and permanently installed fittings. It is also referred to as the net weight (mass) of the container.

Pin (Hinge Pin)

Hinge component attaching the hinge blade to the lug

Plank

A solid or longitudinally laminated hardwood or a softwood board

Plank flooring // Repair if

Cracked or split (If light leaks)

Polyethylene beads remaining on floor surface and stuck to caulking that would impede the safe loading and operation of ca container.

DV = Sweep // OT = Sweep

Pooled oil on floor surface that would damage cargo and impede the safe loading and operation of the container.

DV = Spot clean // OT = Spot clean

Poorly-straightened panel damage should be reworked if any of the following conditions exists:

No attempt was made to restore the original corrugated formed edges.

No attempt was made to flatten the surfaces between the formed edges.

There is a complete loss of the original profile shape.

Surface preparation and painting were done so poorly that corrosion has occurred.

Porosity

Welding defect composed of voids, holes, pin holes, pores, etc., caused by contaminants at the time of welding

Rain Gutter

Part of, or attachment to, rear (door) header to divert water away from the door entrance

Rear corner posts // Repair if

Any deformation causing interference with door operation, securement or light-tightness

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ repair a tarpaulin by sewing on a patch.

Do not

Replacement

To remove an entire damaged component and weld or attach a complete new component of the original size and strength. (In some cases, a different shape may be permitted)

Replacement planks and plywood boards, as well as undamaged remaining planks or boards, must cover

At least three crossmembers or forklift pocket sides

Rework of previously straightened panels is required when

A. evidence of considerable hammer marks is present

B. the owner's policy requires repair

C. the straightened area is an incorrect color

D. original profile of the corrugation is changed

B. the owner's policy requires repair

Roof panel insert, patch and replacement material should be of

Corten steel unless the original material is known to be different and the owner consents to use other material. If corten steel is not used, use 2 mm (14 gauge) thick replacement material

Roof panels, header extension plates, and corner protection plates // Repair if

Holed, cut, torn or cracked; broken component and/or weld

Rust marks due to abrasion by non-stainless materials that would not damage cargo.

Reefer = No repair

Scratches due to cargo loading that would not be acceptable to a shipper or lessee for shipment of dry-van general cargo, but would be acceptable for open-top cargo.

DV = Grind/paint // OT = No repair

Sealant exposed to cargo-carrying surfaces should not be of butyl material, but rather of

urethane or chloroprene material suitable for contact with cargo

Sectioning

To restore a damaged component to its original size, shape and strength by cutting out a portion of the component that extends through its full profile and welding or fastening replacement material of the original size, shape and strength in place. The replacement part itself is called a section

Sections through the complete profile of the C-channel forklift pocket side are

not permitted

Side and front panels are the thinnest components of the container, yet they must be able to withstand forces of

60% and 40% of payload, respectively

Side panels // Repair if

OUTWARD deformation, such as bend, bow, dent, etc. (If more than 30 mm (1-3/16 in) measured on an inside recessed corrugation)

Spillage on exterior that attacks paint and that would not be acceptable for shipment of dry-van and open-top cargo.

DV & OT = Blast/paint

Spillage on exterior that renders ISO markings illegible and would not be acceptable for shipment of dry-van or open-top cargo.

DV & OT = Spot clean

Split plank with no sign of impact or overloading present.

Repair is not necessary unless the plank leaks light or is loose.

Stains and discoloration of interior linings.

Reefer = Hot high-pressure wash

Stains and marks on walls due to tire cargo that are not acceptable to shippers or lessees for shipment of dry-van general cargo or open-top cargo.

DV & OT = Power grind/paint

A steel corner fitting is being replaced. To ensure better weld penetration, IICL recommends that the edges of parts adjacent to the corner fitting be ground to a minimum bevel of?

A. 30 degrees

B. 45 degrees

C. 55 degrees

D. 60 degrees

B. 45 degrees

Sticky adhesive that would damage cargo.

DV & OT = Spot clean

Stitch or Skip Weld

A linear series of weld beads, each of which is approximately 25 mm (1 in ) or more in length and separated from the next bead by an unwelded length.

Straightening

To mechanically or hydraulically restore a damaged component as close as possible to its original shape without removal of any portion of the component (although in certain cases adjacent components may have to be unfastened from the component being straightened)

Tack Weld

A bead of weld less than 25 mm (1 in ) in length, usually used singly or in combination with other tack welds to hold components in position temporarily prior to permanent welding

Tape remaining on interior surfaces that would not be acceptable for shipment of cargo.

Reefer = Scrape/spot clean

Tape remaining on walls that would not be acceptable to a shipper or lessee for shipment of cargo.

DV & OT = Scrape/spot clean

Tar stain that would damage cargo and impede the safe loading and operation of the container.

DV = Scrape/spot clean // OT = Scrape/spot clean

TCT

An abbreviation for Australian Timber Component Treatment, an immunization of exposed wooden components in compliance with Plant Quarantine requirements of the Australian Department of Health

TIR (Transport International des Routiers)

Road transport approval under regulation of customs authorities of different nations, allowing movement of goods across international frontiers, usually without opening containers in the process. In the USA, where TIR approval is not enforced, the initials TIR are often used interchangeably with EIR to refer to an interchange report

The top of a replacement plastic ventilator should be centered what distance from the top side rail?

A. 50-55mm (2-2 3/16 in)

B. 70-75mm (2 5/8 - 3 in)

C. 100mm (4in)

D. 150mm (6 in)

A. 50-55mm (2-2 3/16 in)

Top side rails // Repair if

Any deformation such as bend, bow, dent, etc..

Transferable burn marks on floor that could damage dry-van cargo and are not acceptable to shippers or lessees for dry-vans, but are acceptable for open-tops.

DV = Power sanding // OT = No repair

Transferable burn marks on floor that will not damage dry-van general cargo or open-top cargo.

DV & OT = No repair

Transferable, damp, liquid stain that would damage dry-van general cargo but not open-top cargo.

DV = Cold high-pressure wash // OT = no repair

Transferable dry dust, carton dust, sand, dirt and depot yard dust exceeding what would normally remain after a sweep out and that would be unacceptable to shippers or lessees for dry-vans but acceptable for open tops

DV = Sweep // OT = no repair

Transferable or non-transferable dry dust, carton dust, sand, dirt and depot yard dust that is not in excess of what would normally remain after a sweep out and that would not damage dry-van general cargo or open-top cargo.

Dry van? Open Top?

Both DV and OT // no repair // no cleaning method

Transferable stains that would damage dry-van general cargo but not open-top cargo.

DV = Spot clean // OT = No repair

Transverse

Placed or running crosswise, perpendicular to longitudinal; aligned across the width of a container

Tunnel Bolster

The crossmember supporting the rearmost portion of the gooseneck tunnel

UIC (Union Internationale des Chemins de Per)

Organization primarily of European railroads which establishes standards for container transport on member railroads

Undercoating

A waterproof material brushed or sprayed on the container underside. It protects the steel members from corrosion and waterproofs wooden flooring

(understructure) When installing screws in a replacement understructure component, use

zinc-plated or other similarly treated self-tapping screws with the same diameter of screw head and shank as the original

The use of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is not recommended by IICL as a method of repair for wooden floor repairs.

wood filler

Ventilator

A device permanently attached to the side (or front) panel of a container which allows the exchange of air between the interior and exterior of the container

Ventilator covers // Repair if

Broken, missing, etc. (If cracked or broken in the enclosed, baffled area of the ventilator)

Ventilator Panel

The portion of the side (or front) panel located behind the ventilator

Vertical side gaskets and horizontal bottom gaskets are considered to be watertight if they

do not leak light when the doors are closed and locked.

Web

A metal sheet or plate connecting together the flanges of a structural member

Welding

To fuse two separated pieces of metal together using heat and a third piece of metal

Welds to corner fittings should be made with?

A. CO2 semi-automatic welding

B. Low hydrogen welding rods

C. Fully automatic welding

D. Arc welding

B. Low hydrogen welding rods

Wet, standing and pooled liquid that would damage cargo.

DV = Hot high-pressure wash // OT = Hot high-pressure wash

When cutting out the damage

the cut should extend beyond the damaged area to allow insertion of wedges between top rail and roof panel

When heat is used to straighten a corner post, the damaged area should be heated no more than

A. 550 C (1022 F)

B. 650 C (1200 F)

C. 750 C (1300 F)

D. 850 C (1560 F)

B. 650 C (1200 F)

When installing a narrow ventilator,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ should be drilled; the panel insert must be left \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

no holes // blank

When installing a wide plastic ventilator drill \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the panel insert

27 holes, each 10 mm (3/8 in) in diameter

When must a reference line extend the full length of a bottom side rail?

A. When there are two or more areas of damage on the bottom side rail

B. When there is a sharp bend in the bottom side rail

C. When there is a bowing over the entire bottom side rail

D. When there is additional damage to the bottom side rail so that the reference line cannot be positioned over the ends of the damage

C. When there is a bowing over the entire bottom side rail

When repairing flooring, the method of repair should be the least aggressive necessary to correct the damage. The general order of aggressiveness, from least to most, is:

-Cleaning

-Dowel repair

-Sectioning or partial replacement

-Complete replacement of floor

Where should the reference line be placed in order to determine repairworthiness of a crossmember flange that is bent upwards?

A. Along the inside lower formed edge of the crossmember

B. Spaced out from the crossmember web

C. On the outermost flange surface along the full crossmember length

D. No measurement is necessary

D. No measurement is necessary

Which of the following components is sometimes placed longitudinally in the container to support plywood flooring?

A. Transverse bow

B. Gusset

C. Hat section center spacer

D. Threshold plate

C. Hat section center spacer

Which of the following defects requires repair?

A. A loose door gasket

B. A bent J-bar that does not affect door operation

C. A dent 13mm (1/2 in) deep on the door sill

D. Four dents, each 11mm (7/16 in) deep, on contiguous outboard corrugations of a roof panel

A. A loose door gasket

Which of the following is an example of a plank floor condition requiring repair AND which should be considered as damage?

A. A crack or split with no evidence of impact, which leaks light

B. A crack or split with a sign of impact which does not leak light

C. A crack or split, adjacent to a dented bottom rail, which leaks light

D. A crack or split, with no evidence of impact, with a loose piece

C. A crack or split, adjacent to a dented bottom rail, which leaks light

Which of the following is NOT a transverse structural member of the container?

A. Front sill

B. Tunnel rail

C. Rear header

D. Crossmember

B. Tunnel rail

With wooden flooring, height variance between adjacent planks or panels is limited to

A. 5 mm (3/16 in)

B. 10 mm (3/8 in)

C. 15 mm (9/16 in)

D. 20 mm (3/4 in)

A. 5 mm (3/16 in)

Wooden flooring (Different heights or surfaces) // Repair if

IF difference is more than 5 mm (3/16 in)

Wooden flooring (Gouges) // Repair if

IF more than 15 mm (9/16 in) deep OR more than 5 mm (3/16 in) deep throughout a width of more than 150 mm (6 in) of the gouge

Wooden flooring // Repair if

Delamination or splinters

DOWNWARD deformation such as a bend or bow (IF more than 15 mm measured transversely at the floor screw center line)