



Glass Processing Technology
Prof. Ramu
Department of Civil Engineering
Indian Institute of Technology, Madras

Lecture - 49
Quality Testing Part I

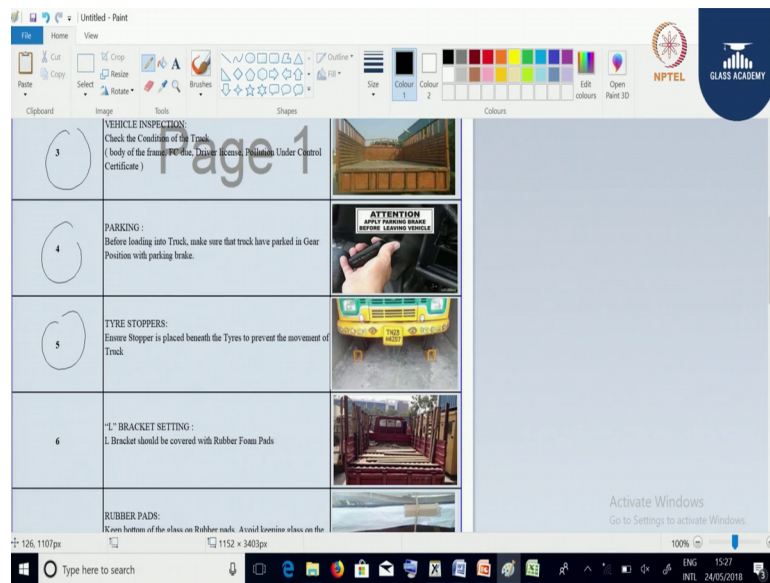
Now, we will see in the standard operating procedure for the logistics or dispatch department.

(Refer Slide Time: 00:36)

STANDARD OPERATING SYSTEM			
DOC NO-FUSO-BW/DS/03		REV NO-4.0	DATE -01.01.2017
DEPARTMENT	DISPATCH	MACHINE	SAFE TRANSIT
SNO	PROCESS		PICTORIAL VIEW
1	PERSONAL PROTECTIVE EQUIPMENT: Gloves are mandatory to protect personnel from injuring their hands, while handling the glass. Gloves also ensure that no finger marks appear on the coated side of glass. If finger marks are left on the glass, they will leave an imprint Arm guards are mandatory as glass may cut and injure the forearm.		
2	Safety shoes must be worn by all the loading personnel.		
VEHICLE INSPECTION:			

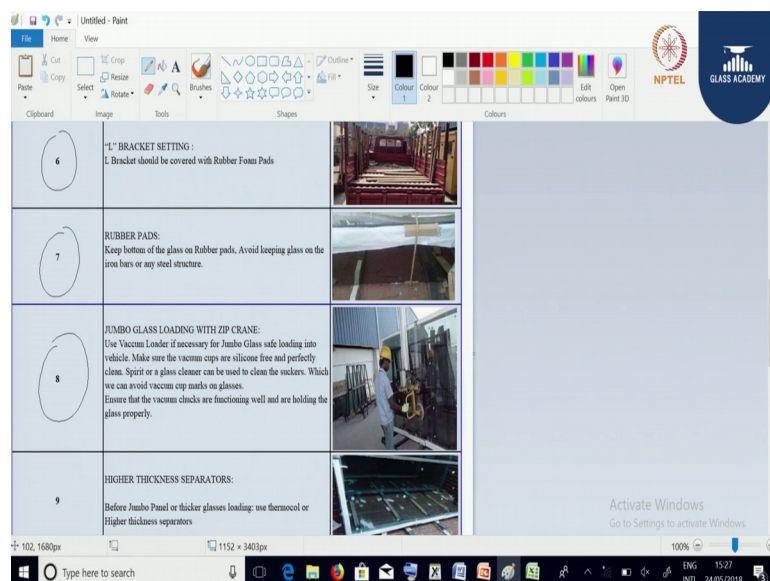
Here if you see first one is we need to understand the personal protective equipment that is applicable at the time of loading. You can see here helmet, armguards, shoes that are compulsory mandatory at the time of glass loading.

(Refer Slide Time: 00:49)



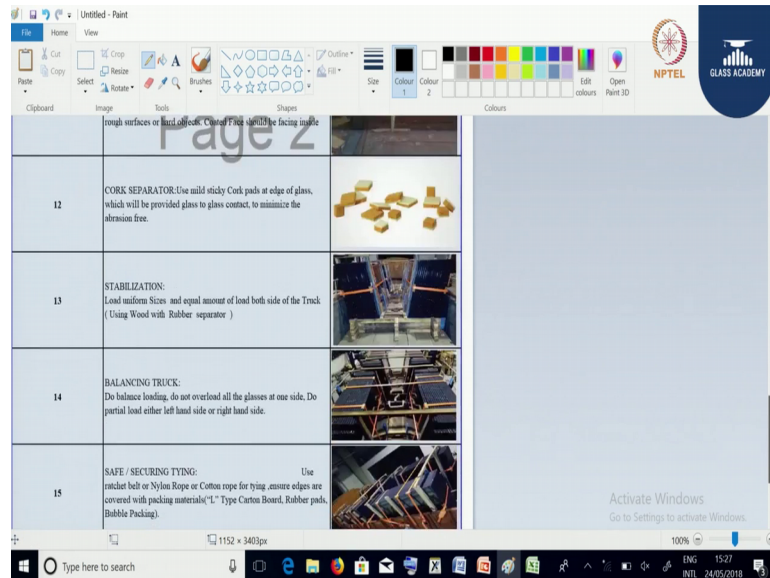
Next, we need to understand the vehicle inspection; check the condition of the truck, body of the frame, (Refer Time: 00:56), driver license, pollution under control certificates, all these things we need to check before starting the loading. Next during the loading when we are about to start the loading the vehicle to be parked and before loading into truck make sure the tractor have parked in a gear position with parking break. The tyre stoppers always should be kept so that, there is a no movement of the vehicle.

(Refer Slide Time: 01:20)



L bracketing system should be used to have the glasses at 3 to 7 degree angle. Rubber pads to be used as a supporting material, jumbo glass loading to be always done with zip cranes.

(Refer Slide Time: 01:32)



And there should be a proper interleaving if required thermocol is required. For a higher thickness glass you can see here the thermocol's are used on the periphery of the gauges to avoid the direct contact and to overcome the rubbing issue. And we should make sure that the glass is stacked uniformly with 3 to 7 degree angle. Edge production should be always there with the cartoons while applying the row. Always there should be an interleaving between the glass, like separators, like rubber separators or cork pads.

Stabilization; you load uniform sizes equal amount of load both the sides of the truck; means the truck should have uniform loading, like left side to right side again left side to right side like that. And next thing if you see that there should be a balancing of the truck. You should not keep loading the glasses on one side of the truck there should be always balancing of the truck, you can see in the figure how the balancing has been done.

Safe and secure tying ratchet belts or nylon rope or cotton rope for tying ensure that cover the pack safe securing or tying. Use ratchet belt or nylon rope or cotton rope for tying the glasses you can see in the figure. And the last one is rainwater production always the truck should be covered with a tarpaulin during the raining season.

(Refer Slide Time: 02:57)



This is the warehouse area where we are going to stack different types of glasses like clear glass, reflector glass, low e glass, pattern glasses. You can see all the racks are all the sheets and cases are placed in rectangle L angle, you can see L angles there. So, you can see here this is a low e product, this is another low e product, this is another low e product, another low e product; these are all different low e products that are stacked. You can see this is one type of interior product here and you can say again this is a low e product; this is a bronze 5 mm bronze reflective product.

Now, in this warehouse area you can find different type of glasses based on the customer requirement. You can see entire this thing, you can find different types of glasses, with this different thicknesses, with different sheet sizes and different colours. Different types of glasses, different thicknesses, different sheet sizes, and different colours. And always the glasses are stacked at 3 to 7 degree angle.

(Refer Slide Time: 04:32)



Loose glass lifting where with the help of EOT crane, spider band, and slinks we are lifting the glass from one place to another place; lifting of the glass basically; now they are going to lift the box packing, you see they are hanging a slinks to the box with the help of EOT crane they are hanging the slinks. And they are making sure that the belt is clogged properly with the help of forward, backward, right, left movements in the EOT crane setup they are moving the glasses from warehouses to autoloader section.

Now, the box is positions at auto station for pickup through autoloader. If you see this is the tag given by the supplier through this tag you can understand the glass is 8 mm thick and the specification is ST 120; which is the reflective glass. And the sheet size is 3210 and 2250 and inside the box there are 17 volumes are there. And in order to identify the box separately (Refer Time: 07:58) will be giving with the tag number this is the tag number. So, this tag number is the key that will be allowed to have the tracing of this box.

Now, this is a sheet lifter if you see in order to lift a single or multiple sheets we can use this set up. So, you can see now they are lifting the single sheet. Now it is going to autoloader section and ready for cutting. Now in this case you can see they are lifting multiple sheets.

Fine (Refer Time: 10:48).

Thank you so much.

No my pleasure, just we are starting from warehouse.

Ok.

Where we are going to see how we are going to lift single sheet multiple sheets and boxes.

Ok.

Three things we are going to see.

Storage also cover know.

Yes that also.

Then when resealing also how to take up the.

Yes repacking.

Repacking and (Refer Time: 11:20) aluminium funnel how to.

Yes

(Refer Time: 11:24).

So, you can see now they are lifting a set of glasses or glass sheets with the help of spider bar and the slinks hanging on two sides of the bar. So, this setup we use to lift a bunch of glasses. Now from the warehouse area now it is getting placed in the autoloader. Now they are positioning the sheets into the autoloader section that is station. Where they are with the help of autoloader they are going to lift (Refer Time: 12:37) sheet after (Refer Time: 12:40).

This is identification tag that is given by the supplier if you see this is the sengobben make and glass is clear glass the thickness is 12 mm the sheet size is 3660 by 2770 and the volume is 8. And the identification of this particular case is done through the tagging, that is what given by the sengobben. So during the process if at all any deviation, we can trace with the help of this tag.