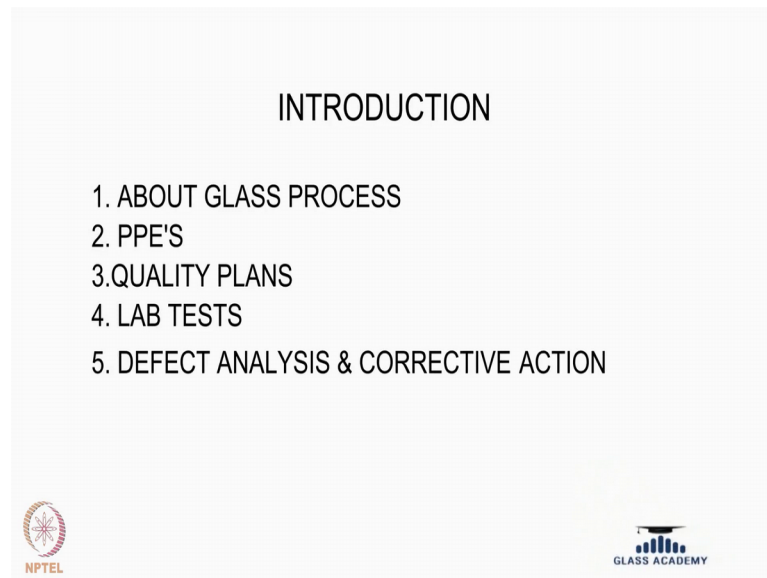


Glass Processing Technology
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Lecture - 12
Process Flow – PPE

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Hi, this is Ramu from Fuso Glass India Private Limited. So, today we will be covering the topics which are related to glass process, lab tests and what are the quality standards that we follow. So, basically we will be going through the glass process what are the PPE's that are required to handle the glass, what are the quality plans that we the that a glass goes, what are the lab, lab tests that we follow, and what are the various defects that are going to arise during the process, and how we are going to overcome.

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ABOUT GLASS PROCESS

1. Cutting
2. Grinding
3. Fabrication
4. Ceramic Printing on Glass
5. Heat Strengthened Glass
6. Toughened Glass
7. Heat Soak
8. Lamination
9. Insulating/Double Glazing Unit
10. Final Product Dispatch



So, first we will discuss about what about glass process. So, if you see process, what do you mean by process, we will be basically taking the raw material from the supplier in the form of sheets, then we will be doing process and we will be given to our customers or end users. The process covers cutting, grinding, fabrication, ceramic printing, heat strengthening, toughening, heat soaking, lamination, insulating or double glazing then final product will be dispatched to the customer.

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SAFETY EQUIPEMENTS WARE HOUSE

HELMET 	RUBBER GLOOVES 
ARM GUARD 	SHOE 



Now, we will be understanding what are the different PPE's required to handle the glass during process. So, if you see the glass handling starts from warehouse, so the warehouse persons will be are basically handing handling the glass sheets, what we get from the supplier. So, he requires a helmet, rubber gloves, arm guards and a safety shoe, then the glass whatever has been loaded in the warehouse that will be going to the cutting area, where the glass will be cut as per the customer requirement.

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Here the PPE's required in cutting department or apron, arm guard, rubber gloves and again safety shoe.

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Once the glass is once the glass cutting is over, it has to go either to a seeming rough grinding finishing or a double edged crystal polish finishing. If it is a crystal polish and finishing where the edges are exposed, the it goes to double edging machine and the PPE's required a double edging machine are helmet, rubber gloves, shoes arm guard. If you see the same thing double edged unloading, PPE's required our helmet, cotton gloves; if it is a performance glass, rubber gloves, shoes and arm guards.

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And when we see the other part of grinding where the edges are closed or covered that is known as rough grinding that we are going to achieve through seeming machine, the PPE's required in this particular process are goggles, arm guard, rubber gloves, nose mask and safety shoe. Once the glass has been cut grind grinded it goes to drilling section or fabrication, if at all the glass requires fabrication work. The PPE's required in fabrication are goggles, cotton gloves, arm guard, apron, safety shoe.

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Once the glass has been cut grind and fabricated, it goes to washing. The PPE's required in washing are apron, cotton gloves, shoe and arm guard. Whatever we have seen that is known as preprocess activities.

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Next we are going into the main functioning of the process that is the tempering process where the glass gets the strength the tempering loading involves the following PPE's like helmet, shoe, arm guard and cotton gloves if it is a performance glass.

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The same PPE's applied at tempering unloading are cotton gloves, shoe, goggles and arm guard. Goggles are required to avoid any spontaneous breakages during unloading time.

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Once the glass has been tempered, it goes to either lamination or insulation. So, let us take insulating PPE's. It covers helmet, arm guard, shoe, surgical gloves and goggles.

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Next during pasting the PPE's required are apron, cotton gloves, goggles, shoes.

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Next the glass goes to if the glass is under lamination the PPE's required are helmet, cotton gloves, rubber shoe, shoe and arm guard.

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During the assembly area, we require head cap, surgical gloves, apron and nose mask.

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And during the autoclaving, the PPE's required are helmet, shoe, rubber gloves and goggles.

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And at the dispatch area, we require helmet, cotton gloves, shoe and arm guard.

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To work out the maintenance activities, the PPE's required are helmet, lifeguard belt, rubber gloves, shoes and goggles.

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This covers our PPE's required for the glass to undergo process. These are the safety tools PPE's applicable at cutting. This is the cutting. This is the helmet. If you see this is apron, arm guards, rubber gloves and safety shoe.

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Helmet, apron, arm guard, rubber gloves and safety shoes, these are the PPE's required a cutting.

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Summary:

By the end of this video, you have learnt about the:

- Glass process
- PPE's required at various process

