

Glass in buildings: Design and Application
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Lecture - 41
Interior Glazing Applications - Shower Enclosure

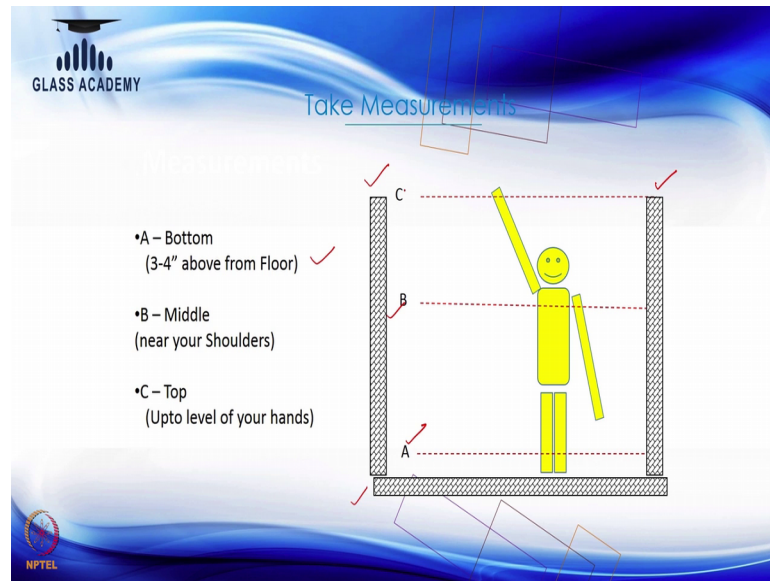
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So firstly these are the tools required for installation purposes. You can see the drill machine is required, drilling bits are there, then laser measurement machine, then plastic hammering, plastic hammer sometime we need to fix the rulers and fix the plastic part into the glass. So, need not to use that wooden or iron metal hammer, you can use this rubberized hammer, then Allen key set is required.

Sprit level of course, this one of the critical part to check the level of glass level of floor. If it is not level again fixing of glass will be very very tough for us. Then vacuum holder how to lift the glass. And then scanning tool there is there any piping inside the tile, because once we are going to drill the hardware it should not drill some inside piping; otherwise it will be hazardous at site. So, we need to take care of the small small things. I will take you how to take measurements.

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So, this is a basic I mean idea of taking measurement, you can see it is a wall to wall. So, this is wall and on the other side there is a wall and this line is showing our floor wall. So, the first thing we need to take measurement from bottom 3 to 4 inches above. Why to 3 4 inches above is; you must have seen that most of the commercial or residential spaces are having tiles, marble or any other surface. There will be some skirting on it, skirting mean to say that tapping which will provide 3 to 4 inches. So, we need to take measurement from top of that lab, top of that ledge why because if glass is coming down then the 3 4 inches will be tough to manage.

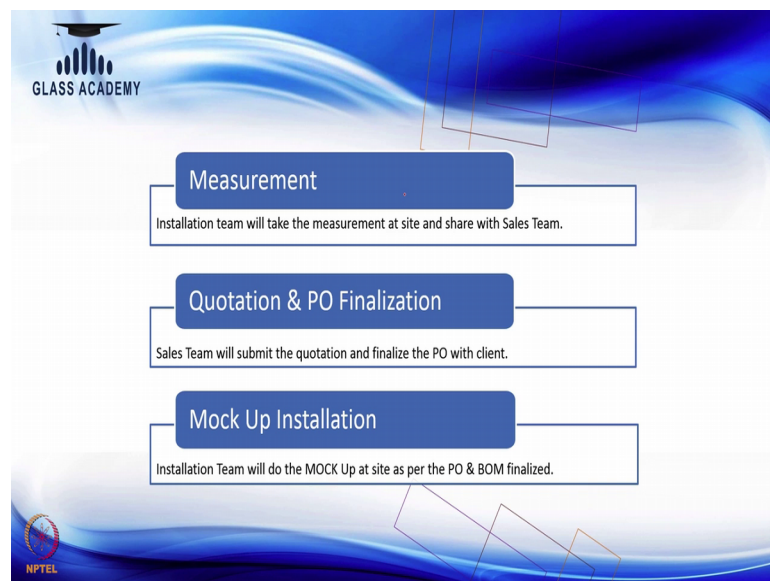
If you are taking measurement from top of that ledge means; if ledge is coming in between you can cut it down. So, that is why we suggest that measurement should be taken in case of a skirting is there 3 to 4 inches above from the floor. So, that is first thing as we have described here, A measurement should be 3 to 4 inches above, then coming to B which should be ideally middle of your body so like here wall to wall. Then C whereas, the maximum level of your hand can be raised so that is C.

So, considering this all A B C the first ideal way to take the measurement is you should go for the minimum size. Why minimum size; if size is less then you can manage it with the help of profile, you can manage it with the help of hinges, you can manage it with the help of filling gap with silicon or some other gap filling material. If height is more then what will happen? You will not be able to cut the glass you will not be able to do

anything with the wall, so that will be critical. So, in general there will be a variation of 10 to 15 mm in between wall undulation.

So, mostly we recommend that you should take the minimum sizes considered for a glass size. So, that your glass will not reject because once the glass is there, as I said earlier you cannot do anything with the toughened glass. So, the ideal way is to take the minimum or you can do the other way you can take the average of all this 3 dimension. Let us say 1000, 1050 and C is coming 1060, so 1000 1300, 50 60 is 110. So, the dimension is coming 3110. So, you can divide it by 3 whatever average coming you can take that or you can go for a minimalistic like 1050. So, there is a gap in between 1050 and 1060. So, you can go for 1050 which will be again good to use for the whole size. So, that is what the idea of taking measurement.

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Once you are done with the measurement you need to do the quotation and PO finalization from the customer end. Once he will give you the quotation and PO finalization we will go for the mock up installation, because most of the category in this commercial places people are looking for mock up that; how glass will appear, how hardware will be appeared, how you can use it, what kind of roller is being used. So, this is the ideal way of going for this business going for this understanding, that first to take the measurement submit your PO and get the quotation and do the mock up. Once mock

up is done again you can showcase the products highlights; so because this is the basic understanding of this business model also.

So, that is how a shower enclosure is being done. So, to sum up let us go through our key learning.

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The slide features a blue background with white wavy lines. In the top left corner, there is a logo for 'GLASS ACADEMY' with a graduation cap icon above it. In the top right corner, the text 'Key Learnings!' is displayed in white. A list of six numbered points is centered on the slide. In the bottom left corner, there is a small circular logo for 'NPTEL'. Faint, overlapping wireframe diagrams of rectangular shapes are visible in the background.

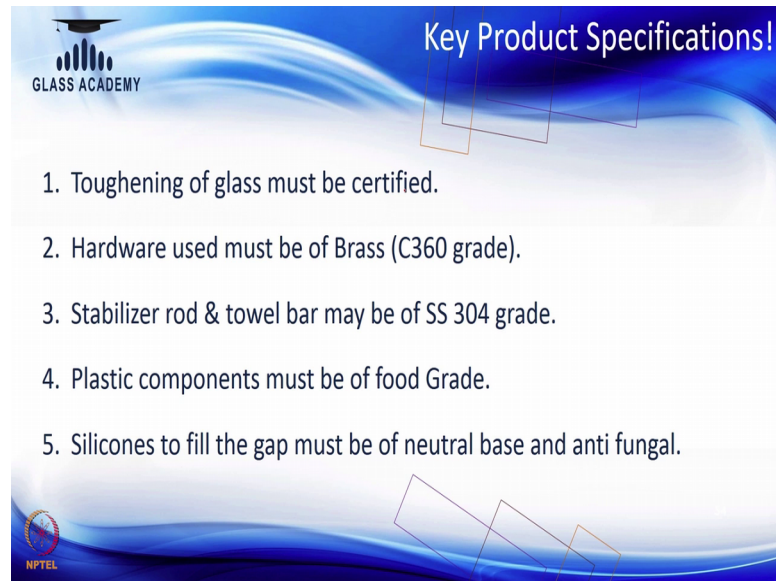
Key Learnings!

1. Shower enclosure is an essential part of bathroom.
2. Helps to maintain hygiene in bathroom.
3. Separates Dry & wet area in bathroom.
4. Helps to utilize more space in your bathroom.
5. Enhances the aesthetic appeal of bathroom.
6. Provide safety as used toughened glass.

The first thing why the shower enclosure is an essential part of bathroom, as we all discussed as we all gone through it. Then it helps to maintain hygiene in bathroom how hygiene is being maintained with the shower enclosure, because the wet and dry area is being separated. Once the wet area is being separated no more unhygienic things in coming in dry area, no moisture, no dirt accumulation, no fungal infection on to the wall, no time harmless nothing is going to happen. So, you are getting a more and more hygienic space in your bathing space.

Then thirdly it separate as I discussed, wet area and dry area in your bathroom giving more space, more and more mobilization, safety in your bathroom. And of course, providing a nice glass as we saw that designer class also tilted, that trusted category, or some other designer category it is going to enhance the aesthetic appeal of our bathrooms as well and though we are using a toughened glass in this category. So, it is very very safe to use it is very safe to go for it.

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The slide features a blue background with white wavy lines. In the top left corner, there is a logo for 'GLASS ACADEMY' with a graduation cap icon. In the top right corner, the title 'Key Product Specifications!' is written in white. A list of five specifications is centered on the slide. In the bottom left corner, there is a small circular logo for 'NPTEL'. Faint, semi-transparent diagrams of a shower enclosure are visible in the background.

Key Product Specifications!

1. Toughening of glass must be certified.
2. Hardware used must be of Brass (C360 grade).
3. Stabilizer rod & towel bar may be of SS 304 grade.
4. Plastic components must be of food Grade.
5. Silicones to fill the gap must be of neutral base and anti fungal.

Considering the key product specification, the first toughening must be certified. Whenever we are going to select a shower enclosure you must be see; go through it that what kind of toughening standard is being followed by the glass supplier, because if glass is not toughened properly then it can hamper the complete safety of the product. So, that is the most critical part of this product vertical that the glass, which is going to be fixed up in shower enclosure must be toughened on standard specifications.

Then coming to the hardware category of course, hardware must be of brass. And brass also the best grade is considered as C 360. So, whenever we are going to consider the hardware material we must look into it that whether the brass which is being used in this category is of which grade. Because if brass is not good what is going to do is; again it will get corroded. The moment it will get corroded it will get loosen right? Because corrosion will happen the metal get start decomposition decaying, the movement metal will start decomposing it will lose this grip on the glass. The moment glass will become loose while opening it may burst. So, that is how the small error is going to make a big damage to our product. So, we must consider first the toughening category and the second the hardware which is being used must be of good grade of brass.

Then the third because we are going to hold the fixed part, with the help of stabilizer rod that must be of SS and that too of 304 grade, because it is going to hold the glass from top. Just to avoid vibration, but of course, finish is also critical part of this category. So,

we should not compromise on this SS category as well. Then the third whatever plastic component is being used in this category must be of food grade. When I see food grade it means it will not pale off, it will not get shade off, it will be white as early as you bought it like new.

Secondly there will not be any pungent smell after a period of time because you know water has got some natural components, it will mix or it will react to the plastic component. If it is not of good quality it will absorb water the water will stick, it will get pale off or it will start giving some pungent smell. So, to avoid that kind of problems in bathroom, to maintain a hygienic bathroom you must see through it the plastic component which is being used must be of food grade quality. And of course, everything is coming in writing nowadays. So, whenever you are specifying a hardware component you must ask whether the brass which is being used in shower enclosure is which grade; secondly, the components SS which is being used of which grade. Third plastic component which grade then same glass is toughened. Please let me know the specification of toughening.

So, the moment you are going to specify this all key specification, there will not be any compromise on the quality part of this product. And you will be having a brilliant product in this category; then coming to the silicone part, like as we discussed there are plastic breeding plastic seal to cover up the gap. Other than that we are using silicones also in floor to avoid water spilling from the fixed part panel. So, whatever silicone being used it must be of neutral base. Neutral base means that it should not emit some pungent smell that is one thing. It should react to water surface, it should not react to glass surface because glass is also you know prone to corrosion all if something is not there if it is acidic, it will start itching, it will start making some other hazardous problem to the glass so it must be of neutral base.

And the second thing is that should be anti-fungal, because after a period of time again because water is there fungal you know formation is very very common when water is there. That is why people look up to this hygienic factor whenever we consider such kind of product. So, it should be a anti-fungal so that no pungent smell will come after a period of time of glasses. So, these are 5 key product specification which we need to must look into it when we are going for a shower enclosure product, when we are going to educate our client on a product category.

Thank you so much. Wish you all the best have a great life ahead.