

Spiral staircase handrail jobsite measurement

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Measurements and Installation of Spiral Staircase Handrails







1. Tools



①Laser level instrument







O Stair plan drawings



2 Tape measure

③Ruler



⑤Utility knife



6Hard cutable paper



8 Level instrument

2. Precautions



1. The measurement environment must be the paving of finished stone.

2. Strictly retain the measurement data, which must be accurate to millimeters.

3. Follow the field completion data, for example, the step height 173mm, 172mm should be recorded truthfully.



3.1. Arc Ladder Masurement - Paper Reference







1. Take a hard paper, the width is not less than 80mm.

2. Use double-sided tape to stick on the stone steps to prevent the paper from moving.

3. Use a utility knife to fit the inside of the stair step, and cut the edge to form a shape. Note that the knife method of the outer edge of the step is a vertical fit.

4. The three sides of A, B, and C are close to the edge, and the line and position of the scene are faithfully copied.

3.2. Arc ladder Masurement - Access



The main job of this step is to go to the step height. Proceed as follows:

1. Place a level ruler on the step and observe whether it is level. If it is not level, you need to raise the level a little to ensure that the bubble is in the center.

2. Use a ruler to take the height.

3. Record the next step on the ruler.

4. The arc ladder measurement includes up to 3 steps of the straight ladder.



3.3. Arc ladder Measurement - Dotting and Review



1. Take 2 dots on the first paper card, about 10cm apart.

2. After following the operations in 3.1-3.2, use a ruler to link these points correspondingly.

3. Draw a straight line between two points. The two adjacent lines should be on a straight line. Check with a laser level instrument.

4. After 5 steps, recheck with a laser level instrument. The sum of the heights of the past 5 steps should equal the total height.

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4.1. Straight Ladder Masurement - Access





1. When measuring straight ladders, the method must be consistent with 3.2, and the data must be recorded when itl is completely level.

2. Straight ladder measurement needs to measure the outer drift size, and the recording method is: Height \boxtimes Depth \boxtimes Outer Drift.

4.2. Straight Ladder Measurement-Schematic Diagram of Measurement Location



The data of straight stairs includes five:

- 1. Step width
- 2. Height of ascending surface
- 3. The outer drift size of the bullnose
- 4. Total oblique length
- 5. Total vertical height



4.3. Straight Ladder Masurement - Slope Length



1. After all the data is recorded, the length of the slope must be measured again.

2. Measure from the first straight ladder to the last straight ladder. Contains 3 straight ladders that have been measured on arc ladders.



5.1. PlatformMasurement - Straight Edge Masurement



1. Measure the position of the platform railings, and directly measure the external dimensions and the height and thickness of the stone platform part in a straight line shape.

2. The connecting part of the straight line and the arc needs to increase 30cm, because the cutting requirements of the factory are not known during the measurement.



5.2. Platformmeasurement - Arc Measurement



1. When measuring the arc edge shape, it is necessary to use paper to fit together, cut out the shape, and release the plane shape.

2. When cutting, you need to cut out the entire thickness, and make a number, if necessary, you need to draw a connecting line between the paper

6. Duble Check - Total Step Height Check

After the measurement is completed, the total height of the stairs needs to check again.



1. Place the laser level instrument on the steps of a group of 3-5 levels.

2. Use a tape measure to measure the horizontal point and find out whether the size of the ground is the same as the sum of the measuring ruler (error 1-2CM is a normal error and cannot over than 5CM).



7. Build a Midel and Restore the Arc of the Scene 100%





After obtaining all the data, the factory builds a model according to the track of the dots and the ascent height of each ascending surface.

The handrails of the spiral staircase are produced according to the curvature and size of this model.



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