CLAIMS

1. A large screen coordinating equipment with six degrees of freedom, characterized in that it comprises three same robot arms arranged in parallel at equal distance; each robot arm comprising:

a column rotation kinematic pair that can rotate around the Y axis,

a column, wherein the column rotation kinematic pair is provided on the top and bottom surface of the column that is set vertically, respectively;

a stretch arm, one end of which is connected with the lateral side of the column via a stretch arm rotation kinematic pair;

a first rotation arm, which is connected and matched with the free end of the stretch arm via the first rotation kinematic pair, the stretch arm and the first rotation arm are connected through the first rotation kinematic pair;

a second rotation arm, which is connected and matched with the free end of the first rotation arm via the second rotation kinematic pair;

a third rotation arm, which is connected and matched with the free end of the second rotation arm via the third rotation kinematic pair; and

the third rotation arm is connected and matched with a display screen via a screen rotation kinematic pair; the stretch arm rotation kinematic pair, the first rotation kinematic pair and the second rotation kinematic pair are arranged parallel with each other; the second rotation kinematic pair, the third rotation kinematic pair and the screen rotation kinematic pair are arranged perpendicularly with each other.

2. A large screen coordinating equipment with six degrees of freedom according to claim 1, characterized in that all of the stretch arm rotation kinematic pair, the first rotation kinematic pair and the second rotation kinematic pair rotate around the axis

parallel to Z axis; the third rotation kinematic pair rotates around the axis parallel to Y axis and the screen rotation kinematic pair rotates around the axis parallel to X axis.

3. A large screen coordinating equipment with six degrees of freedom according to claim 1 or 2, characterized in that a counterweight device is provided on the first rotation arm.

4. A large screen coordinating equipment with six degrees of freedom according to claim 1 or 2, characterized in that a counterweight device is provided at the front end of the stretch arm.

5. A large screen coordinating equipment with six degrees of freedom according to claim 1 or 2, characterized in that a distance sensor is provided around the display screen.

6. A large screen coordinating equipment with six degrees of freedom according to claim 1 or 2, characterized in that a mechanical device is provided around the display screen to avoid collision.

CLAIMS

1. A large screen coordinating equipment with six degrees of freedom, characterized in that it comprises three same robot arms arranged in parallel at equal distance; each robot arm comprising:

a column rotation kinematic pair that can rotate around the Y axis,

a column, wherein the column rotation kinematic pair is provided on the top and bottom surface of the column that is set vertically, respectively;

a stretch arm, one end of which is connected with the lateral side of the column via a stretch arm rotation kinematic pair;

a first rotation arm, which is connected and matched with the free end of the stretch arm via a first rotation kinematic pair, the stretch arm and the first rotation arm are connected through the first rotation kinematic pair;

a second rotation arm, which is connected and matched with the free end of the first rotation arm via a second rotation kinematic pair;

a third rotation arm, which is connected and matched with the free end of the second rotation arm via a third rotation kinematic pair; and

the third rotation arm is connected and matched with a display screen via a screen rotation kinematic pair; the stretch arm rotation kinematic pair, the first rotation kinematic pair and the second rotation kinematic pair are arranged parallel with each other; the second rotation kinematic pair, the third rotation kinematic pair and the screen rotation kinematic pair are arranged perpendicularly with each other; all of the stretch arm rotation kinematic pair, the first rotation kinematic pair and the second rotation kinematic pair rotate around the axis parallel to Z axis; the third rotation kinematic pair rotates around the axis parallel to Y axis and the screen rotation kinematic pair rotates around the axis parallel to X axis.

2. A large screen coordinating equipment with six degrees of freedom according to claim 1, characterized in that a counterweight device is provided on the first rotation arm.

3. A large screen coordinating equipment with six degrees of freedom according to claim 1, characterized in that a counterweight device is provided at the front end of the stretch arm.

4. A large screen coordinating equipment with six degrees of freedom according to claim 1, characterized in that a distance sensor is provided around the display screen.

5. A large screen coordinating equipment with six degrees of freedom according to claim 1, characterized in that a mechanical device is provided around the display screen to avoid collision.