CLAIMS

1. A Eurosilo intelligent device mounting apparatus, comprising:

a Eurosilo device, lifting members, steel trestle pre-assembled sections, a steel trestle, a tire frame, a device moving platform and guide rail, a central rotating piece, a winching system, a hoisting device, a spiral frame, a telescopic blanking pipe, an A-shaped frame, an A-shaped frame side rotating trestle, and a spiral frame side rotating trestle, wherein the steel trestle is assembled inside a Eurosilo structure; the central rotating piece, the winching system, the hoisting device, the spiral frame, the telescopic blanking pipe, the A-shaped frame, the A-shaped frame side rotating trestle and the spiral frame side rotating trestle are assembled at a site outside the Eurosilo structure.

2. A Eurosilo intelligent device mounting method, utilizing the Eurosilo intelligent device mounting apparatus according to claim 1, the method comprising the following steps:

step S1: designing the lifting members according to a total weight of the steel trestle, the central rotating piece and the winching system; mounting the lifting members and the steel trestle pre-assembled sections on a ring beam at a top of the Eurosilo structure; installing, inside the Eurosilo structure, the tire frame and the device moving platform and guide rail; assembling the steel trestle on the tire frame after the tire frame has been installed; at the same time, assembling section by section, main components of the Eurosilo device outside the Eurosilo structure;

step S2: using the hoisting device to lift and move the central rotating piece and the winching system along a wall of the Eurosilo device onto the device moving platform and guide rail for assembly, installation and leveling;

step S3: using the lifting members to lift the assembled steel trestle to a specified height;

step S4: moving the central rotating piece and the winching system along a side of the Eurosilo structure to a location below the steel trestle by using the device moving platform and guide rail; aligning a center of the hoisting device with a center of the steel trestle; lowering the steel trestle to a design height to engage and connect with the central rotating piece and the winching system;

step S5: using the lifting members to lift the central rotating piece, the winching system and the steel trestle together to a designated elevation at the top of the Eurosilo structure, and connecting the steel trestle with the steel trestle pre-assembled sections;

step S6: dismounting the lifting members after the steel trestle has been connected with the steel trestle pre-assembled sections; then using the hoisting device to lift and move the spiral frame to the inside of the Eurosilo structure in three sections for installation; and using the hoisting device to sequentially lift and install the telescopic blanking pipe, the A-shaped frame, the A-shaped frame side rotating trestle and the spiral frame side rotating trestle, until the Eurosilo structure is completed.

3. The mounting method according to claim 2, wherein step S1 further comprises using the hoisting device to lift and move the central rotating piece and the winching system along the wall of the Eurosilo device onto the device moving platform and guide rail and assembling the central rotating piece and the winching system.

4. The mounting method according to claim 2, wherein the specified height in step S3 is 12.0m.

5. The mounting method according to claim 2, wherein the designated elevation in step S5 is 55.40m.

6. The mounting method according to claim 2, wherein step S6 comprises:

step 1: removing the tire frame, and then dividing the spiral frame into three sections and using the hoisting device to lift and move the three sections along the wall of the Eurosilo device onto the device moving platform and guide rail; using the hoisting device to lift and move the telescopic blanking pipe into the Eurosilo structure and assembling the telescopic blanking pipe with the spiral frame; moving the spiral frame and the telescopic blanking pipe to another side of the Eurosilo structure by using the device moving platform and guide rail; removing the lifting members after the lifting members are dismounted; using the hoisting device to lift and move the A-shaped frame to the inside of the Eurosilo structure and connecting the A-shaped frame with the spiral frame; and lifting and moving the A-shaped frame side rotating trestle to the inside of the Eurosilo structure above the A-shaped frame and connecting the A-shaped frame side rotating trestle with the winching system;

step 2: finally, using the hoisting device to lift and move the spiral frame side rotating trestle to the inside of the Eurosilo structure above the spiral frame and connecting the spiral frame side rotating trestle with the winching system;

step 3: after the Eurosilo device is completely installed, using a steel wire of the Eurosilo device to conduct lifting and rotating and entering a debugging stage.