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ASSEMBLY INSTRUCTIONS FOR CABLE CHAIN ON BOX BEAM STRUCTURE

1) SECURITY

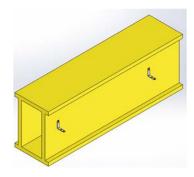
- Disconnect the electrical current from the system before starting any assembly operation.
- Do not use the cable chain for cables with larger dimensions and/or in greater quantity than those specified.

2) INSTALLATION

- Firstly, it is better to introduce the electrical cables inside the cable chain before incorporating them into the crane. To do this, if necessary, the covers that each link has can be dismantled, subsequently proceeding to close them to secure the assembly.

In the case of several cables, mount the heaviest ones towards the outside of the chain. If there is a big difference in diameter, use vertical spacers inside the chain.

- Place weldable bolts with M8 thread every 2m along the beam on which the hoist will circulate. Take into account that two side profiles are supported and joined on the same bolt.



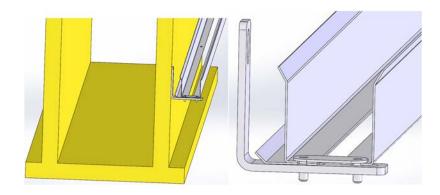
- Anchor the brackets that support the metal profiles that guide and support the cable chain. These brackets also serve as a connection point between different sections. The support structure for the cable chain is capable of supporting the total weight of the system. Check that these brackets are at the same height and make some height adjustment if necessary thanks to the elongated hole they have for adjustment.
- Take two side profiles and a support profile for the fixed cable (if necessary). Using a spacer piece, join this subassembly and anchor it to the first bracket using nuts and pressure washers at its bottom.
- Take another subset equal to the previous one and fix it in the following square and joining both subsets at the same time.
- So until the end of the tour

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- Assemble the small plastic guides that join the sides of the metal channel in its upper part.
- Support the cable chain on the formed metal channel, leaving it in the form in which it will definitely work. Check that there is a gap of about 4-5mm between the chain and the channel formed by both side profiles.
- Attach both pieces of the terminal set to the cable chain. Each one at its corresponding end. Remaining one in the fixed part and the other in the drag arm of the mobile machine to be fed.
- Connect the electrical cables at both ends and test their insulation.
- Fix the electrical cables with a small plastic tie on both terminals of the cable chain. The electrical cables must not cause any torsion or lateral stress to the energy chain.
- If necessary, mount the fixed power cable for the translation motors on its corresponding metal profile, being able to secure it to it by using small plastic ties.

3) OPERATION

3.1 Previous checks

Carry out several routes by hand with the cable chain to check that it runs smoothly and without snags along its entire length without problems.

Correct any possible lack of parallelism with the box girder using the elongated holes that the brackets have on their lower part, loosening the spacer pieces, aligning and re-securing the spacer pieces to the bracket.

3.2 End checks

Once the current is connected, check that the cable chain runs back and forth without problems.

Check that the machine to which the system feeds works correctly.

3.3 Normal functioning

Do not exceed the maximum voltage and/or amperage specified for the cables used.

Operate the energy chain within the electrical and/or mechanical specifications for which it was specified.

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4) MAINTENANCE

Periodically carry out maintenance operations to check the condition of the cable chain and its components. Check intervals will vary depending on the use of the system.

During each inspection all these points should be checked:

- Chain link wear.
- Correct tightening of the metal profiles to their brackets.
- Separation or alignment of said metallic profiles with respect to the box beam.
- Electrical cables: cuts, cracks, etc.
- The metal profiles must be free of dirt in the tread area.