FAQ – SEK 2019

1) In the rule says that the pipes are placed randomly in the collection area. Can they be put at any other angle to the side of the runway (Figure 1)? Or just in relation to the side of the track (Figure 2)?

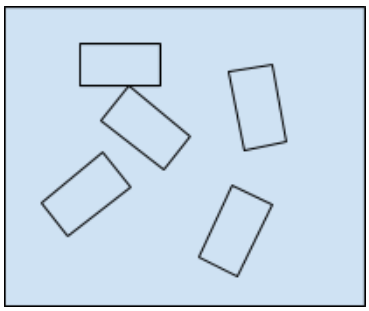

Figura 1 - pipes are placed randomly

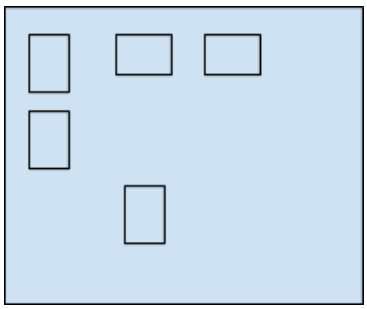

Figura 2 - Pipes in parallel position

A: Yes! The pipes can be positioned at random and is at the discretion of the judge of the match. The idea is to start the competition with a positioning of the pipes that facilitates the interaction with the robots, but that, according to the progress and the performance of the teams, can be difficult until they are totally random;

2) Is there a minimum spacing between pipes in the collection area?

A: No! As in the previous answer, the pipes can be positioned at random and is at the discretion of the judge of the match.

3) In case the team chooses to make two robots, can there be wireless communication (Wi-fi, Bluetooth) among robots?

A: Yes! One of the main challenges this year is precisely the interaction between robots.

4) Is it possible to have two consecutive gaps in the pipeline so that the robot has to position 2 pipes side by side? For example, a hole of 35cm in which the robot should position 1 pipe of 15cm and another of 20cm?

A: No! The proposal is to have spaces with dimensions determined for each pipe size. What can happen is a team putting a smaller tube in a larger space. If this happens, the score is described in the rules.

5) The rule says that "the areas of collection of pipes will be in different positions and random at each match.". Given this, will the collection areas be (each) MDF modular pieces or the three areas will be bonded on a single piece of MDF?

A: The collection areas will be made in modular pieces (833,33 x 600mm) and individually adhesive. Therefore, the position of each collection area can be changed between one test and another.

6) We wanted to know how fixed the pipeline will be in the arena support. One of the possibilities that we evaluated would be in "finding it" using touch sensor, for example. But we want to know if using this method would not move the structure, causing damage to the team.

A: The pipes placed on the platform, representing the fixed pipeline, will be composed of the same types of pipes and supports of the mobile pipes. Therefore, I imagine they will not be too fixed to the point of identifying them with the touch sensor. Of course, it depends on how these sensors will be used.

7) Regarding the placement of the pipes on the platform, a doubt has arisen due to the position of the pipes and what will be considered "misplaced" in the area delimited by the pipeline. How will this "misplaced" be evaluated? Any angle that the pipe makes with the holder, will it be disregarded?

A: To better answer this question, we have done some illustrations to demonstrate what will be considered a correctly placed pipe and what will be considered "misplaced". In the figures below, the white pipes are the fixed tubes representing the pipeline. The platform is in blue color and the tube holders are represented in yellow color. The pipes in red color represent the moving tubes that will be placed by the robots.

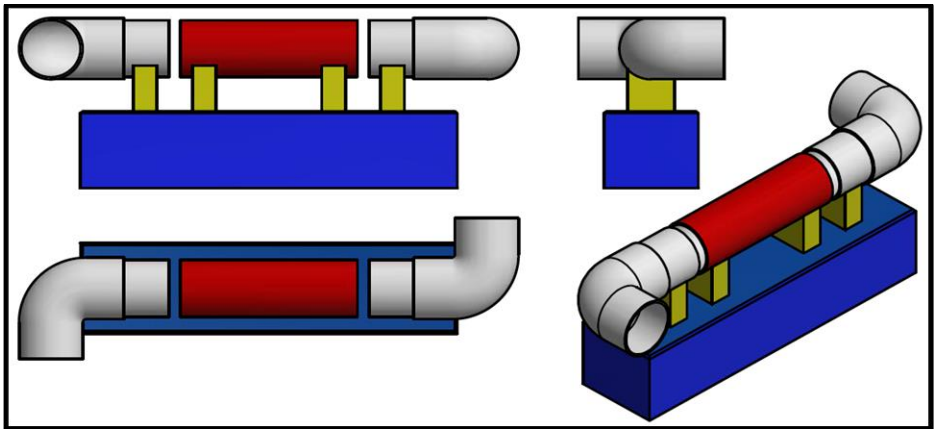

Figura 3 - Example of pipe placement

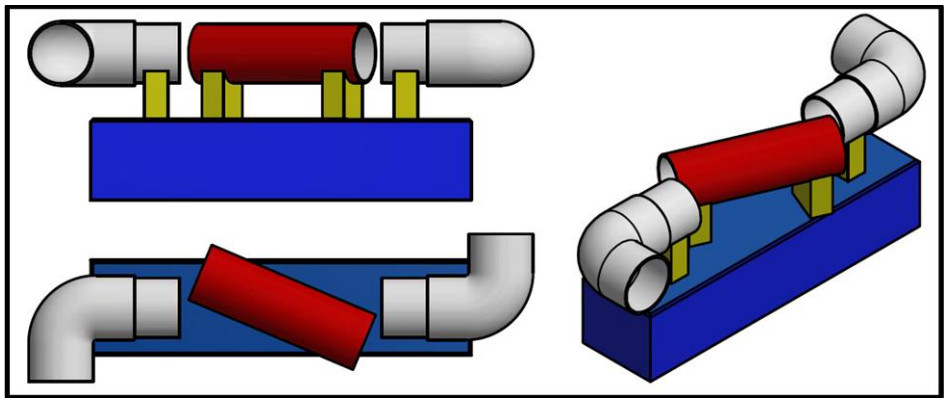

Figura 4 - Example of pipe placement

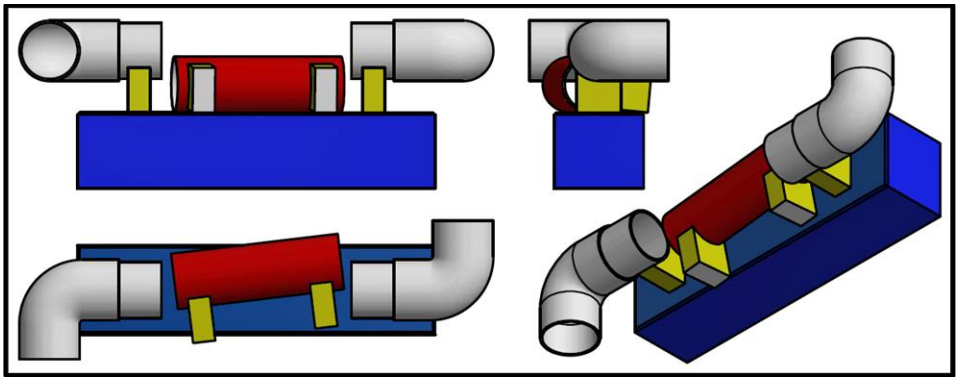

Figura 5 - Example of pipe placement

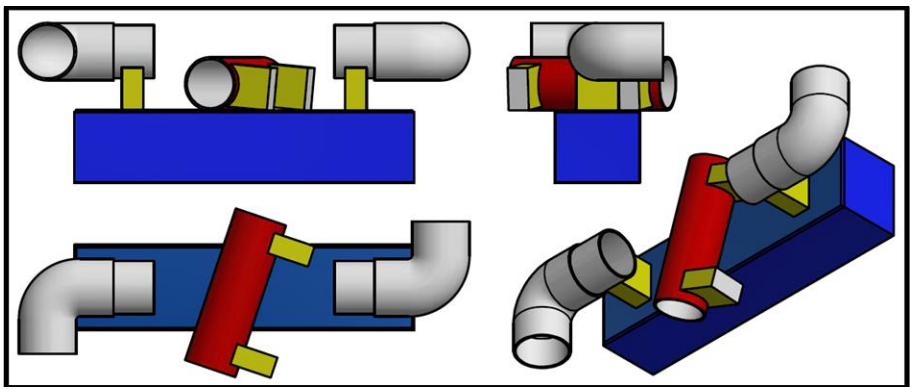

Figura 6 - Example of pipe placement

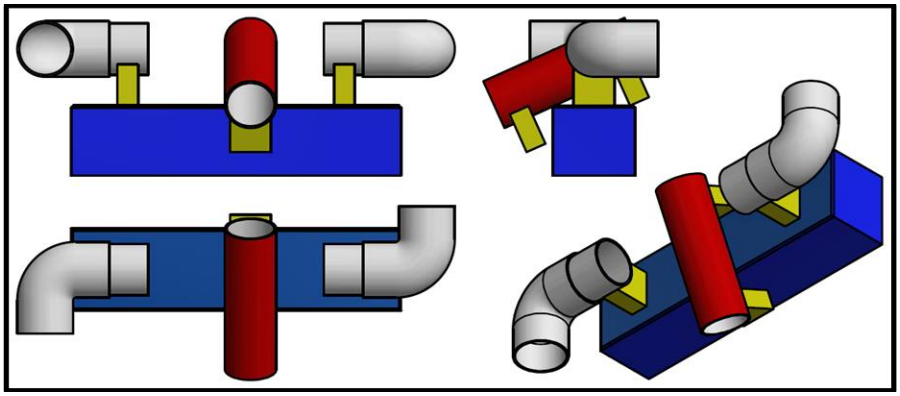

Figura 7 - Example of pipe placement

In the above figures, only the examples shown in figures 3 and 4 (three and four) will be correctly considered. In Figures 5, 6 and 7 (five, six and seven), it shows examples of pipes that will be considered "misplaced.