Cableski Technical Rules for All-size CABLES

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***Drawings still to be entered***

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1. General
	1. Applicability of these rules

These rules are additional rules for 3-event Cableski competitions on Cableski installations, which do not comply with the rules as set for standard 3-event Cableski Technical Rules of the International Waterski and Wakeboard Federation (IWWF). The IWWF 3-event Cableski Technical Rules (CTR) shall apply to all Cableski competitions except where otherwise stated in the rules below, The Cableski Technical Rules for All-size CABLES.

* 1. Transparency

Organizers of competitions must specify on their competition application form in which mode the competition will be held for each of the 3 events. This mode will also be mentioned clearly on the international calendar. The mode for each even will also be specified on the published results sheets.

Competitions done on not CTR cables will only count for the ‘who-beats-who’ ranking list.

1. Installation Types

There are three type of Cableski installations specified:

1. Cableski installations with at least 4 deflection pulleys running counter clockwise (these are also called the ‘counter clockwise’ or ‘standard’ installations)
2. Cableski installations with at least 4 deflection pulleys running clockwise (these are also called the ‘clockwise’ installations)
3. Cableski installations with only two pulleys (these are also called the ‘two-pylon’ installations)

The cable does not necessarily need to be a 10 mm steel cable, but it must be strong enough to stand the competition needs. For the slalom and jump event, the cable shall have a speedometer calibrated between 25 and 60km/h and the motor shall be strong enough to attain the requested speeds and maintain that speed constant with a skier in the course. For the trick event, speeds shall be calibrated between 25 and 35km/h.

The installation shall be in optimal technical condition, in order to guarantee a smooth running of the competition.

For each event the competition can be run in any of the modes described further in these rules, as long as the installation is set up according to these rules.

1. Standard Cables (running counter clockwise)
	1. Tricks

The competition area for tricks starts after the deflection pulley before the trick area and ends at the next deflection pulley. For safety reasons, there should be no wakeboard obstacles (kickers, sliders, etc…) too close to the competition area. The Chief Judge and the Safety Officer of the competition will decide on what is a safe distance.

Which mode to apply will depend on the minimum available length of the competition area. For calculation reasons, has the typical maximum speed used in tricks been set at 36km/h or 10m/s. A skiers is allowed to ask for a faster speed, but he will have to be aware that he may reach the end of the trick competition area before the end of the allowed time. This will never lead to any type of rerun.

The minimum length of the trick competition area shall be calculated as follows, add 20m preparation time at the start and 10m at the end of the course before the next deflection pulley as extra buffer:

 20m + 10m + (number of seconds per run)\* 10m/s

As an example the minimum trick length of a trick competition area, required for a standard 20 second trick competition will be 230m.

 20m + 10m + 20s\*10m/s = 230m

The competition can consist of two or more passes per skier depending on the length of the trick competition area. More than two passes shall only be allowed for competitions with a trick competition area shorter or equal to 100m, in which case the competition will be held in according to the rules for Cableski competitions in the swimming pool. One pass shall never last more than20seconds.

Competitions eligible for the ‘who-beats-who’ ranking list may choose the mode freely, considering the above rules and limitations. Records shall only be recorded for two 20second pass trick competitions.

The recommend, but for ‘who-beats-who’ ranking list not limited modes for a trick event are:

|  |  |  |
| --- | --- | --- |
| **Mode**  | **Time and No runs** | **Competition area** |
| T20 | Two runs of 20seconds | min. 230m |
| T10 | Two runs of 10seconds | min. 130m |
| Swimming pool mode | Four runs depending on length | Not specified |

* 1. Slalom

The competition area starts at the last deflection pulley before the first slalom buoy and ends at the next deflection pulley. For safety reasons, there should be no wakeboard obstacles (kickers, sliders, etc…) too close to the competition area. The Chief Judge and the Safety Officer of the competition will decide on what is a safe distance.

The mode of the competition for slalom depends on the minimum length of competition area available. The CTR requests a minimum length of 300m for the slalom event with a 6 buoys course, which we further will call the S6 mode.

For shorter competition areas, there shall be a 4 buoy slalom course, where the 5th and the 6th buoy of the 6 buoy slalom course have been taken out. The minimum competition area for setting up a 4-buoy slalom course shall be 217m. A 4-buoy slalom course competition will call the S4 mode.

Diagram 1 and diagram 2 describe the S6 and the S4 courses. The length of the lines for slalom is as is defined in the CTR.

For courses with only 4 boys, the skier shall follow the main running cable around the deflection pulley before the slalom course, pass around outside of all 4 buoys and after rounding the 4th buoy, proceed through the end gate and ski until the carrier has fully passed the deflection pulley after the slalom course, in order to qualify for the next pass.

Diagram 1: S6 slalom course

Diagram2: S4 slalom course

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Regular | Variation | Minimum | Maximum |
| Length S6 | 259m | +/- ¼ % | 258.353m | 259.648m |
| Length S4 | 177m | +/- ¼ % | 176.558m | 177.443m |
| A | 27m | +/- ½ % | 26.865m | 27.135m |
| B | 41m | +/- ½ % | 40.795m | 41.205m |
| C | 29.347m | +/- ½ % | 29.200m | 29.494m |
| D | 47.011m | +/- ½ % | 46.776m | 47.246m |
| E | 1.25m | +/- 5 % | 1.188m | 1.313m |
| F | 11.50m | +/- 1 % | 11.385m | 11.615m |

The maximum off line distance for middle line buoys is 0.3m. The average of all ‘F’ dimensions shall not be less than 11.48m.

* 1. Jump

The competition area for jump starts at the last deflection pulley before the ramp and ends at the next deflection pulley. For safety reasons, there should be no wakeboard obstacles (kickers, sliders, etc…) too close to the competition area and in order so that the skier can cut upon his preference. The Chief Judge and the Safety Officer of the competition will decide on what is an acceptable distance.

Depending on the length of the competition area, the ramp shall be located at one of the following positions.

|  |  |  |
| --- | --- | --- |
| **Mode** | **Position of the ramp after the last deflection pulley before the competition area** | **Competition area** |
| J290 | 180 – 190m  | min. 290m |
| J250 | 160 – 170m | min. 250m |
| J230 | 140 – 150m | min. 230m |

Diagram 3: J290 jump course

For the J290 jump course, there shall be two jump buoys at 160m and 140m before the ramp.

Diagram 4: J250 jump course

For the J250 jump course, there shall be one jump buoy at 140m before the ramp. The ramp shall be placed minimum 90m before the deflection pulley indicating the end of the jump competition area.

Diagram 5: J230 jump course

For the J230 jump course, no extra jump buoys before the ramp are required. The ramp shall be placed minimum 90m before the deflection pulley indicating the end of the jump competition area.

The jump buoys will act as guide buoys for the skiers to start their cut. The jump course and the slalom course can be incorporated into each other. In this case the jump buoys will be of different color than the slalom buoys to clearly mark the difference.

1. Clockwise running Cables
	1. Tricks

The rules of CTR (see section 3.1) shall be applied for clockwise running cables without adjustments.

* 1. Slalom

For clockwise running cables the minimum required competition area lengths shall apply as for standard installations (section 3.2). The only difference for slalom refers for the location of the slalom buoys. The first buoy is placed on the left side of the main running cable instead of on the right side. The other buoys switch accordingly as it would be the mirror image of the ‘standard’ slalom course. See diagrams 6 and 7 for the six and four buoys slalom courses on a clockwise running cable.

In case of a clockwise running cable, a six buoys course will be denoted as S6clock, the four buoy course will be S4clock.

Diagram 6: S6clock slalom course

Diagram7: S4clock slalom course

* 1. Jump

For clockwise running cables the same minimum competition area lengths shall apply as for standard installations (section 3.3). The jump ramp as well as the jump buoys will remain on the left side of the main running cable. See the following table and scheme for more details.

|  |  |  |
| --- | --- | --- |
| **Mode** | **Position of the ramp after the last deflection pulley before the competition area** | **Competition area** |
| J290clock (diagram 8) | 180 – 190m  | min. 290m |
| J250clock (diagram 9) | 160 – 170m | min. 250m |
| J230clock (diagram 10) | 140 – 150m | min. 230m |

Diagram 8: J290clock jump course

Diagram 9: J250clock jump course

Diagram 10: J230clock jump course

1. Two-pylon Cables

For a two pylon cableski installation the competition area will be the ‘return’ pass of the skier. The skier will start from the starting jetty and will ski to the other side of the cableski installation or otherwise said, will ski from the first pylon to the second. The skier is allowed to practice or ’warm up’ during this pass, but is not allowed to fall during this pass. A fall during this pass will be considered as an early fall and the skier will score ‘zero’ points for that pass.

For safety reasons, there should be no wakeboard obstacles (kickers, sliders, etc…) too close to the competition area. The Chief Judge and the Safety Officer of the competition will decide on what is a safe distance.

* 1. Tricks

The maximum length of the trick competition area shall be calculated as described in section 3.1. For a two pylon installation, a preparation time of at least 30m shall be calculated, though the skier is allowed to start his trick run as soon as he made the turn on the second pylon, coming back to the starting area. The time for the trick pass will start as is for standard competitions, at the start of the first trick. For an announced back-in start, the trick run will then start at the start of the first trick after the turn into the back position.

The following competition areas therefore will exist for two-pylon trick competitions:

|  |  |  |
| --- | --- | --- |
| **Mode**  | **Time and No runs** | **Competition area** |
| T20tw | Two runs of 20seconds | min. 230m |
| T10tw | Two runs of 10seconds | min. 130m |
| Swimming pool mode-tw | Four runs depending on length | Not specified |

During the trick event on a two-pylon cable, the skiers will start at the starting dock and ski till the other pylon. During this pass, skiers are allowed to do ‘not-counting’ warm-up tricks, but are not allowed to fall. At the second pylon, the skier will turn and will ski, coming back to the starting dock. This pass is considered the ‘competition area’ and thus his time for the trick pass will start with the first trick he performs after having made the turn at the second pylon. For a pre-announced back-in run, the time for the trick pass will start at the first trick after the back-in positional turn.

For safety reasons, the installation will be programmed to stop at a well-defined distance before arriving at the starting dock again. This distance shall be the same for each skier and shall be communicated before the start of the competition. This stop, if it comes before the timed end of the trick pass, will conclude the end of the trick pass. This will never lead to any type of rerun.

* 1. Slalom

For the slalom event on a two pylon cable, there shall be no gates as in a traditional course. A middle line buoy will indicate the entry and the exit of the slalom course. The skier will have to pass left of the entry middle line buoy and right of the exit middle line buoy, which follows the fourth or the sixth slalom buoy.

The entry buoy will be located at least 60m away of the second pylon, the exit buoy will be at least 60m from the first pylon. In the slalom event, the skier will start at the starting dock and ski under the cable at start speed till the second pylon. There the skier will turn and ‘enter’ the slalom course which will be in the direction going back to the starting dock. The cable must be powerful enough to have reached the desired speed before the carrier crosses the entry buoy of the slalom course. The speed of the cable will be maintained until the carrier crosses the exit buoy, unless the skier has fallen before.

As is ruled for standard and for clockwise running cables, depending on the length of the cable there will be a six or four buoy slalom course (number of buoys indicate the buoys the skier has to round). See diagrams 13 and 14 for details.

Diagram 13: S6tw slalom course

Diagram 14: S4tw slalom course

After the skier has passed the slalom course successful he will proceed to the next pass at on speed higher until he reaches the maximum speed. If he has successfully passed the pass at maximum speed with the 18.25m rope he will let go the rope and wait till the 16m rope is being set up. The 16m rope will be set up once there are no skiers left that still need to ski at the 18.25m rope, this is the same principle as is used for slalom at standard cables. Subsequently every skier has to pass the next rope length, before the rope gets shortened again. Only skiers that successfully pass the rope length are allowed to continue at the shorter rope length.

* 1. Jump

For the jump event, similar as for the standard installations, there are three categories for jumping, depending on the length of the cable. Unlike for standard installations, the distance from the top of the jump ramp till the end of the competition area shall never be less than 110m.

Diagrams 15, diagram 16 and diagram 17 illustrate the three different possible jump courses.

Diagram 15: J290tw jump course

Diagram 16: J270tw jump course

Diagram 17: J250tw jump course

In the jump event, the skier will start at the starting dock and ski under the cable at start speed till the second pylon. There the skier will turn and ‘enter’ the jump course which will in the direction going back to the starting dock. The cable must be powerful enough to have reached the desired speed at least 50m after the carrier has turned at the second pylon.

Skiers in the same series will all take their first jump before any of them in series proceeds to the second jump.