Extreme Kayak Ramp

Ramp specification

Version 1.1

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History of modifications and reviews of this document

Version	Date	Description
1.0	12/10/2021	-
1.1	16/08/2022	Replacement of "Extreme Canoe Slalom" with "Extreme Kayak"

Contents

1) Introduction

1.1 Goal

The goal is to standardise and ensure the participants safety whilst allowing a spectacular start for the Extreme Kayak event as it makes its' Olympic Games debut in Paris 2024.

This document introduces the requirements needed for the start ramp system.

1.2 Context

This is the first document that outlines how to design and build the optimum extreme kayak start ramp system for an ICF Competition.

Previously there have been a number of permanent or temporary ramps constructed and used in competition

Some examples include during competitions at: Pau, Prague, Markleeberg, Ivrea, Krakow, China, Bratislava, Ljubljana, Augsburg, Rio de Janeiro, London

1.3 Statement of Requirements

These requirements are based on the knowledge and the experience of the existing solutions, the rules regarding the Extreme Kayak start, and are also linked to safety norms (eg railings), to ensure the security of all participants.

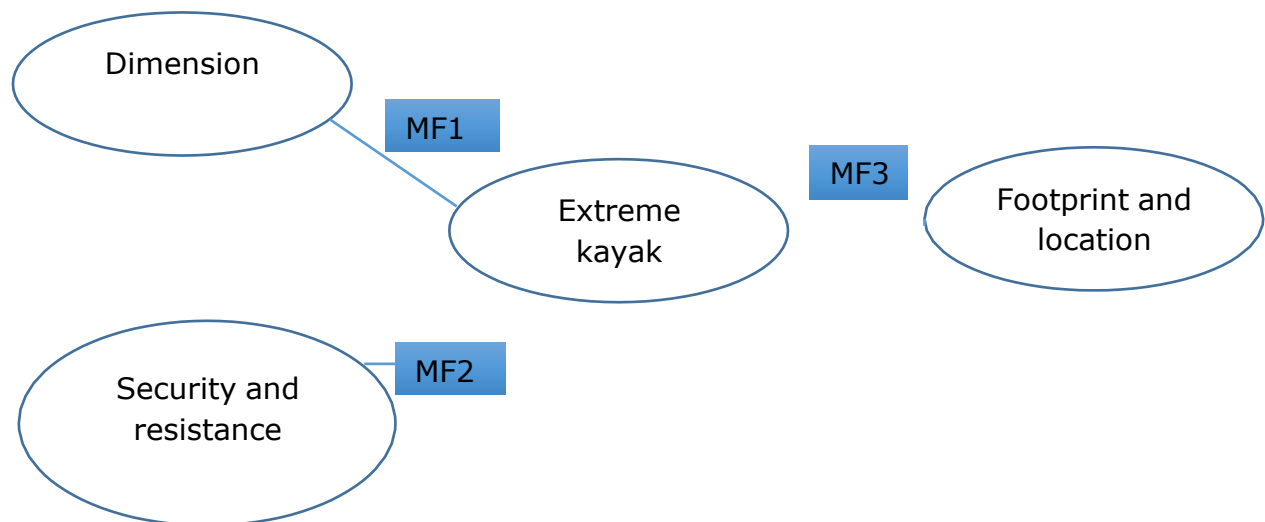## 1.4 Environment of the product and distribution

The ICF expect this document will guide Competition Organisers and Venue Managers in the construction and use of the Extreme Kayak Start ramp system.

The Extreme Kayak Start Ramp system has two main components:

1. The platform deck – flat section the boats rest on before the start

2. Sloping ramp – the sloping section from which the boats slide into the water.

2) Functional expression of the Requirement

2.1 Main functions

Dimension — MF1 — Extreme kayak — MF3 — Footprint and location

Security and resistance — MF2

Figure 2: Graph of main functions

Main Function 1 (MF1): Range of dimensions of the platform deck and sloping ramp

Main Function 2 (MF2): Security and load rating for competitors, officials and equipment

Main Function 3 (MF3): Recommendation for footprint and location of the ramp

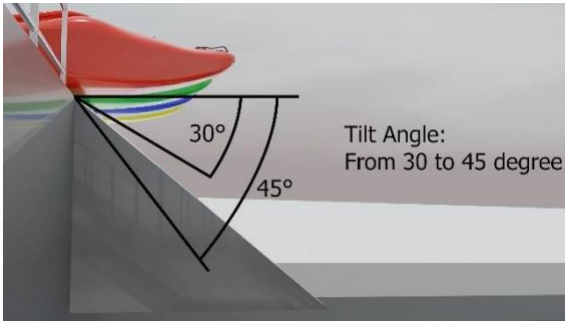## 2.2 Complementary main functions linked to the specifications:

Main Function Scaffold (MFS): Criteria of scaffold installation, if applicable, material, mechanical strength, assembly, disassembly etc…
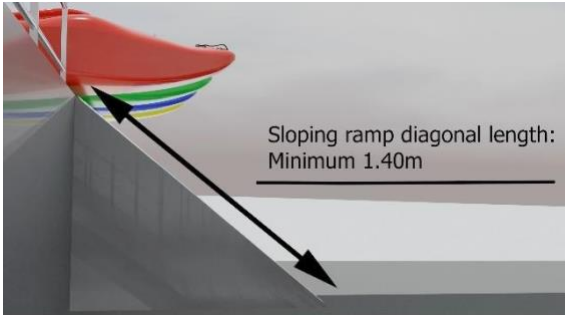
Main Function Bridge (MFB): Criteria of bridge construction, if applicable: material, dimensioning calculation, building etc…

2.3 Assessment criteria

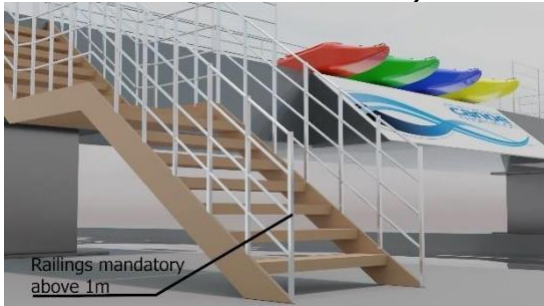Priority of the criteria are rated with a highest priority being 5 and the lowest being 1

MF1: Dimensions of the platform deck and sloping ramp

N°	Detail	Criteria	Level and limits	Priority
MF1	Width of the platform deck surface	Measure	Minimum of 5m accessible to thewater (1.25m for each boat)	5
MF1	Tilt angle of the sloping ramp surface	Measure	From 30 to 45 degrees below thehorizontal	5
MF1	Sloping ramp height off the water (reference is the lowest part of the sloping ramp)	Measure	Minimum 1.5m to a maximum of 2.5m from water to lowest part ofthe ramp. The ramp deck can be set higher and in this case the sloping rampdiagonal length should be adjusted to achieve the above height off the water.	5

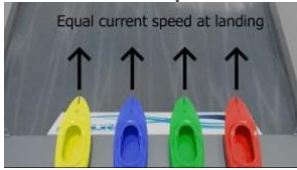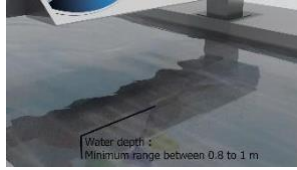|				
			Height: Minimum 1.50m Maximum 2.50m	
MF1	Sloping ramp diagonal length	Measure	Minimum of 1.4m Sloping ramp diagonal length: Minimum 1.40m	4
MF1	Depth of the platform deck	Measure	Minimum 2m, Recommendation of 3m Depth of the platform: Minimum 2m	4

MF2: Security and load rating for competitors, officials and equipment

N°	Detail	Criteria	Level and limits	Priority
MF2	Platform deck has to be a flat surface	Surface	No holes, crossing screws or gaps that can injure competitors or officials	4
MF2	Support the load of Competitors, equipment, and officials	Distributed load	Minimum 3kn/m² If applicable for scaffold, class 4 minimum related norm EN 12811-1 or equivalent according to country norms	5
MF2	Railings must be built to avoid falls for competitors and officials	Dimension	Mandatory where the height of the fall would be above 1m, (except for the sloping ramps' water access area) Railings mandatory above 1m	5

MF3: Recommendation for footprint and location of the ramp

N°	Detail	Criteria	Level and limits	Priority
MF3	Ramp should be set (if possible) at or before the canoe slalom start	Location	Positioning space	2
MF3	Ramp has to be positioned to allow the fairest landing condition for all competitors	Location	Equal current – water speed	4
MF3	Recommended water depth at landing area.	Measure	0,8 to 1 m water depth	4
MF3	Ramp should be integrated into the landscape of the course and not bother Competitors, Officials, camera positions or filming in canoe slalom.	Location	Positioning space	3

Complementary main functions

- MFS: Respect all criteria of scaffold norm if applicable, including but not limited to, installation, material, calculation assembly, and disassembly

- MFB: Respect all criteria of bridge construction norms if applicable, including but not limited to, material, dimensioning calculation and building. This is applicable to a temporary structure or a permanent bridge modified to take the Start Ramp System

3) Approval / Homologation

The plans for the Start Ramp System to be used for ICF Competitions must be submitted to the ICF for approval.

This should be done before construction or installation.

If in a particular case the system does not fit these requirements the ICF will advise what changes should be made.

Once built the ICF will visit the venue and homologate the Start Ramp System