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## Hydraulischer Modellversuch „Welle Wittelsbacher Brücke“ – Untersuchung und Planung einer neuen Schwelle bei der Wittelsbacher Brücke im Hinblick auf die Surftauglichkeit

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### *Projektbeschreibung*

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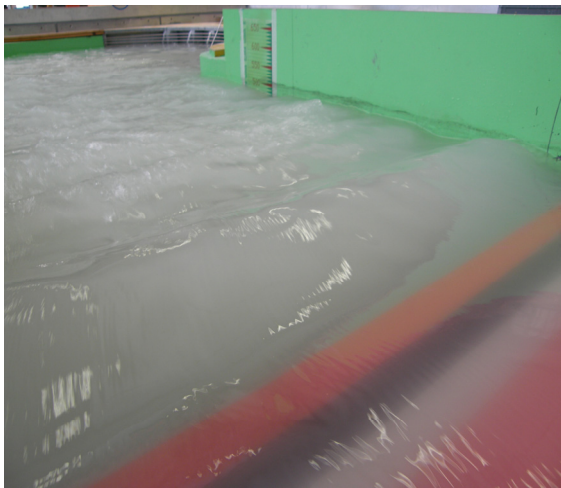
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Sport waves are always more and more used as a free time sport. Also if not everywhere is possible to have an easy access to the sea side, this kind of sport is becoming really common due to different kinds of waves. One of the possibility is surf a standing wave in a river. A standing wave is a wave that is not moving in the space, but where the water has



got enough velocity to sustain the surfer. One of example is the surf wave in Munich on a small river called „Eisbach“. The wave is running 365 day per year due to a constant water discharge. Following the good experience of the wave on the Eisbach, the city of Munich would like to create another surf spot on the river Isar, just after the bridge



„Wittelsbacher“. One of the differences between the two waves will be the width and the strong connection between the river discharge and the wave functionality. In fact the Isar river has got a

big range of discharge (from 20 m<sup>3</sup>/s up to 250 m<sup>3</sup>/s), where the wave is plan to work just between 60-100 m<sup>3</sup>/s (due to security reasons). To this aim, University of Innsbruck is studying in an integrated model (numerical and physical), the possibility to obtain waves that are running in the supposed range of discharge. Together with the hydraulic condition for the wave, the study is concerning also the security of the surfers, in the downstream water level. The study is divided in two parts: a preliminary study about the different possibilities in the boundary condition to create a wave, conduct through a pilot test (scale 1:5) and numerical simulation.

As soon as the boundary condition will be fix, a pilot scale test of bigger dimension (but in smaller scale, 1:10) will help to optimize the wave and to investigate the security conditions of the surfers.

The wave will be used not only from the surfers but also from the kayaker, to play the Rodeo specialty (acrobatic kayak).