

Frontinus-Gesellschaft e.V.

Internationale Gesellschaft für die Geschichte
der Wasser-, Energie- und Rohrleitungstechnik



Cordial Invitation
to the Online Lecture (ZOOM) on 12.01.2023, 6:00 pm (CET)

Drs. Paul Kessener
“Römische Druckleitungen und deren Probleme”
(“Roman Siphons and associated Problems”)
(Lecture in German)

Paul Kessener, educated as a physicist at Nijmegen University, is an independent researcher of Roman aqueducts and water distribution, ancient hydraulics, and hydraulic machines. Special interests are pressure conduits (inverted siphons) and associated problems from air-water interaction, discharge measurements of aqueducts, as well as related literature of ancient authors as Vitruvius, Frontinus, Pliny. Investigations were performed among others at Nîmes, Lyon, Pompeii, Aspendos, Patara, Antiochia ad Cragum, Palermo, Nijmegen. Since 2005 member of the international research team for the investigation of the aqueducts of Ephesos under direction of the Österreichisches Archäologisches Institut at Vienna (ÖAI, Dipl.-Ing. Gilbert Wiplinger). Presentations were given at the 'Cura Aquarum' conferences and the 'International Congress on the History of Water Management and Hydraulic Engineering' series. PhD 2017 on Roman Water Distribution and Inverted Siphons (Radboud University Nijmegen, Prof. Dr. Eric Moormann). Publications in international magazines as Babesch, Journal of Roman Archaeology, and others (<https://independent.academia.edu/PaulKessener>). Member of the Frontinus Gesellschaft and of the Deutsche Wasserhistorische Gesellschaft DWhG.

Paul Kewssener about the lecture:

Today about 1600 Roman and Greek aqueducts are known to have provided water for towns and settlements. To transport water to the desired destinations only one driving force was applied: gravity. The advantage of gravity is that it is always and everywhere available. But it is also only directed downwards. Liquid water must flow down if it is to get anywhere at all. Thus the constructors of aqueducts had to cope with the terrain between source and destination, by circumventing valleys, building bridges and long arcades, digging tunnels, and in some cases construct pressure lines: siphons. With a siphon water is transported across a valley by means of a piped conduit that descends to the bottom of the valley and rises up again on the other side to a point a bit lower than the start. Some 80 siphons are known today, at times gaining considerable lengths.

In this presentation the problems that could occur with siphons and the solutions that were chosen to cope with these problems are discussed. First a number of siphons will pass the show, after which some considerations on solving problems will be viewed.

The access data for the online meeting (ZOOM) are as follows:

<https://us02web.zoom.us/j/87933930044?pwd=dlk4REZ4S0NnL3k2RGN2TVdtZTdTd3Zz09>

Meeting-ID: 879 3393 0044, Kenncode: 631844

Prof. Dr.-Ing. Hans Mehlhorn
President of the Frontinus Society

Dipl.Ing. Gilbert Wiplinger
Head of the Scientific Board
of the Frontinus Society