

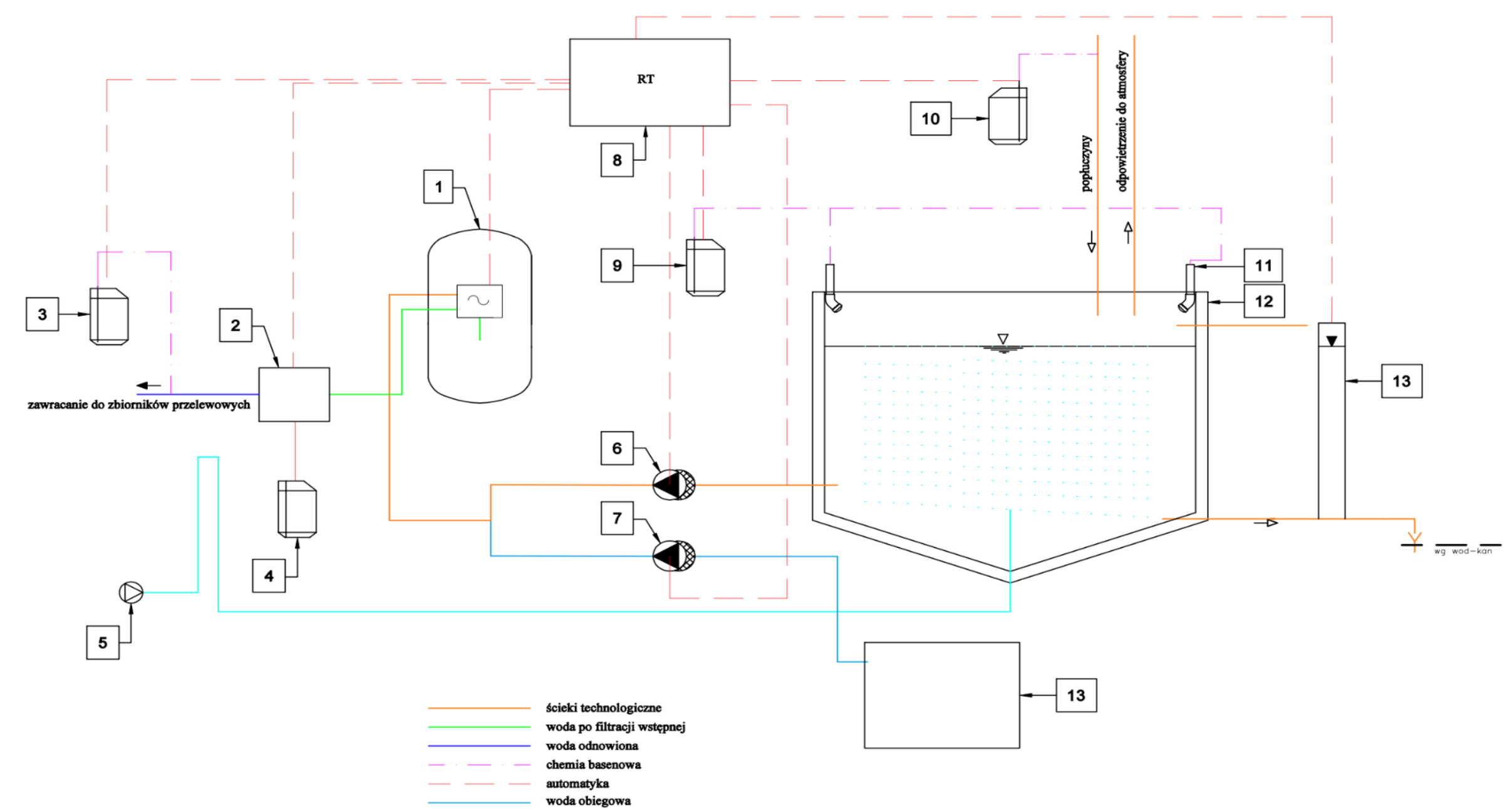
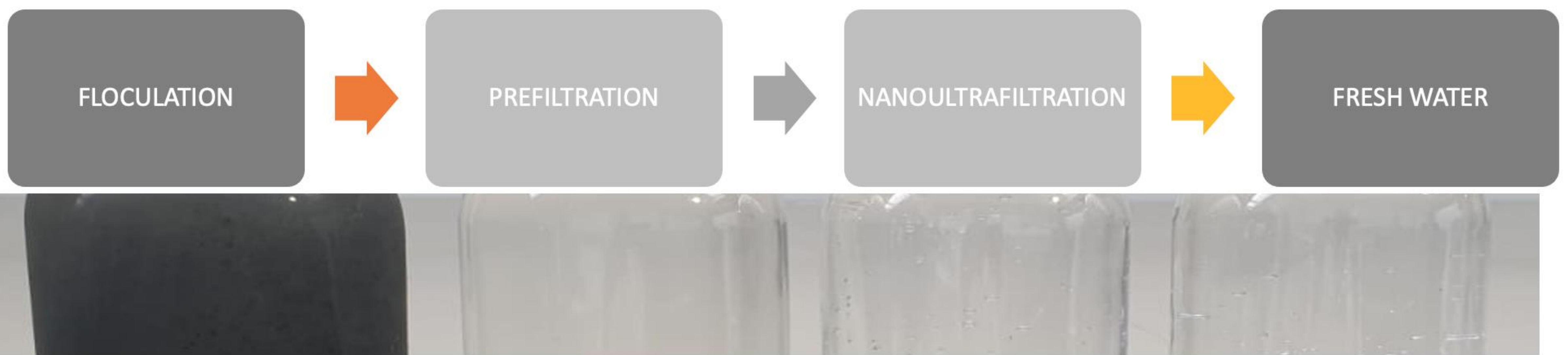


**BYDGOSZCZ UNIVERSITY
OF SCIENCE AND TECHNOLOGY**
Faculty of Chemical Technology
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Method and installation for the recovery of rinsed brine water

Inventor: Wojciech Poćwiardowski, PhD, Eng.
Grant: 3/1/2021 Innovation Incubator 4.0

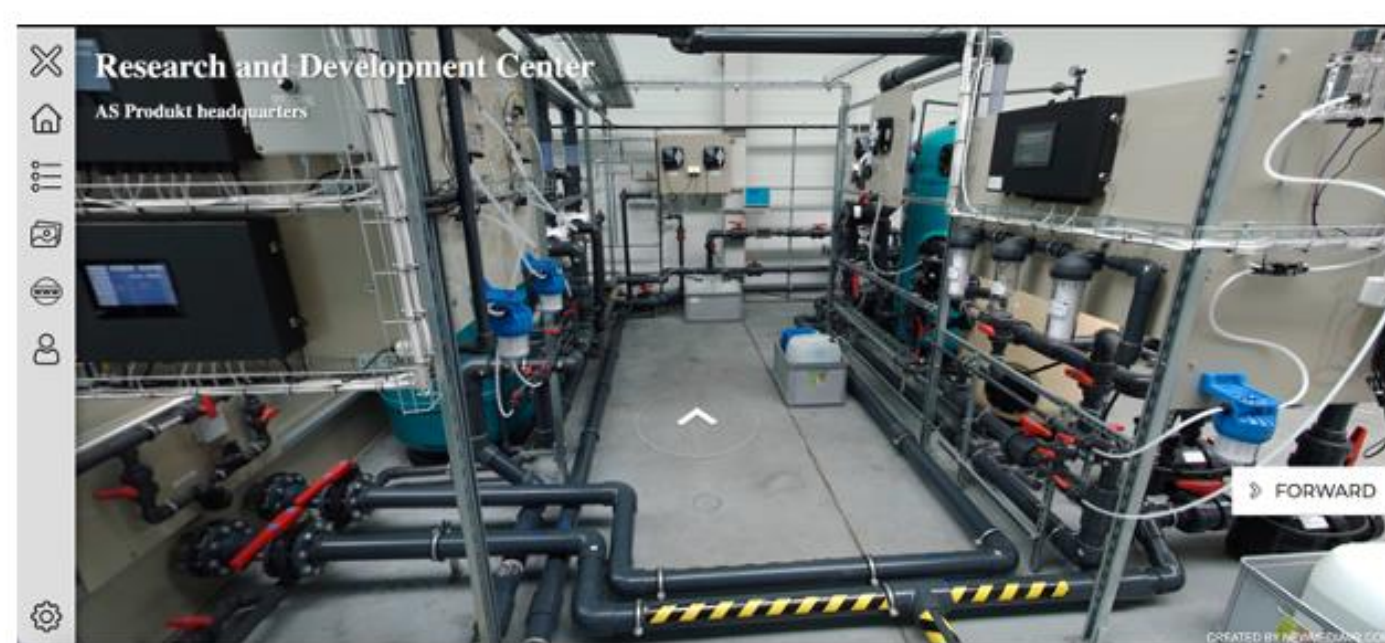
At the Faculty of Technology and Chemical Engineering, PBŚ in Bydgoszcz has developed an innovative resource and installation for the recovery of rinse brine water. It is an economical and ecological system using filter tubes purifying in the nano- and ultrafiltration spectrum. The filtration system was built from recycled hemodialysis tubes, replacing the filtration membranes used so far. After medical application, the filters are cleaned and sterilized and assembled to purify the brine water under pressure. This technology is an incremental innovation on a global scale. The method and installation is at the V level of technological readiness. Technological validation of the developed prototype in a near-real environment was carried out. The implementation of the technology in spa pools will result in significant savings in brine water. As a result of water treatment after rinsing the base filters of the spa bases, we obtain up to 96% recovery, without causing deterioration of parameters in spa grounds.



This technology enables the reuse of washings from the filters of spa pools up to 96%, which significantly reduces the need for brine water, reduces the costs associated with its heating and sewage disposal. The installation is characterized by the retention of solid suspensions, colloids, bacteria, viruses, but not the removal of salts dissolved in water, which is especially important so that the composition and concentration of cations and medicinal anions do not change.



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