DIN 19645:2016-07 (E)

Treatment of spent filter backwash water from systems for treatment of water of swimming-pools and baths

Contents

Page

10 Requirements and performance of treatment stages 22
10.1 General 22
10.2 Requirements for removal from the backwash wastewater storage tank 22
10.3 Requirements for pre-treatment for the separation of coarse material 23
10.4 Requirements on partical removal 23
10.5 Requirements on virus retention 23
10.6 Requirements on adsorption 23
10.7 Requirements on the removal of oxidizing substances 24
10.8 Requirements on full desalination, partial desalination and dissolved organic carbon (DOC) removal 24
10.9 Requirements on equipment for increasing the acid capacity KS4,3 25
10.10 Requirements on disinfection by chlorination 25
10.11 Requirements for disinfection using UV irradiation for Type 2 service water 25

11 Materials and components 26
11.1 General 26
11.2 Pipelines 26
11.3 Pumps 26
11.4 Valves 26
11.5 Modules with ultrafiltration membranes 27
11.6 Modules with ultrafiltration membranes as in 3.33 27
11.7 Modules with reverse osmosis and nanofiltration membranes 27
11.8 Control and automation 27

12 Dosing, measuring and control technology 28
12.1 Dosing system 28
12.2 Measurement and control technology 28
12.2.1 General 28
12.2.2 Water meter 28
12.2.3 Differential pressure measurement 28
12.2.4 Conductivity measurement 28
12.2.5 Chlorine measurement 28
12.2.6 Sampling valves 28

13 Operation and maintenance of membrane systems 29
13.1 Ultrafiltration and microfiltration system operation 29
13.1.1 Filtration 29
13.1.2 Backwashing to restore permeability 29
13.1.3 Chemical cleaning 30
13.2 Operation of nanofiltration and reverse osmosis systems 31
13.2.1 Filtration 31
13.2.2 Cleaning and flushing 31
13.3 Monitoring and documentation 32
13.4 Interruptions in operation 32
13.5 Maintenance 33

Annex A (normative) Operations log 34

Annex B (informative) Process stages 35