Self-Cleansing Velocity

DESCRIPTION

Self-cleaning velocity is essentially the speed at which wastewater must travel through the discharge pipework to 'clean' the pipework as it pumps. There is no requirement within the standards (BS EN 12056-4:2000 'Gravity drainage systems inside buildings - Wastewater lifting plants. Layout and calculation' and BS EN 752:2017 'Drain and sewer systems outside buildings - sewer system management') for discharge pipework to be mechanically maintainable; therefore, reliance is solely on self-cleansing velocity to carry out this function. The minimum design velocity should be 0.75 m/s, to prevent settling out of solids in foul water applications and lime in the solution for groundwater applications.

The term 'self-cleansing velocity' refers to the flow velocity required to convey solids along with the water carrier. Therefore, to maintain an unobstructed pipeline, the water velocity should be sufficient to transport solids/lime/debris/fat that may be present in the wastewater.

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Pump	Typical duty (l/s)	Diameter of Discharge (mm)	Water Velocity
Delta V3	2.00	32	2.49
Delta V4	2.00	32	2.49
Delta V6	2.00	32	2.49
Delta V3 Foul	4.00	50	2.04

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