

NEW APPROACH FOR THE COMPUTATION OF FLOW VELOCITY IN PARTIALLY FILLED PIPES ARRANGED IN PARALLEL

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In this paper, a new approach is presented for the computation of the flow velocity in pipes arranged in parallel based on analytic development. This parameter is needed to trail error procedures to be solved, and have big important in flow measurement and design of drainage network, where the flow is mostly flowing in free surface flow. A new method is elaborated to eliminate the need for trial methods, where the computation of the flow velocity become easy, simple and direct with zero deviation compared to Manning equation and others approaches which have been considered as the best approaches but after investigation these approaches are lack accuracy and do not cover the entire range of :

Key words: Flow velocity, free surface flow, uniform and steady flow, Circular pipe, Manning equation.