

EVALUATION AND ANALYSIS OF EMITTER DISCHARGE EXPONENT FOR ESTIMATING EMITTER DISCHARGE AT VARIOUS PRESSURE LEVEL

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ABSTRACT : Emitters discharges along a lateral were measured by collecting discharge in catch cans. The diameter of lateral line was 15 mm. There were 10 emitters at a spacing of 2 m along the lateral line. The lateral line was operated for one hour at different operating pressure from 0 to 2.2 kg/cm². Based on this measurement the emitter discharge exponent was developed. The estimation of emitter discharge was done by emitter discharge exponent equation and head loss due to friction. The Discharge exponent of the emitter was 0.24 falling the category of pressure compensating emitter. The maximum variation between estimated and measured emitter discharge was 29.4%. However, the average estimated and measured emitter discharge at different operating pressure showed less variation (i.e., 0.2 to 4.53%).

Key Words : Emitters, uniformity coefficient and discharge exponent.