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A Project Report On  
**“OPTIMIZATION OF PRESSURE COMPENSATED  
DRIP EMITTER”**

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# **Pressure Compensated Drip Emitters**

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## **ABSTRACT**

Drip irrigation is such an irrigation method that transfers the water under a definite pressure after filtering through pipe network into the soil surrounding the root system of plants in drops slowly and uniformly. As the key device in drip irrigation the emitter is to drip the pressurized water in the pipeline to the roots of the crops evenly and steadily so as to guarantee the water demand for crop growth.

Drip irrigation system employs some emitters in its system. The pressure compensated emitters are micro channels that are simple to design, but difficult to produce, thus for the ease of production and to avoid the problems associated with the present designs of emitter channels such as clogging, this project includes flow structure analysis in different micro channels geometries using CFD for problem solving and to recommend the best channel geometry for production and to overcome the existing problems.