

(PREVIEW)

Indian Standard
**FERTILIZER AND CHEMICAL
INJECTION SYSTEM
PART 1 VENTURI INJECTOR**

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Irrigation and Farm Drainage Equipment and System Sectional Committee had been approved by the Food and Agriculture Division Council.

The application of fertilizer materials or/and other chemicals through irrigation water to crop plant is based on the principle that a swiftly moving stream of water is able to carry with it the dissolved substances and fine dispersed suspended particles of materials. Venturi Injector is one of the appliance used for this purpose.

Venturi Injector operates on the principle that when a pressurized operating (motive) fluid enters the injector it is constricted towards the injection chamber and changes into a high velocity jet stream. The increase in velocity inside the injection chamber results in decrease in pressure, thereby enabling an additive liquid material to be drawn through the suction port and entrained into the motive stream. As the Jet stream is diffused toward the injector outlet, its velocity is reduced and there will be a pressure drop at the outlet. In order to standardize the requirements of this appliance for the benefit of manufacture as well as users this standard has been developed. While part 1 of this standard covers the requirement of venturi injector, the part 2 will cover the requirements of ferti-injector pump.

The figures given in the standard are only for illustrations showing typical installation of venturi injectors in the main line.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)' The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1 SCOPE

1.1 This standard prescribes the requirements of Venturi Injectors used for injecting fertilizer and chemicals in the sprinkler and drip irrigation systems.