

TYPICAL SPECIFICATIONS

- 1.0 Furnish and install where shown on drawings, complete **Hyspan** Venturi Flow Measurement System as manufactured by **Hyspan**. This shall be a coordinated system, including individual Venturi Flow Stations and Portable (or permanently mounted) Master Meter, supplied by one manufacturer.
- 2.0 Each primary flow element shall be a **Hyspan** Venturi selected from manufacturers' engineering data to permit prescribed flow at a minimum of head loss. For maximum accuracy and minimal turbulence in recovery area and thus low pressure loss, the beta ratio shall be selected to allow for a differential pressure compatible with the meter as specified herein and insure a proper system accuracy throughout the entire range. This accuracy must be obtained with as little as five (5) pipe diameters of straight pipe upstream and two (2) diameters downstream from the venturi. Each venturi shall be furnished with two (2) accurately located built-in sensing taps, nipples, shutoff valves and quick connect couplings. Venturis shall be complete with an identification tag on chain giving pipe size, venturi series, station identification and meter reading at specified flow rate, flow vs differential curves and installation instructions.
- 3.0 Venturi stations shall be one-piece brass or bronze threaded 1/2" through 3". Sizes 2 1/2" through 10" shall consist of one-piece steel, with weld or flanged ends. Sizes 12" and larger shall be fabricated steel, with weld or flanged ends.
- 4.0 Venturi sizes and beta ratios shall be selected so that design flow rates shall read between 20% and the full scale range on a linear meter (e.g. between 10" and 50" on a 0-50" meter), with permanent pressure loss of not more than 25% of indicated flow rate differential pressure.
- 5.0 The indicating meter shall be portable (or permanently mounted) type with 6" round dial, 270° indication. It shall be the dual rupture-proof liquid filled bellows type with integral temperature compensation. The meter shall have over-range protection in either direction equal to the working pressure equivalent of the instrument housing (250 psig @ +250°F). The accuracy of the meter shall be no less than 0.75% full scale. The meter case shall be waterproof. It shall have external zero and range adjusting screws and lifelong lubrication. Scale shall be calibrated uniformly either in differential pressure (0-5", 0-100"); percent of flow; or directly in gpm.
- 5.1 Portable Master Meters shall be mounted in a durable metal reinforced plastic carrying case with the following accessories:
 - a) Two (2) 10" lengths of connecting hose, each with color-coded quick connect couplings compatible with the venturi couplings.
 - b) Two (2) brass blow-down valves with Buna-N seals.
 - c) Blow-down hoses.
 - d) Instruction book with flow vs differential curves.Portable Master Meter shall (shall not) become the property of owner.
- 5.2 Stationary, or permanently mounted meters shall be furnished with wall or panel mounting brackets, bleedoff and shutoff valves, connectors, fittings and assembly piping for single, or multiple stations. Piping connections from venturi to meter shall be furnished by the contractor.

NOTE: The above is a suggested wording for a typical specification of a Flow Measurement System—since service conditions and other factors will vary on different projects the exact wording may need revision to fit different specific situations.