

HONORABLE MENTION TECHNOLOGY

Bernoulli Inlet

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This new technology is a novel sampling inlet that may achieve isokinetic sampling. The inlet capitalizes upon the Bernoulli effect by assuming the shape of an airfoil, and thereby develops positive pressure above the input port relative to the exhaust port. Thus, passive sampling is achieved (i.e. without the need for a fan) in non-zero velocity fields. In addition to isokinetic sampling, the inlet thereby reduces power consumption as well as unwanted particle impaction since no shrouding is required. Potential commercial applications include sampling of fluids in pipes (chemical manufacturing industry); off-shore oil well environmental sampling; and air duct sensors.