

FLOW LOOP SYSTEMS

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OVERVIEW

Cortest Flow Loop Systems are used to simulate flow conditions inside a pipeline. A wide range of applications can be simulated, such as: **Single Phase Liquid Flow, Single Phase Gas Flow, Multiphase (Liquid/Gas) Flow, Laminar Flow, and Various Hydrodynamic Conditions including Corrosion Flow, Slug Flow, Annular Flow, and Stratified Flow.** The flow loops are used to measure the effectiveness of corrosion inhibitors and drag reducers in various environments and flow regimes. Customers can specify operating parameters such as flow rate, temperature, pressure, single or multiphase, piping diameter, and a selection of corrosion probes and sensors to customize the system for their specific requirements.

CATEGORIES : OIL & GAS | STEEL | DESALINATION | NUCLEAR | RESEARCH

MEDIA TYPE
LIQUID, GAS, OR MULTIPHASE

FLOW RATES UP TO

10 m/s

(Liquid Flow Loop)

FLOW RATES UP TO

20 m/s

(Gas Flow Loop)

FLOW LOOP SYSTEMS

SYSTEM FEATURES

-Liquid Flow Loop Features

Flow Rates Up to: 10 m/s
Operating Temperatures Up to: 300°C
Operating Pressures Up to: 30 MPa
316 Stainless Steel or Hastelloy C-276 Construction
Variable Speed Pumps
In-Line Test Spool Sections for Insertion of Corrosion Monitoring Probes and/or Coupons
Removable Test Sections for Customer Supplied Material Test Studies

-Gas Flow Loop Features

Flow Rates Up to: 20 m/s
Operating Temperatures Up to: 150°C
Operating Pressures Up to: 10 MPa
316 Stainless Steel or Hastelloy C-276 Construction
Variable Speed Gas Blowers/Pumps
In-Line Test Spool Sections for Insertion of Corrosion Monitoring Probes and/or Coupons
Removable Test Sections for Customer Supplied Material Test Studies

-Multiphase Flow Loop Features

Liquid Flow Rates Up to: 10 m/s
Gas Flow Rates Up to: 20 m/s
Operating Temperatures Up to: 150°C
Operating Pressures Up to: 10 MPa
316 Stainless Steel or Hastelloy C-276 Construction
Variable Speed Gas Blowers/Pumps
In-Line Test Spool Sections for Insertion of Corrosion Monitoring Probes and/or Coupons
Removable Test Sections for Customer Supplied Material test Studies
Fully Inclined Test Section to Simulate Different Flow Regimes

CONTROLS

-Programmable Logic Controller (PLC) Based Control Systems

-Temperature and Variable Speed Flow Control

-Analog Outputs for Temperature and Pressure Recording

-Over Temperature and Variable Pressure Safety and Alarms

-Default Data Acquisition System Records the Following Data:

Solution Temperature(s)
Heater Band Temperature(s)
System Pressure(s)
Flow Rate
Corrosion Rate
Test Duration

TYPICAL APPLICATIONS

-Corrosion Inhibitor Evaluation

-Electrochemical Studies

-New Product Development/Testing

-Flow Studies

-Field Simulations