

vision
without
limits

OIL & GAS
REFINERY

CANTY

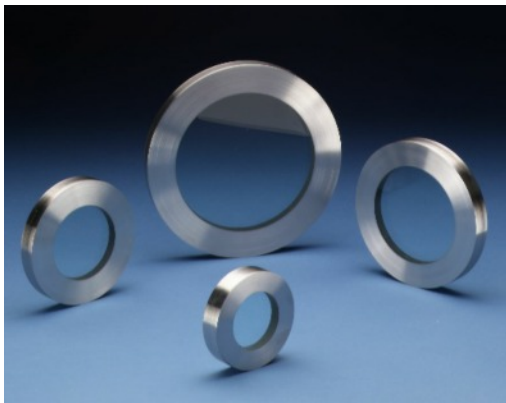
PROCESS TECHNOLOGY

BUFFALO

DUBLIN

THAILAND

CANTY FUSEVIEW™

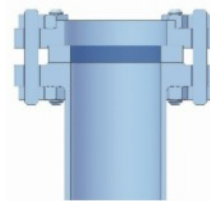


Our unique fused glass windows far exceed all conventional tempered glass windows in safety and performance. CANTY windows can be easily removed for cleaning and do not have to be discarded in the same way as traditional tempered glass windows.

How It Works

To manufacture a FuseView™ we heat the glass to it's molten point where it flows to the wall of the metal. At that point the glass fuses or bonds to the metal. Then we slowly cool the FuseView™ until the glass solidifies. The metal has a higher coefficient of expansion than the glass and the metal compresses on the glass. This squeezing prestresses the glass and puts it under radial compression. Glass is strong in

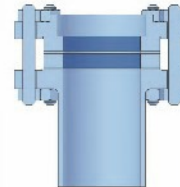
compression but not under tension or shear. When the FuseView™ is pressurized the glass bends and relieves the compression and avoids tension. This is the same as is done with concrete - it is prestressed in compression in order to take bending.



- FUSEVIEW™ ANSI/DIN**
- Ideal for new or retrofit applications.
 - Available in ANSI/DIN as well as almost any custom size.
 - The largest viewing area of any fused sight glass on the market.

• Quartz/sapphire shield for caustic service is available as an option

FUSEVIEW™ HIGH TEMP



- Include dual FuseView™ sight glasses for extreme high temperature applications.
- Dual sight glass package insulates the inner FuseView™ sight glass against thermal shock.

For More Information Click [Here](#)

SIGHT FLOWS



All CANTY sight flows come standard with FuseView™ sight glasses to provide the safest sight flow in the industry. Our sight flows have been designed to meet strict ASME code requirements and all units are hydro-tested to 150% of the maximum rated pressure.

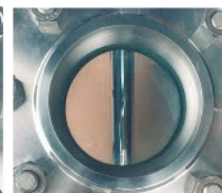


MODELS

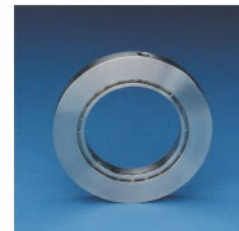
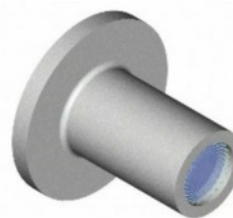
- Flanged
- Threaded
- Welded

FUSED GLASS ADVANTAGE

All CANTY sight flows feature FuseView™ sight glasses to ensure safety. By fusing glass to metal, a high pressure, high safety and high impact hermetic seal is formed.



A **Jet Spray Ring** can be used in combination with any low viscosity fluid that is compatible with the process, to generate a high energy vortex action on the surface of the sight glass to remove any fouling, and ensure a clear view at all times.



CANTY LIGHTS

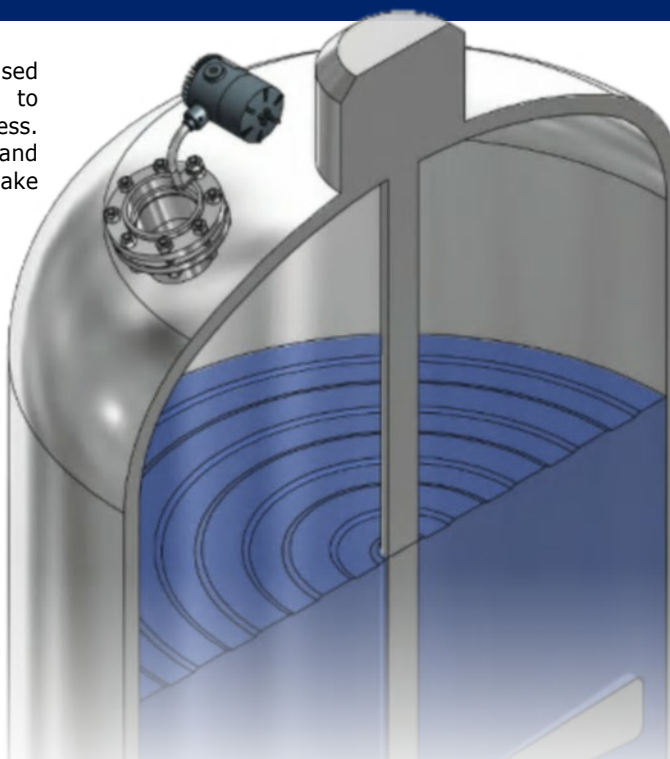
All CANTY LED lights feature a hermetic, fused glass, high pressure / temperature seal to completely seal the light from the process. The 316L SS or Hastelloy® design and variety of mounting connections make CANTY Lights ideal for any application.

Bundles mount direct to FuseView™ - No light loss due to reflection!



CANTY 12" bundle models mount directly to a sight glass with an optional bracket.

- View and illuminate through one nozzle
- Maximum LED illumination
- Cool light output - there is no product bake-on



CANTY 24" and longer bundle models mount remote from the sight glass with an optional bracket for increased accessibility.

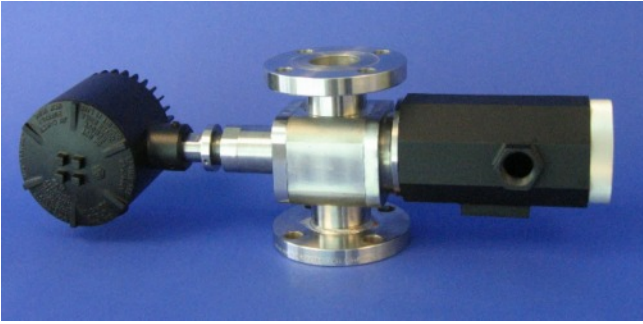
Flexible fiber optics allow for Mounting in any convenient location!



- High Intensity LED Lighting
- NEMA 4, IP66, Explosion proof, Flame proof models
- Fused glass seal provides a safe, reliable, hermetic seal between electronics and the process area.

For More Information Click [Here](#)

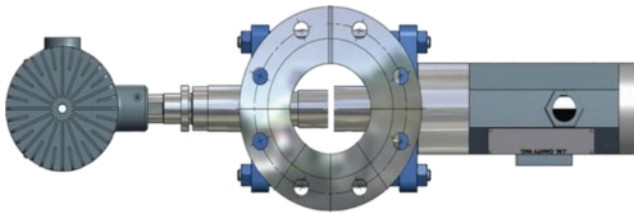
CUSTODY TRANSFER - INFLOW™ ANALYZER



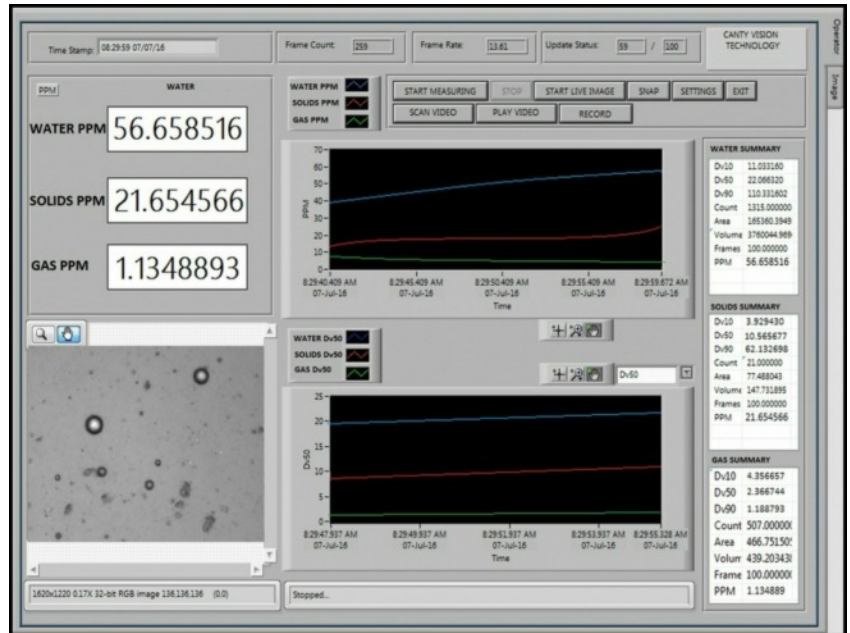
The InFlow™ Analyzer based on dynamic imaging, features a high speed microscopic camera, and high intensity light source positioned on opposite sides of a central flow cell. As fluid passes through the flow cell, images of any suspended particulate are captured and analyzed. Powerful image analysis software can distinguish between **WATER** droplets, suspended **SOLID** particles, and **GAS** bubbles to provide simultaneous size, shape and concentration information for each.

WATER CONCENTRATION - WATER DROPLET SIZE - SOLIDS CONCENTRATION - SOLIDS PARTICLE SIZE

Available in a number of configurations - **direct online, side stream, or portable** - the InFlow™ can be used at **CUSTODY TRANSFER** points on a transport pipeline, to ensure that the recipient is receiving crude within specification, to avoid any processing issues that may occur due to excess amounts of contaminants, and to avoid paying for such contaminants.

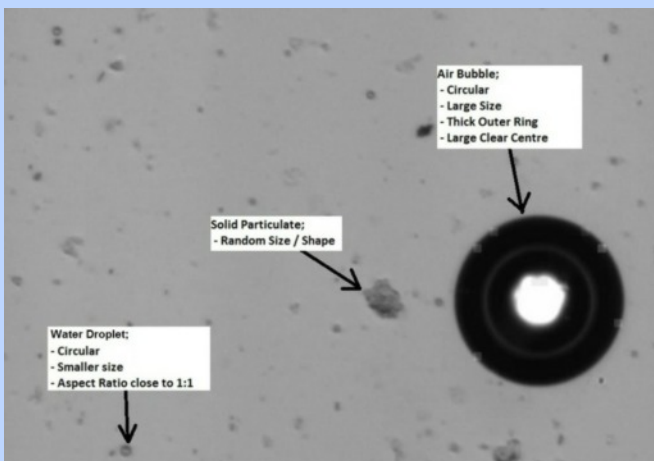


- Variable concentration range setting; 0-10ppm, 0-100ppm, 0-1,000ppm, 0-10,000ppm
- Options to 80,000ppm
- Particle sizing to 0.7µm
- Fused Glass Windows - Options to 600 BAR
- High Intensity LED Lighting
- Gigabit Ethernet Camera Technology



The software interface features continuous real time video for visual verification, and graphical trends for the size and concentration measured.

CUSTODY TRANSFER - ADHERENCE TO PIPELINE / REFINERY STANDARDS - FLOW ASSURANCE

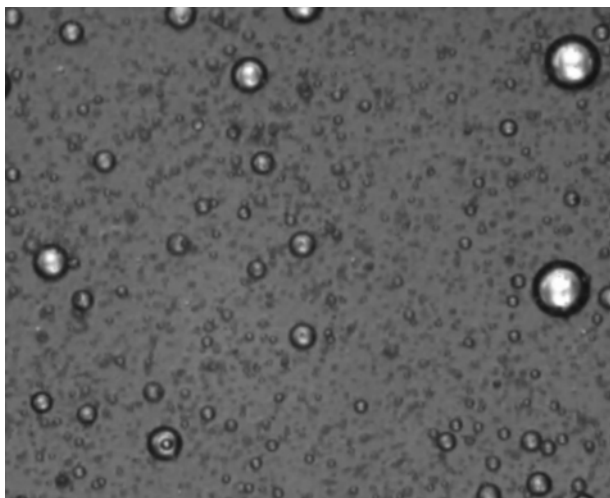


Based on their visual characteristics (shape, percent fill, translucence...) the software can differentiate between the different types of particulate within the crude oil.

Solid particles are irregularly shaped, with distinction between different types of solids also possible; sand appears more opaque than wax or crystal like hydrates for example. Water droplets are visualised as circular particles while gas bubbles are also circular but typically have a higher percent fill. Visual verification ensures the desired particles are included in the specific data set.

For More Information Click [Here](#)

REFINERY DE-SALTER - INFLOW™ ANALYZER

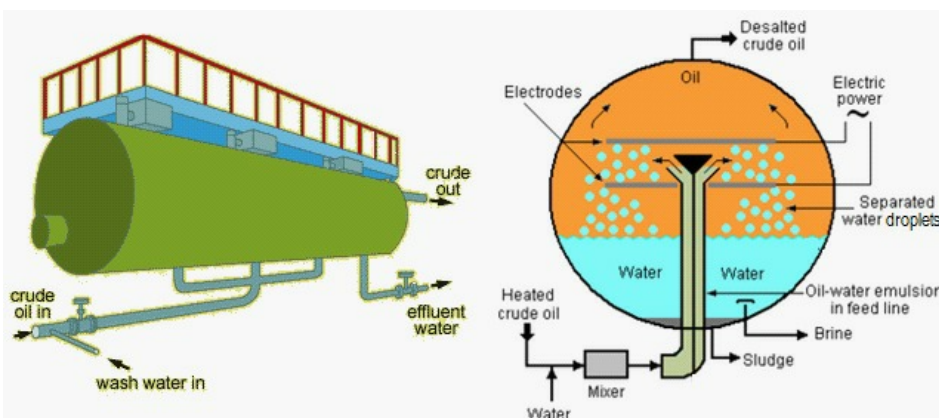


DESALTER INLET - WATER DROPLET SIZE

The InFlow™ Analyzer can be deployed as critical item in optimizing the performance of a refinery **DE-SALTER**. By installing just downstream of the shear valve on the inlet line, the system can provide continuous real time measurement of the injected water droplet size.

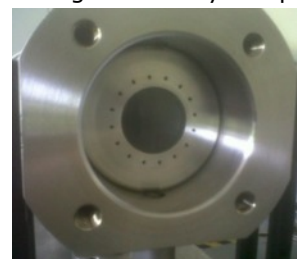
This droplet size is directly related to the rate of absorption of the salt within the crude, and to the electrically induced settling velocity of these water droplets to the base of the de-salter. Measuring and controlling this water droplet size, allows for the most efficient operation of the de-salting process, maximizing salt absorption and oil / water separation, and therefore reducing residence time in the vessel.

The InFlow™ Analyzer can be used to measure the water and solids content in the crude output line, to ensure there is no issue with excessive carryover into the remainder of the refining process. The analyzer can also be installed on the water / brine output line to ensure there is not excessive amounts of oil being removed from the process.



Larger pipelines can still benefit from direct online measurement through the use of the Canty Short Loop Sampler. This system features a fluid take off and return in a single probe connection. The system is mounted as a wafer between 2 flanges if there is flexibility in the piping, or can also be mounted to a side of pipeline flange or NPT connection.

Any fouling or build up on the InFlow™ glass windows, is removed by using a fully automated high pressure jet washing system through the analyser spray ring.

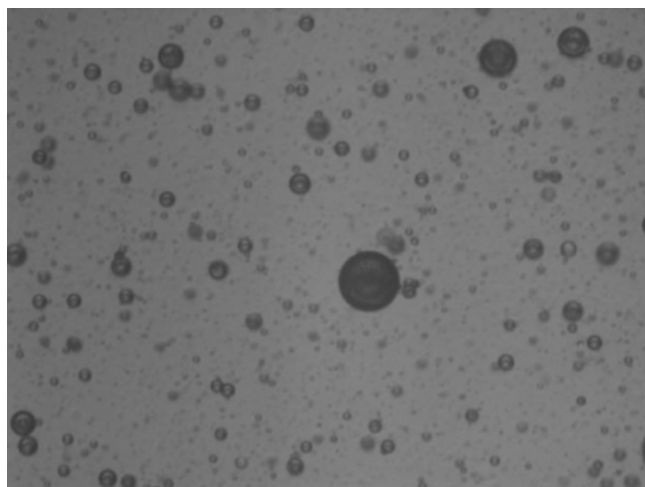


For More Information Click [Here](#)

HEAT EXCHANGER / BOILER WATER

The InFlow™ Analyzer's versatility is demonstrated by the fact the same technology which is used to monitor and measure water and solids in crude oil, can also be used to detect oil leakage into the water / steam side of a refinery heat exchanger / furnace.

With lower detection limits in the range of 1ppm, it makes the technology perfectly suited to this critical, but difficult application.



INFLOW™ ANALYZER - OIL & TSS IN WATER

The InFlow™ Analyzer based on dynamic imaging, features a high speed microscopic camera, and high intensity light source positioned on opposite sides of a central flow cell. As fluid passes through the flow cell, images of any suspended particulate are captured and analysed. Powerful image analysis software can distinguish between oil droplets, suspended solid particles, and gas bubbles to provide simultaneous size, shape and concentration information for each.



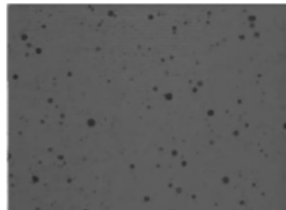
OIL CONCENTRATION - OIL DROPLET SIZE - TSS CONCENTRATION - TSS PARTICLE SIZE



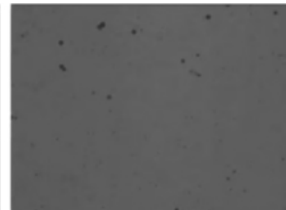
Available in a number of configurations - **direct online, side stream, or portable** - the InFlow™ can be used anywhere within a produced water plant to optimize each stage of separation, to ensure any separation equipment is running at maximum efficiency, and any environmental discharge limits are reached.

The performance of any separation equipment (hydrocyclone, CFU, IGF, membrane filters.....) is based on operating at the correct configuration for the inlet fluid condition. Similarly, the dosing volume / rate of production chemicals such as emulsion breakers or droplet coalescers, is based on understanding what is present within the fluid to be treated. The InFlow™ delivers this information, providing real time data for oil concentration & droplet size, and total suspended solids concentration and particle size.

IGF INLET



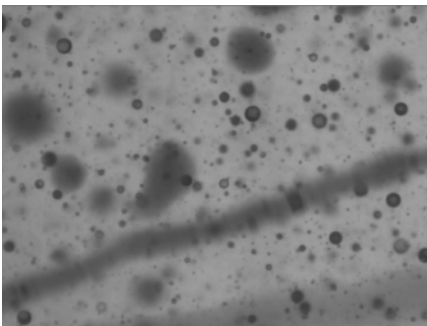
IGF OUTLET



FILTER OUTLET

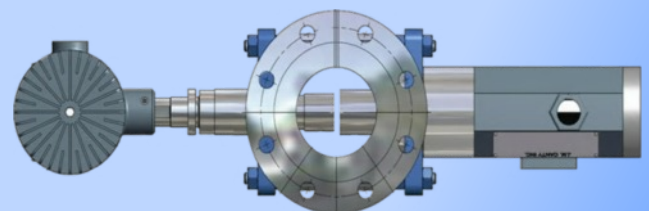


SEPARATOR / FILTER OPTIMIZATION - CHEMICAL DOSING CONTROL - ENVIRONMENTAL REPORTING

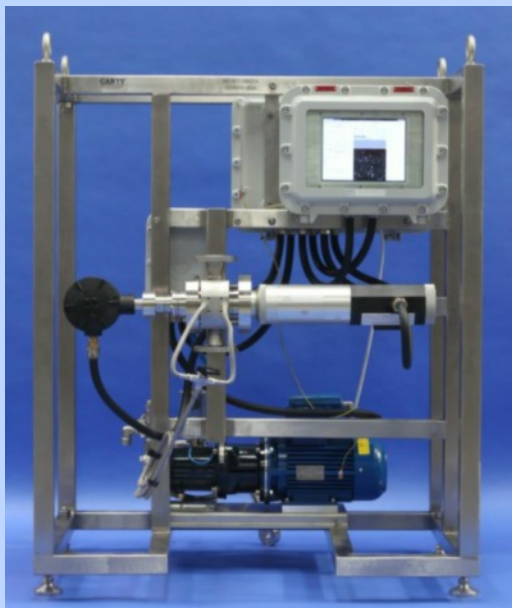


Any fouling or build up on the InFlow™ glass windows, is removed by using a fully automated high pressure jet washing system through the analyser spray ring. The cleaning fluid can even be the produced water itself!

- Variable concentration range setting; 0-10ppm, 0-100ppm, 0-1,000ppm, 0-10,000ppm
- Options to 80,000ppm
- Particle sizing to 0.7µm
- Fused Glass Windows - Options to 600 BAR
- High Intensity LED Lighting
- Gigabit Ethernet Camera Technology



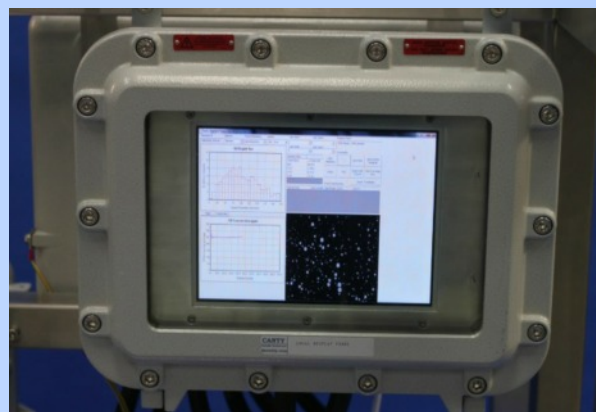
For More Information Click [Here](#)



Skid-Mounted InFlow™

Features:

- Drop-In-Place Design
- On Board Monitor
- On Board Pump



The CANTY Inflow™ is a vision-based camera system used with the CANTY Vector System image processor for oil in water concentration and size measurement in a lab environment / at-line / in-line process. The CautyVision™ Software accurately measures multiple aspects of the OiW from oil / solids / gas independent of each other for accurate data. In comparison to a florescence monitor, which measures only oil and is affected by solids and gas in the stream, the CautyVision™ software can identify the differences and the customer can visually verify the readings. The Inflow™ can be calibrated with the customers current lab method to make for easy instillation in the field. Determining PPM on the inlet and outlet of a separator will help optimize the skid. By providing droplet size the produced water skid will now know exactly how to separate the oil since the skids separation methods are mostly based on size. Also, the chemical companies will know if the chemicals they are injecting are agglomerating the oil, instead of having to wait to see if the skid is able to lower the PPM value. Video recording is an option for later analysis. In-line analysis makes sure production samples are not skipped over due to lack of sample time available!

Short Loop Sampler™

- Easily Installed Modular Unit
- Allows analyzer to be isolated, allowing for calibration & service
- Versatile sampling, single-point sampling & return.



Mobile InFlow™ Cart

Features:

- Moveable skid design on rugged wheels
- On Board Monitor
- On Board Pump

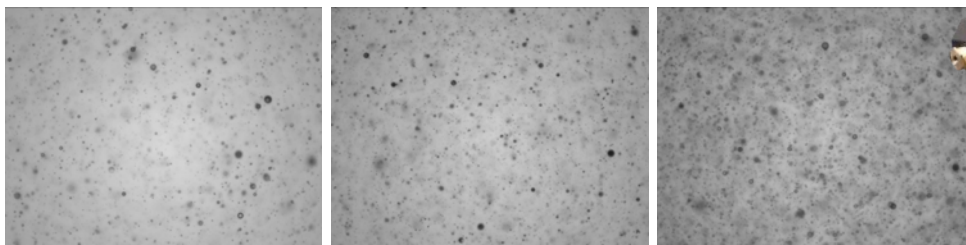
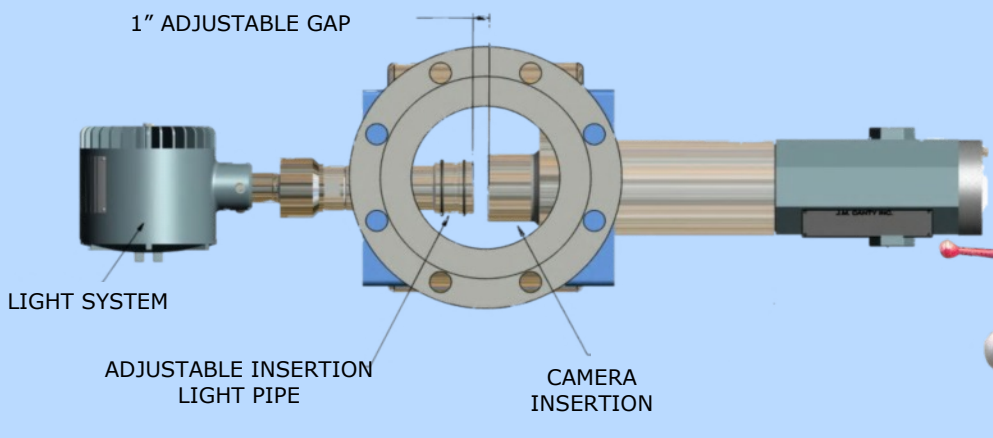
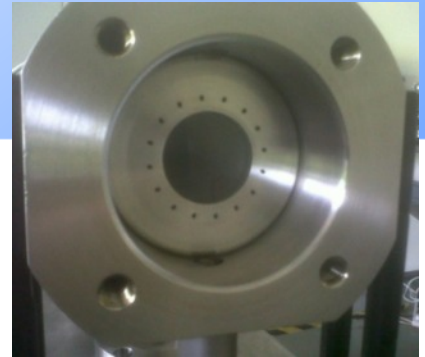
For More Information Click [Here](#)

CANTY InFlow™

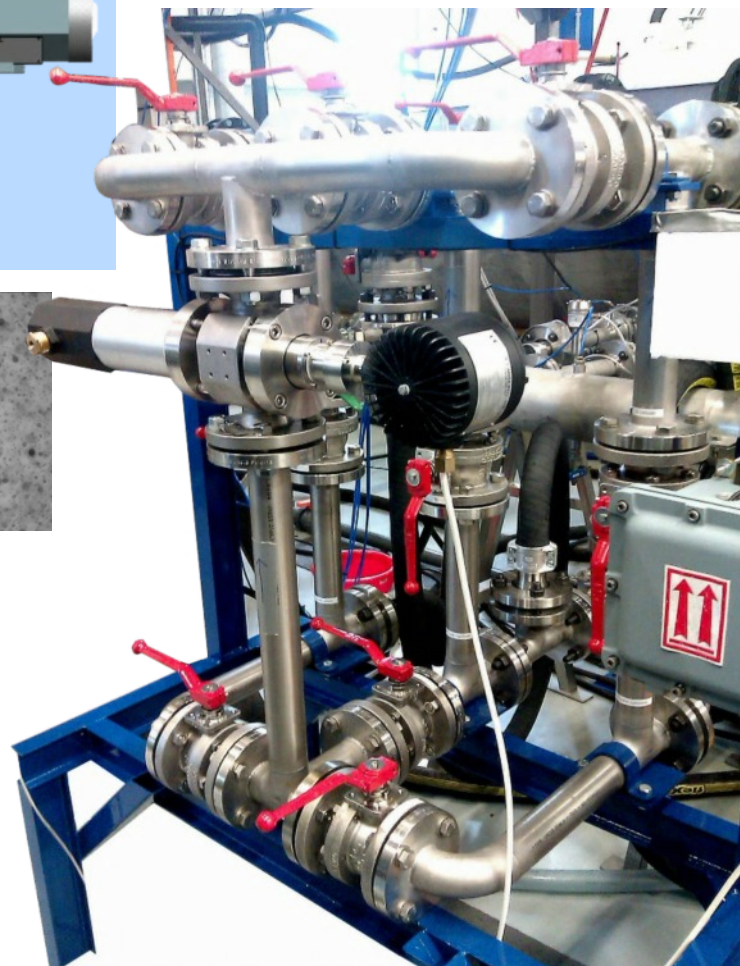


Features:

- Detect Solids & Oil Droplet – Size / Count / Concentration
- In-Line Analysis
- CCD Based High-Speed Imaging Device
- No Sampling Required
- Automatic Cleaning
- Measures PPM / PPB concentration
- Visual Verification
- Particle Sizing From .7 micron - 20,000 micron
- Variable Concentration Range Setting; 0-10ppm, 0-100ppm, 0-1,000ppm, 0-10,000ppm
- High Intensity LED Lighting
- Gigabit Ethernet Camera Technology



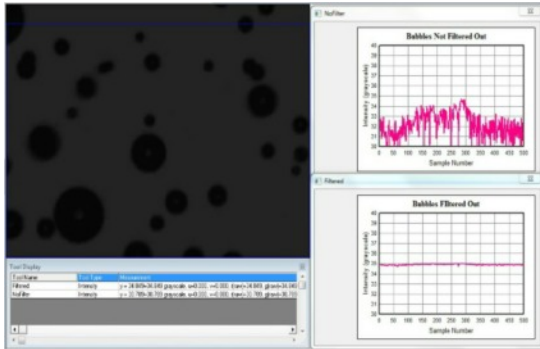
Portable InFlow™



For More Information Click [Here](#)

TURBIDITY • TSS ANALYSIS

Turbidity (NTU)

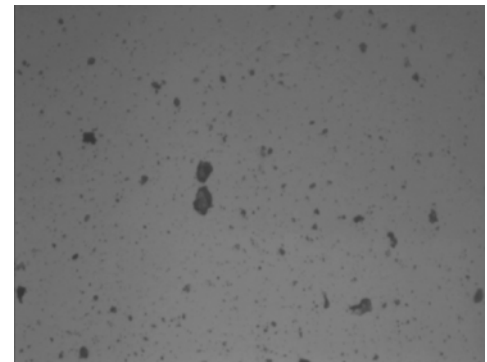


A common source of faults for traditional turbidity analyzers (most commonly light obscuration methods) is gas bubbles within the process fluid, which can have an adverse effect on the measurement. However, when CANTY's dynamic imaging is used, gas bubbles within the fluid are easily recognizable on the display screen due to their visual characteristics, and so they can be eliminated from the turbidity calculation, giving a more accurate, more consistent measurement.

The image opposite shows an example of the same fluid being analyzed with and without the bubbles filtered from measurement. The signal graph of the measurement without the gas bubbles filtered out simulates what may happen when using a traditional light obscuration technique. The signal graph of the measurement with the gas bubbles filtered out is a measurement based on the fluid only, which is what is provided by employing CANTY's dynamic imaging technology.

The particle size distribution and concentration of total suspended solids in **Effluent Water** is a critical measurement, to ensure that the solids that are in the waste water meet EPA regulations.

Larger waste water pipelines can still benefit from direct online measurement through the use of the CANTY Short Loop Sampler. This system features a fluid take off and return in a single probe connection. The system is mounted as a wafer between 2 flanges if there is flexibility in the piping, or can also be mounted to a side of pipeline flange or NPT connection.



For More Information Click [Here](#)

The **Transportable InFlow™** can be used for short term studies of Oil & TSS in Water. This could be when optimising or troubleshooting any separation equipment, or where there are simply too many measurement points for it to be practical to install a permanent analyser at each.

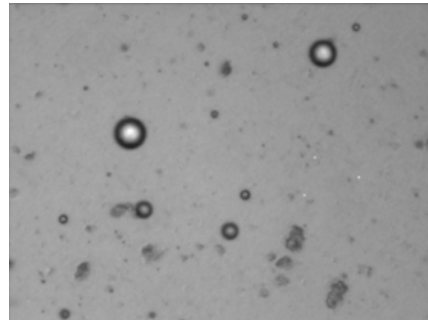
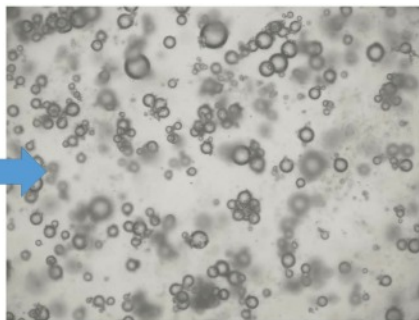
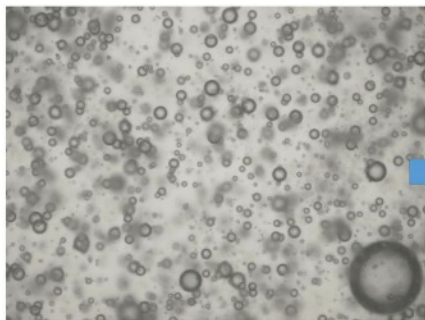
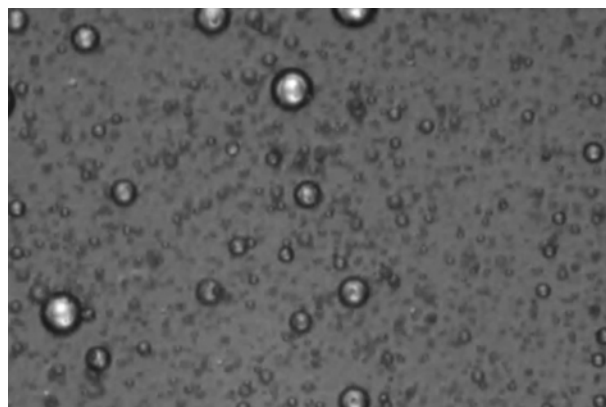
The standard system features a 500psi rated flow cell with 1/2" Swagelok connections for each hook up to existing sample points, with the system configured and operated via a wirelessly connected tablet (hazardous area system - left), or wired connection to a rugged laptop (non hazardous area rated system - below right).



INFLOW™ ANALYZER - BS&W / WAX / HYDRATES IN CRUDE

Flow assurance issues are a major concern during production and transportation of crude oil. Issues can lead to reduced production, choking of the flow lines, and equipment failure. In-depth understandings of these issues are of extreme importance to the oil field operators in order to identify and implement effective preventative measures.

The InFlow™ Analyzer can be installed on a crude oil line to provide visualisation and measurement of **WATER** and other particulate such as **BASIC SEDIMENT, WAX** or **HYDRATES**.



Water & Wax in Crude Oil

Based on their visual characteristics (shape, percent fill, translucence...) the software can differentiate between the different types of particulate within the crude oil. Solid particles are irregularly shaped, with distinction between different types of solids also possible; sand appears more opaque than wax or crystal like hydrates for example. Water droplets are visualised as circular particles while gas bubbles are also circular but typically have a higher percent fill. Visual verification ensures the desired particles are included in the user's data set.

LIGHTING LIGHTING LIGHTING; Visualization of water and other particulate within oil, and in particular heavy crude oils is a challenge in itself. The InFlow™ overcomes this through a combination of flow path adjustment, and ultra high intensity LED lighting. This lighting, originally designed to illuminate large pressure vessels is focused directly into the camera sensor, providing the large amount of light required for imaging within crude oils.

CANTY DCR - OIL / WATER SEPARATION TESTING



CANTY's Direct Characterization Rig (DCR) is an offline system used for testing of the settling / separation rates of oil / water mixtures and emulsions. The DCR's camera provides real time images of the sample as it settles, and continuously tracks the position of the interface lines between the oil, emulsion and water layers.

The unique flow cell featuring CANTY's fused glass technology allows the testing to be performed at pressure and temperature, to simulate real process conditions. The flow cell also features a number of additional ports to allow for injection of oilfield chemicals (eg. emulsion breakers) so their effectiveness can be measured prior to large scale deployment.

For More Information Click [Here](#)

REHEAT BOILERS - HIGH TEMPERATURE CAMERAS

CANTY High Temperature Cameras are ideal for demanding applications involving visual inspection or verification in extreme temperature environments. CANTY High Temperature Camera Systems feature a fused glass seal standard equipment with every model. This unique seal provides an impenetrable safety barrier to protect the camera electronics from the harsh process environment and preventing hazardous vapors from escaping into your plant.

UltraTemp™ Insertion High Temperature Cameras

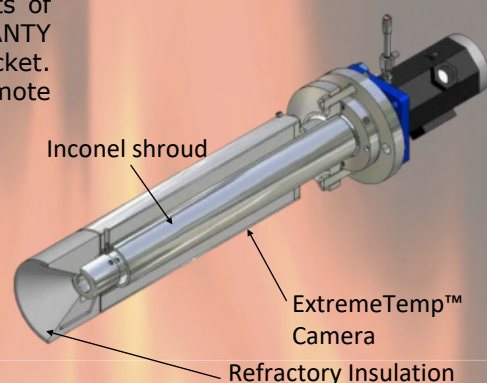


- No cooling air required. Air is used for cleaning only
- 2000°F [1090°C] or 2500°F [1370°C] models
- High temperature furnace package
- 12"-36" models available to insert thru refractory wall
- High quality quartz optics
- Disposable, protective quartz shield
- Auto electronic iris
- Non-blooming CCD camera

ExtremeTemp™ Furnace Cameras

Designed for the extreme 3000°F [1650°C] max. temperature requirements of furnaces, the ExtremeTemp™ Furnace Camera combines the a CANTY UltraTemp™ Camera with an Inconel sleeved high temperature refractory jacket. The assembly is inserted thru an opening in the fire brick, providing a remote view into the furnace.

- 3000°F [1650°C] max. Rating - ExtremeTemp™ furnace lens
- High quality quartz optics
- Auto electronic iris
- Disposable, protective quartz shield
- Non-blooming CCD or Ethernet cameras
- Cooling air required



UltraTemp™ Flush Mount High Temperature Cameras

- Ideal for applications where combined refractory and nozzle length are <4" [102mm]
- 2000°F [1090°C] process temperature / 1300°F [700°C] at lens
- 3" 150# ANSI or 80 mm 16 bar DIN flange mounting options
- Includes protective quartz shield and spray ring assembly



HighTemp™ Surveillance Cameras

- Optional mounting stands available
- High accuracy
- Remotely mounted - direct line of sight
- Ambient temperatures to 200° F
- Ethernet connectivity
- Includes HT insulation, glare filters
- Optional mounting stands available



Water Cooled Camera Jacket

- Ideal for applications where instrument air is unavailable
- Effectively cools camera housing and acts as an insulatory barrier against ambient heat
- Highly efficient and minimizes cooling costs



For More Information Click [Here](#)

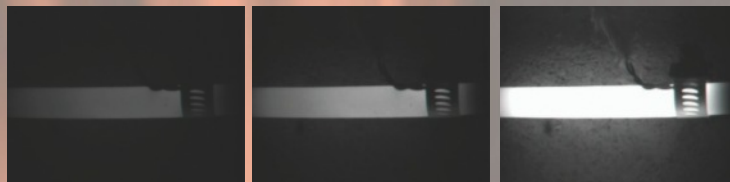
CANTY ThermalVision™ HYDROGEN REFORMER & CRACKERS

CANTY provides continuous temperature measurement by using multiband wavelength imaging pyrometry. With the advancement of CCD technology, multiband measurement has several advantages over 2 color (2 wavelength) pyrometers:

- Product temperature measurement is integrated over a broader range of wavelengths, which minimizes variance in emissivity.
- VIS (Visible spectrum) between .4 - .7 micron allows a wide range of materials to be measured without recalibration or adjustment to emissivity.

With the use of VIS, NIR and IR wavelengths, the proper ThermalVision™ camera can be selected to provide the most accurate temperature measurement range available. CautyVision™ software provides a SMART temperature measurement in addition to molten level tracking, object position and temperature measurement specific to an object or process.

Calibration is performed to ASTM standard, providing for accuracy and repeatability of +/- 1°C.

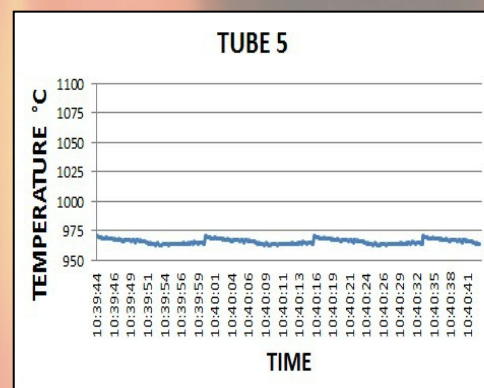
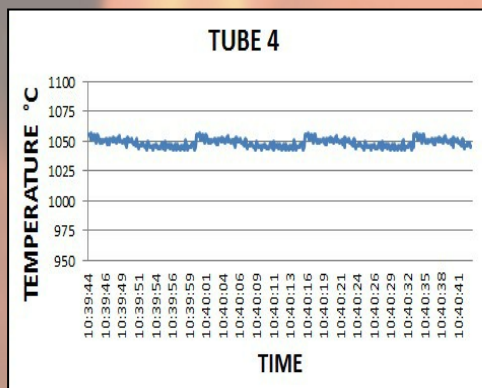


Actual VIS ThermalVision™ Camera measuring rod
Temperatures 750°F [400°C] - 2865°F [1575°C]

Spectrum	Temperature Range
VIS	750°F [400°C] - 3630°F [2000°C]
NIR	570°F [300°C] - 1830°F [1000°C]
IR	32°F [0°C] - 750°F [400°C]

*For reference only

TUBE 4 IS PLUGGED!!!



THE CANTY ADVANTAGE

The CANTY UltraTemp™ is a vision-based camera system used with the CANTY Vector System image processor to monitor the temperature of the tubes inside a hydrogen reformer. The CautyVision™ Software accurately measures temperature as well as bend in the tube for complete control. In comparison to thermocouples which are costly, not reliable and monitor only one tube, a camera system can monitor multiples tubes at the same time. The CautyVision™ software can output a signal to alarm if the tube has increased in temperature over a certain time to an operator screen, PLC, or DCS for closed loop control. The steam can then be introduced to clean the tube and avoid plugging and then switch back to the natural gas. The pyrometer is not effective for controlling the temperature of the reformer due to the time intervals in between analysis is taken. Also, not everyone measures at the same point and this could lead to a change in temperature when a change never occurred. To calibrate the system, the pyrometer can be used initially. If the temperature in the tubes increases over 10°C over 10 minutes, a plug has a chance to take place. With the UltraTemp™ this event can be avoided completely.

FEATURES:

- Temperature control
- Visual verification
- One camera for multiple tube monitoring
- Real time analysis
- Jet spray ring for cleaning
- Up to 3' insertion available
- Wall mounted to operators do not handle
- More cost effective than thermocouples
- Eliminate errors associated with pyrometers
- Ethernet gigabit camera
- 1 degree accuracy
- Data can be stored with images or video
- All data is stored on Excel or in a database for later use and easy storage
- **SAFEST OPTION FOR OPERATORS**

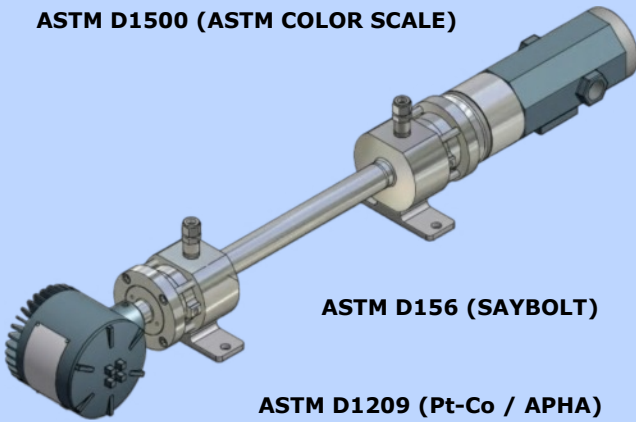
BENEFITS:

- Easy calibration
- Continuous output
- Reading independent of emissivity
- Optional save video & images if needed
- **REDUCE DOWN TIME**
- **INCREASE YIELD**

For More Information Click [Here](#)

DISTILLATION COLUMN - FRACTION COLORS

ASTM D1500 (ASTM COLOR SCALE)



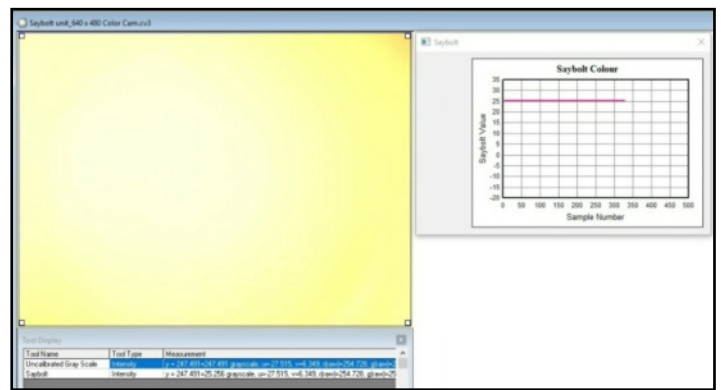
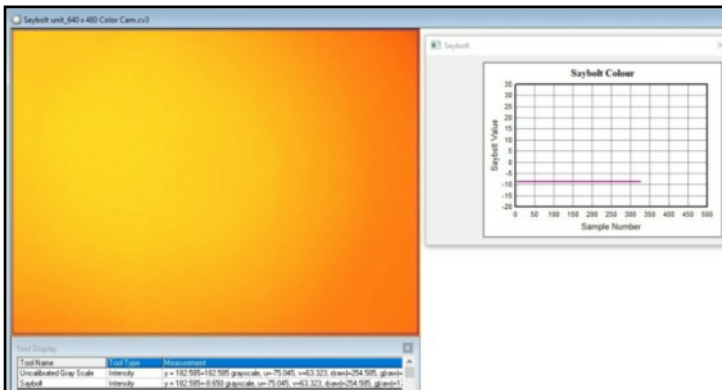
ASTM D156 (SAYBOLT)

ASTM D1209 (Pt-Co / APHA)

A variation of the **InFlow™**, featuring a longer flow path, can be used for measuring the color of the various fractions off the distillation column.

As the fluid passes through the flow cell, the grayscale intensity (0-255) of the fluid is measured, which is a function of the colour of the liquid itself. The measured grayscale intensity can be calibrated directly to any colour scale eg. **ASTM COLOR, SAYBOLT, APHA**

A regulated LED light source ensures that the process fluid is subjected to consistent lighting conditions, while a highly color sensitive CCD camera provides representative images of the fluid, ensuring reliable color measurement. The analysis software also employs a bubble elimination algorithm to ensure that any entrained gas bubbles within the process fluid, do not have an effect on the colour measurement.



DISTILLATION COLUMN - TRAY MONITORING



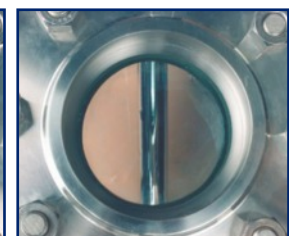
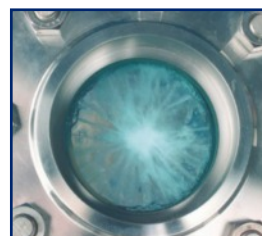
Canty's process vessel cameras with integral light source allow for high quality remote viewing of a process vessel from the operator control room.

The system hard mounts directly to the process vessel, so does not have any reflection issues which are a problem for any camera mounted outside an existing vessel sight glass.

With Gigabit Ethernet cameras the standard, and analog (NTSC / PAL) cameras also available, it allows for the flexibility of using a Canty camera light combination for new project, or as replacement systems where existing video cabling may already be in place in the plant area.

Gigabit Ethernet systems connect to a control room PC over Cat6 or Fiber Optic cable via TCP/IP communication. CantyVision software is installed on the control room PC to allow for viewing, recording, video playback, and snap shot image capture.

The Canty Jet Spray Ring is used to ensure a continuous clear view into your process.



For More Information Click [Here](#)

FUEL ANALYSIS

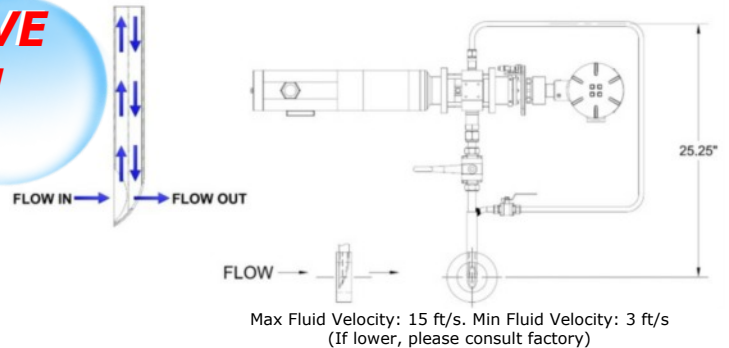
WATER / SOLIDS / GAS INDEPENDENTLY DETECTED

Using the ASTM D8049 method, the CANTY InFlow™ is a vision-based camera system used with the CANTY Vector System image processor for JET FUEL concentration and size measurement in a lab environment / at-line (Short Loop Sampler) / in-line process. The CautyVision™ Software accurately measures multiple aspects of the JET FUEL from water / solids / gas independent of each other for accurate data. In comparison to a fluorescence monitor or laser unit, which measures only contamination level but cannot determine the difference of water / solids / gas.

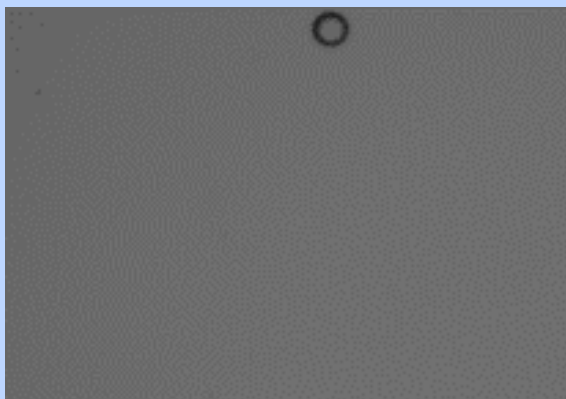
The software can then output user defined particle size distribution and particle concentration information.

- LED Strobed Technology (2μs Pulsewidth) allows for flow rates through analyzer of up to 15 fps.
- Transmitted light microscopy visible to NIR.
- 2.1 Mega-Pixel CMOS Imaging Sensor (45 FPS)
- Measurement capability to 1μm
- Calibration verification using NIST Traceable polystyrene microspheres.
- High speed software with easy to use graphical using interface.
- 15 ft/s Flow Velocity

BUBBLES HAVE NO EFFECT!



Gas bubbles in-stream do not effect analysis



Water droplet size & concentration



Core Unit

COLOR ANALYSIS

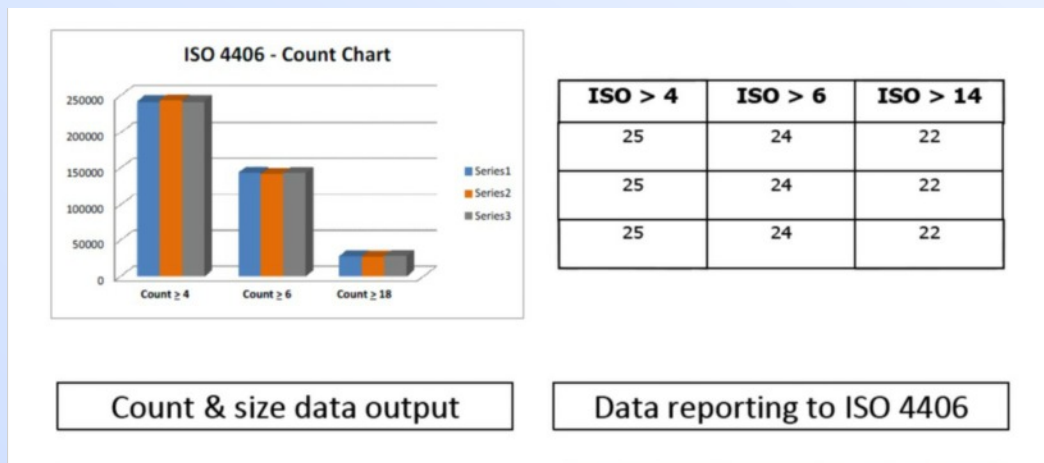
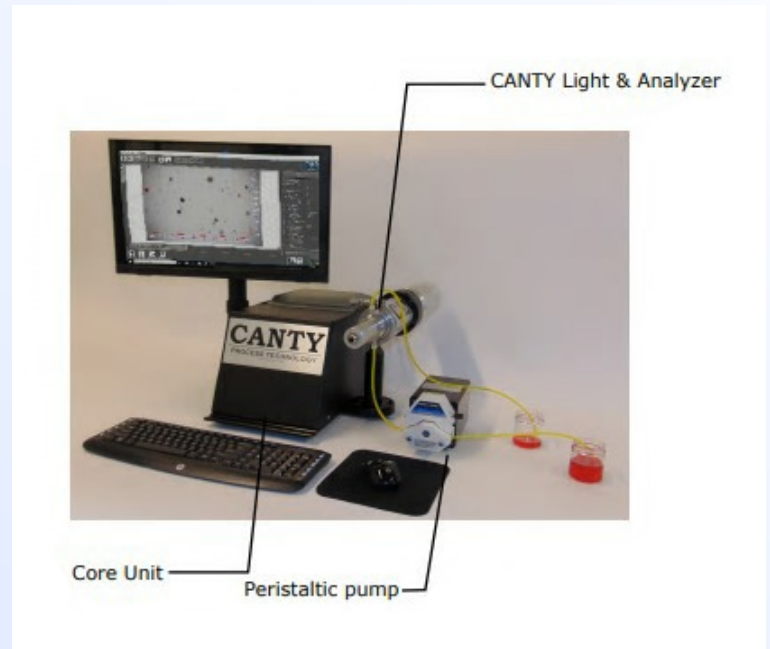
Color analysis is done by using a high resolution CCD/CMOS image sensor that detects color changes in fluids by measuring the transmittance of light. Using advanced software algorithms the system automatically removes gas bubbles from the analysis resulting in highly accurate and repeatable data outputs. This system is designed for inline use with varying pressures, temperatures and pipe diameters.

For More Information Click [Here](#)

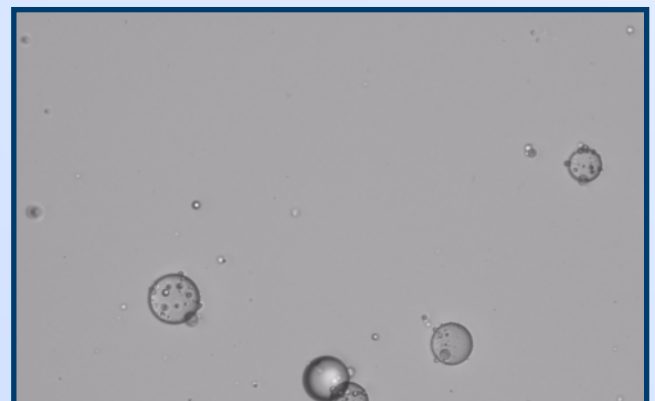
LUBE OIL PARTICLE & WATER ANALYZER

The presence of solid particles and water in lubricating and hydraulic oils can be problematic as they increase wear of moving parts, clog system filters and promote corrosion throughout the system. Detecting solids and water in these oils is crucial in managing the operation of equipment and enhancing its effective life cycle. Knowledge of particle shape, in addition to count per mL, enables the user in many cases to assess the type of particulate present and its cause which can assist in pinpointing future points of system failure and preventing them.

- **Measuring Principle as per ASTM D7596 & D8049**
- Data reporting to ISO 4406
- Detects and discerns solids, water and air in oils - back scatter and obscuration devices cannot determine shape and therefore count water and air as solid particles.
- Visual Verification
- Ethernet Connectivity
- Intuitive Software Interface
- Measurement to 0.7 μm
- **Eliminate defoamant/antifoam error in readings taken with laser instruments.**



Combining the latest in CCD/CMOS Ethernet camera technology, with CANTY fused glass technology, high intensity lighting, and CANTYVISIONCLIENT software, the system provides real time particle analysis of solids, water and air bubbles in lubrication oils. The method involves flowing the lubricating or hydraulic oil between a microscopic camera and high intensity light source. The captured images are then analyzed by the CANTYVISIONCLIENT software, where the suspended particulate is analyzed under a number of different parameters to provide size, shape and concentration data. As per ASTM D7596, particles are classified under sliding / cutting / fatigue wear, nonmetallic particles, fibre particles, water droplets & air bubbles to provide a comprehensive understanding of the condition of the fluid, and indicate where and how possible failures are likely to occur.



For More Information Click [Here](#)

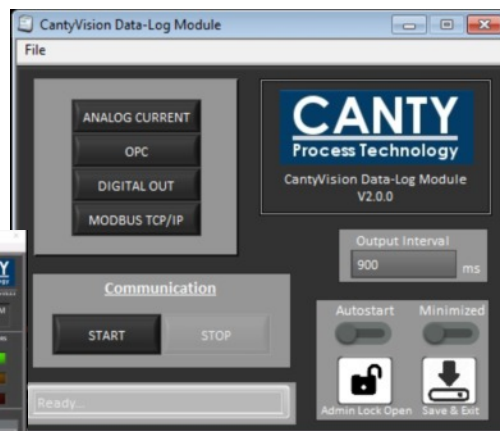
VECTOR CONTROL MODULE



The Vector Control Module (VCM) is a small fanless solid state embedded processor that has CANTYVISION™ software pre-installed. It is designed to keep project costs low and to also eliminate the need for a computer. Since the VCM has analog outputs, there is no need for an additional analog output module purchase*. The operator screen makes it simple for operators to see what is going on real time with visual verification.

The VCM has OPC or 4-20mA outputs to a PLC or DCS for complete control. The VCM comes with the ability to have full administration controlled passwords and permissions. This compact design and cost effective system is easily setup and has a customizable screen. Access to technical support can be obtained with Internet connection.

- Supports up to six cameras
- OPC outputs
- Up to eight analog 4-20mA outputs
- Link to technical support (when Internet connected)
- Digital IO
- Four USB Ports
- Four serial ports
- CautyVision™ Software installed
- Full administrative control embedded operating system
- Fan-less solid state vision control system



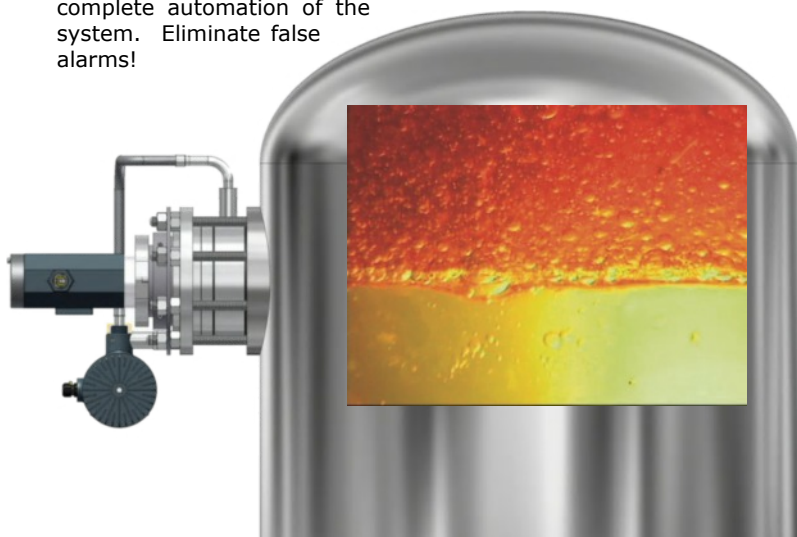
For More Information Click [Here](#)

ADDITIONAL OIL & GAS PRODUCTS

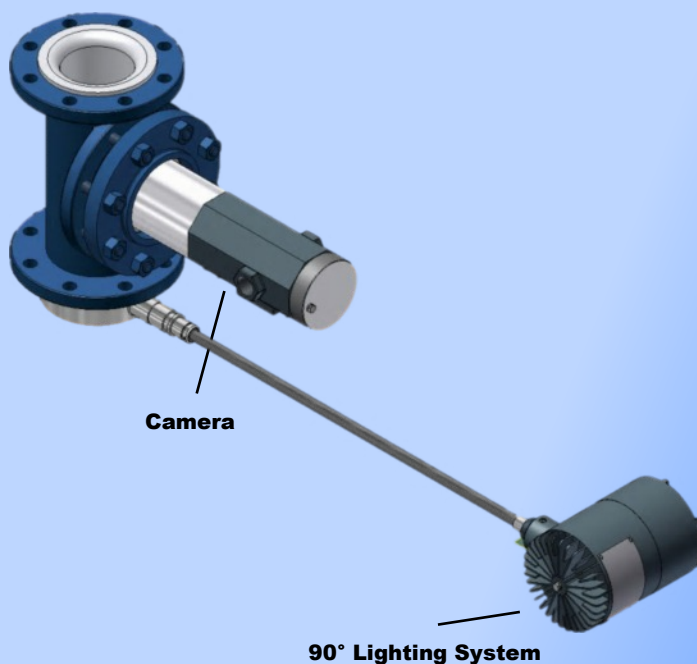
Interface

Mounted in the outlet line of a vessel, an imaging system using a unique fiber optically guided 90° lighting arrangement is used to detect the phase change during a batch liquid - liquid separation process.

Image analysis software can identify the aqueous, organic, and emulsion phases, with connection to the DCS allowing for complete automation of the system. Eliminate false alarms!



Phase Split



For More Information Click [Here](#)

**CANTY'S GOAL IS TO PROVIDE EQUIPMENT TO ENHANCE PROCESS CONTROL
AND YIELD. WE ACCOMPLISH THIS BY DESIGNING, MANUFACTURING AND
SERVICING THE FINEST EQUIPMENT IN THE WORLD**

SOME OF THE COMPANIES WE HAVE WORKED WITH

ASCOM	PREMIER OIL
BALEEN	PROLAB NL
BG TECHNICAL	SAIPEM
BP	SAUDI ARAMCO
CAMERON	SGS
CETIM	SHELL
CHEVRON	SIEMENS WATER
DALEEL PETROLEUM	SINTEF
EESTI ENERGY	SMS
EXXON MOBIL	SNF
FMC	SOILTECH
FRACTECH	TOTAL
IMPERIAL OIL	TUV NEL
MYCELX	WEATHERFORD
NESTE OIL	WINTERSHALL
NOV	
OIL PLUS	



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