



ART CRAWLER SERVICES

**FIND VALUE FOR
THE LONG RUN**

NON-INVASIVE CORROSION
INSPECTION SERVICE



OVERVIEW

Make Inspections a Work of ART

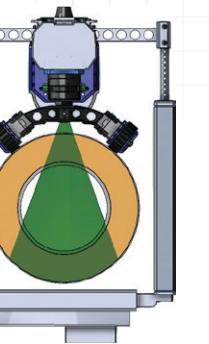
MISTRAS' Automated Radiographic Testing (ART) Crawler services utilize digital radiography (DR) to screen for internal corrosion and corrosion under insulation (CUI) in insulated and uninsulated aboveground piping and pipelines, even with product flowing through the lines.

Designed, developed, and manufactured in-house by MISTRAS Group, ART Crawler services support customers across the upstream, midstream, and downstream sectors of the oil & gas industry.



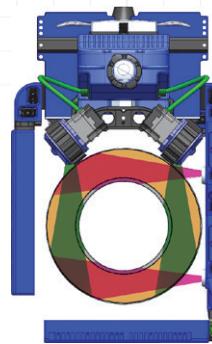
THE RIGHT INSPECTION SOLUTION FOR YOU

No matter what type of corrosion screenings your operations call for, MISTRAS' collection of ART Crawler services has the capabilities to meet your unique corrosion inspection needs.



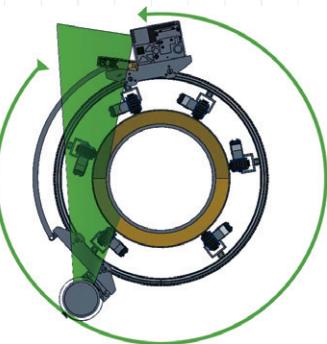
INTERNAL CORROSION CRAWLER SERVICES

TECHNIQUE	Thru-Wall Radiography
PIPE RANGE (INSULATED)	4" - 48" overall OD in-service lines
PHYSICAL SPECS	55" x 11" x 10"; 70 lbs.
REGION OF INTEREST	Bottom quadrant of pipe
DAMAGE MECHANISMS	General corrosion, isolated pitting, MIC, pipe liner failure, plugging
WIRELESS RANGE	Up to 1/2 mile line of sight
POWER REQUIREMENTS	56v Li-ion battery
CLIMB ANGLE	0-15 degrees from horizontal
TEMPERATURE RANGE	-40 F to 120 F
IMAGERS	Multi-line Photon Detectors
X-RAY ENERGY	60kV to 225kV



CUI CRAWLER SERVICES

TECHNIQUE	Tangential OD Radiography
PIPE RANGE (INSULATED)	2" to 48" overall OD in-service lines
PHYSICAL SPECS	36" x 8" x 8"; 37 lbs.
REGION OF INTEREST	Single & multi azimuth
DAMAGE MECHANISMS	CUI, moisture saturation, insulation failure, ice build-up, weld ID
WIRELESS RANGE	Up to 1/2 mile line of sight
POWER REQUIREMENTS	56v Li-ion battery
CLIMB ANGLE	0-15 degrees from horizontal
TEMPERATURE RANGE	-40 F to 120 F
IMAGERS	Multi-line Photon Detectors
X-RAY ENERGY	50kV to 160kV

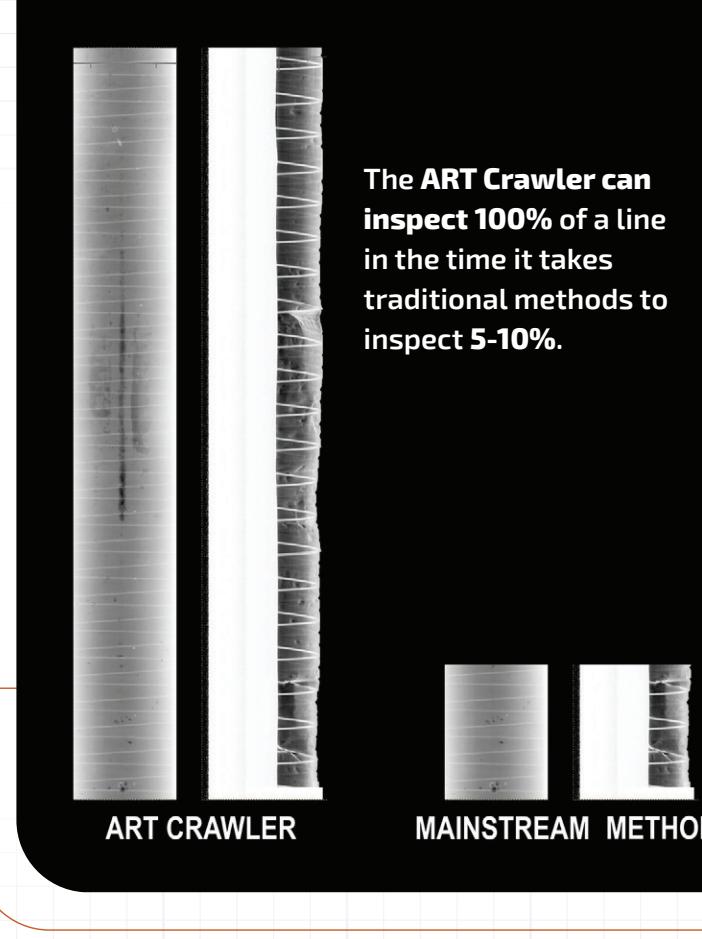


360° CRAWLER SERVICES

TECHNIQUE	Tangential OD Radiography
PIPE RANGE (INSULATED)	12" to 60" overall OD in-service lines
PHYSICAL SPECS	70lbs + ring weight (varies by diameter)
REGION OF INTEREST	360 degrees OD
DAMAGE MECHANISMS	CUI, Moisture saturation, insulation failure, ice build-up, weld ID
POWER REQUIREMENTS	110 VAC
CLIMB ANGLE	0-15 degrees from horizontal; ≥ 30 90-degree elbows
TEMPERATURE RANGE	-40 F to 120 F
IMAGERS	Large Area CMOS detector
X-RAY ENERGY	50kV to 225kV

HOW DIGITAL RADIOGRAPHY WORKS

- Digital radiography uses X-rays to provide silhouettes of the pipe wall, identifying where internal corrosion or CUI is present
- Digital scans can be instantly viewed on a tablet or computer screen, with no need for a film room or chemical processing
- Radiographic inspection results are permanently archived so corrosion data is easily accessed at any time



ART CRAWLER SERVICES BENEFITS

MISTRAS' ART Crawler services help inspection and integrity personnel make your internal corrosion and CUI inspection process run smoothly.



Advanced robotic
inspection technology



DICONDE-compliant
radiographic images



High efficacy for
CUI detection



Insulation remains
intact



Rapid corrosion
screening



Reduce downtime
and costs



No impact on simultaneous
operations (SIMOPS)



More informed asset
integrity decisions

INSPECTION METHOD PROS AND CONS

CAPABILITIES	COMPUTED/DIGITAL RADIOGRAPHY (CR/DR)	AUTOMATED ULTRASONICS (AUT)	ART CRAWLER
Rapid, Large-Scale Screening Coverage			○
Keep Product in In-Service Lines	○	○	○
Permanent Image Archiving	○	○	○
Keep Insulation Intact	○		○
Digital Imaging	○	○	○
Unlimited Autonomous Range			○

Get the free eGuide, How to Detect Corrosion Under Insulation (CUI) in Your In-Service Piping & Pipelines, for a guide to selecting the right CUI detection method for you.



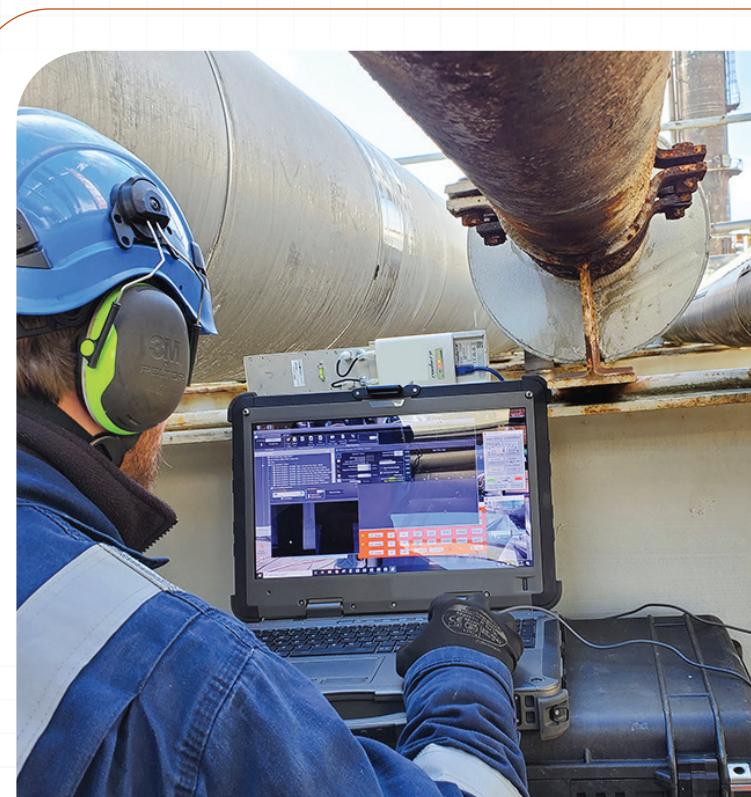
SCAN TO GET IT NOW!

artcrawler.mistrasgroup.com

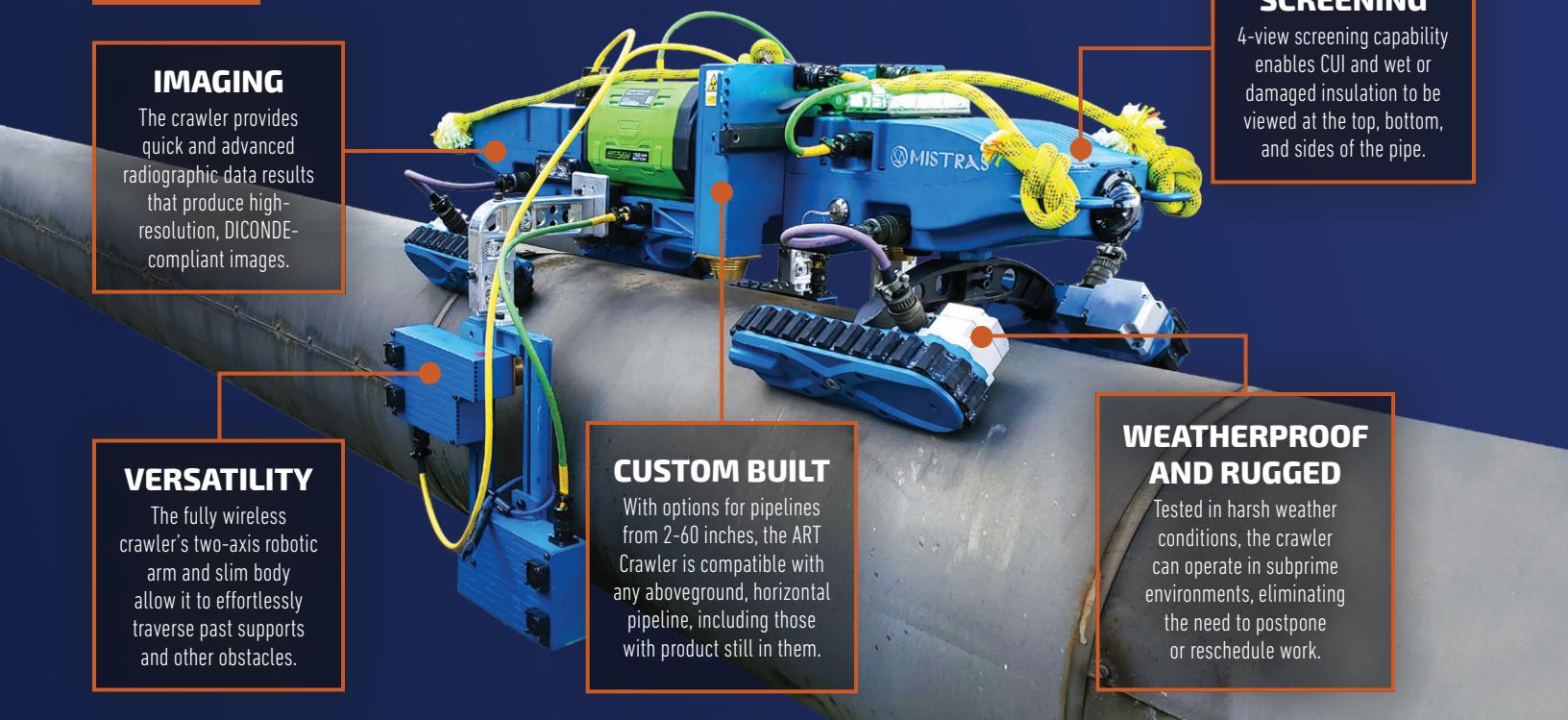
ADDITIONAL SUPPORT SERVICES

MISTRAS offers support to help identify and remediate corrosion damage as quickly, cost-effectively, and non-invasively as possible. Trained and certified technicians can be quickly mobilized to provide additional inspection and maintenance support where you need it, and when you need it most, with services including:

- Traditional and advanced non-destructive testing (NDT) follow-ups
- Maintenance services to remove and re-install insulation and protective coating
- At-height inspections with experienced rope access personnel and drone pilots



A CLOSER LOOK



ADDITIONAL RESOURCES

[ART Crawler in World Pipelines Magazine](#)

CUI, C U LATER

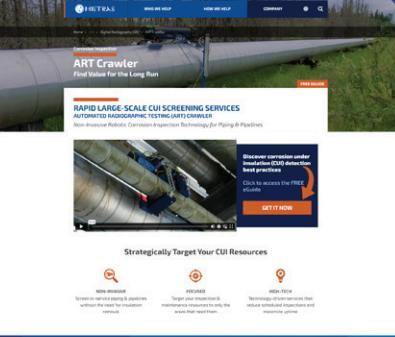
John Musgrave and Kelly Morris, MISTRAS Group, USA, outline a pipeline inspection technology to provide advanced corrosion detection.



[ART Crawler Inspection Services Video](#)



[ART Crawler Webpage](#)





ART CRAWLER SERVICES

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THE LONG RUN**

NON-INVASIVE CORROSION
INSPECTION SERVICE

**DON'T LET UNDETECTED
CORROSION SLOW YOU DOWN**



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