



THE STEP-BY-STEP GUIDE
to BRIC Service



Corrosion, erosion, scaling, and sludge deposits can reduce the reliability and performance of your boiler, or worse, lead to unscheduled downtime or forced outages. That's why boiler maintenance is so important. Your productivity and profitability depend on it.

With our new Boiler Robotic Inspection & Cleaning (BRIC) Service, you have an alternative to conventional maintenance methods, that can be time consuming, costly, and dangerous. BRIC leverages advanced robotics to keep humans out of the boiler; there's no scaffolding required, and BRIC instantly delivers more high-quality, accurate data than conventional methods. As a result, BRIC can help you reduce costs by 50%-70% and turnaround times by 30%-70%. The best part? The entire process can be tackled in just five steps.

STEP

1

Customer Information



First, we collect information using our BRIC Questionnaire. By understanding every detail of your scope – including cleaning requirements, visual and UT inspection needs, physical attributes of your boiler, and specific plans for the outage – we can accurately begin to assess the project.

STEP

2

Assessment



Is BRIC right for this job? We check feasibility and deployment options to make sure.

How many robotic systems and operators are needed? Based on your schedule, we estimate the number of systems and operators required.

What is your key driving force – time, data, or budget? Taking your requirements into consideration, we issue a proposal with options so you can select the best solution for you.

STEP

3

Planning & Simulation



You've selected your option, and it's time to start planning!

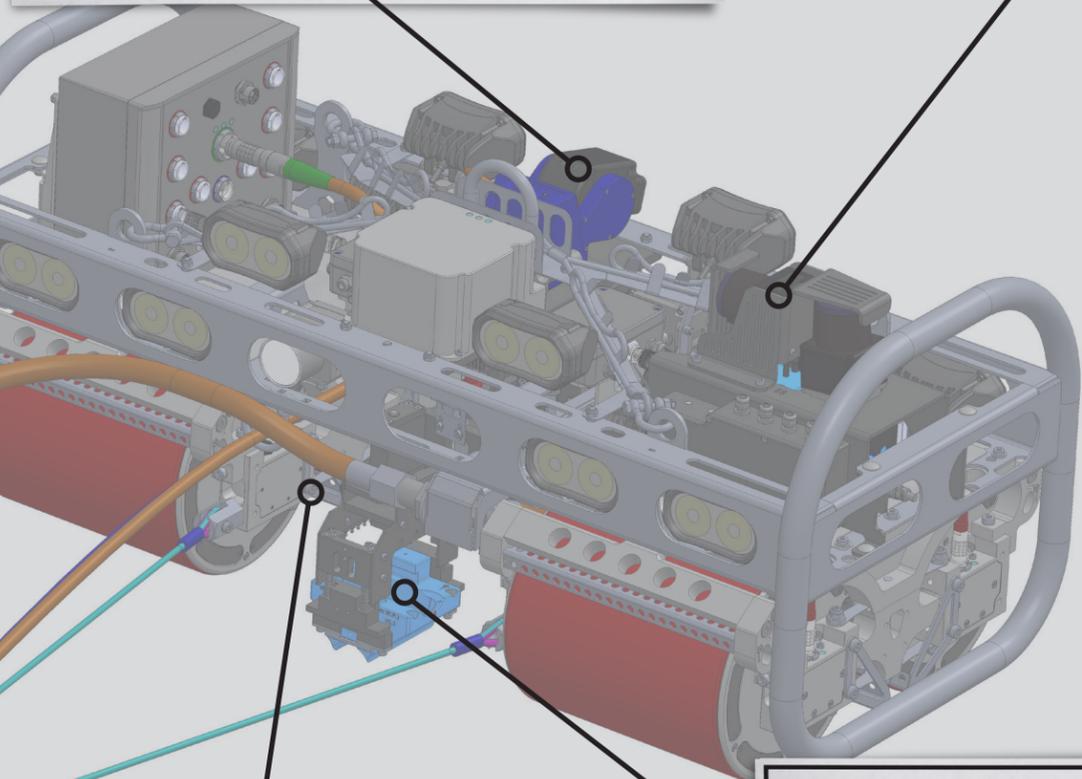
We create a detailed "flight plan" that covers the entire scope of the project. A step-by-step process is mapped out, and your boiler is modeled in 3D.

Advanced Robotics

BRIC uses advanced robotics to keep humans out of confined spaces while delivering high-quality data through three innovative inspection technologies:

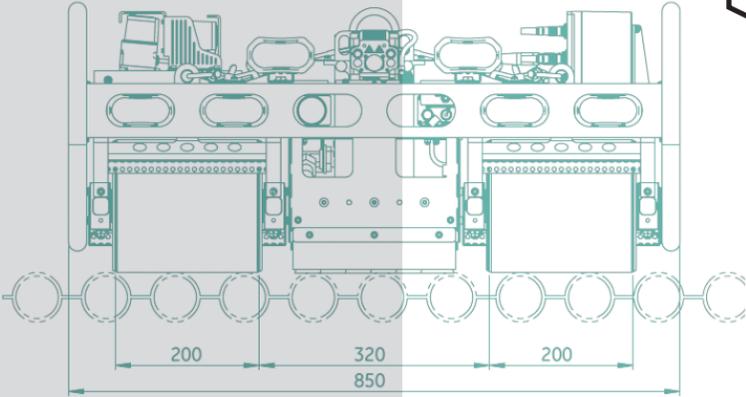
A Tilt/Zoom full HD camera executes a close-up visual inspection.

3D LOC Technology geo-tags data with its precise location in the boiler.



An Integrated Water Jet (500 bar/7250 psi) cleans the boiler walls to prepare them for inspection.

An Ultrasonic (UT) Probe Module takes three measures along the tube circumference.



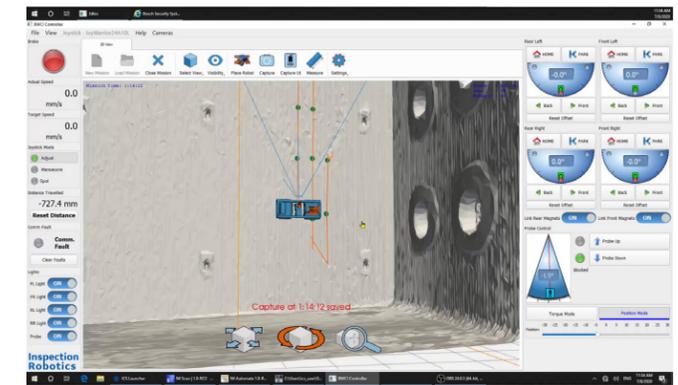
STEP 4

Inspection



We handle all the logistics, including system testing, equipment shipping, and resource planning.*

Certified to perform visual and ultrasonic inspections, our specialized robotics service team executes the cleaning and inspection using advanced technology to capture high-quality data, which is saved to a 3D model – your boiler’s digital twin – so you can accurately forecast the future of your boiler.



STEP A

VISUAL INSPECTION

Using high-resolution cameras on poles on the robot or on drones, we take a visual overview of the inside of the boiler.

STEP B

CLEANING

High-pressure water jets attached to the robotics prepare the water wall surface for the inspection by removing dirt and deposits.

STEP C

INSPECTION

We perform a detailed, close-up visual inspection with a full HD camera and an ultrasonic inspection with a UT probe, which takes three measurements on the circumference of the tube.

* Except the Water Jet Pump



STEP 5

On-site reporting and data hand-over



Once the inspection is complete, you instantly have high-quality, accurate data that's geo-tagged with its precise location inside your boiler. No waiting for a conventional report or guessing where weak spots are located.

You can then export your data to an asset anagement system or RBI system. And you're always able to access your boiler's 3D digital twin for future forecasting of your boiler.

The end-to-end support of Waygate Technologies

From our automated processes to the instant delivery of your inspection data, everything we do is focused on delivering peace of mind. That's why we support our customers from planning through inspection and beyond. Whether you need straightforward maintenance or a custom solution, our highly trained team is here to help ensure safe, high-quality inspections so your boilers operate at optimal performance for years to come.