

# How smart PIGs keep pipelines safe

Smart PIGs are probes that clean and inspect pipelines to prevent leaks and environmental damage. In a natural gas line, PIGs are powered by natural gas pressure pushing them onward. Outfitted with computers, GPS, sensors and magnets that transmit data to engineers, smart PIGs can pinpoint any signs of trouble.

**WHAT THEY LOOK FOR:** Stress, corrosion, gouges, dents and cracks.

**WHY ARE THEY CALLED PIGS?** In addition to being an acronym for Pipeline Inspection Gauges, they also make a squealing noise when running through a pipe.

**HOW BIG ARE THEY?** When PIGs are used to inspect Duke Energy natural gas lines, they can be up to 18 feet long and can inspect pipes that are up to 30 inches in diameter.



**PIPE WALL THICKNESS SENSORS**  
are powerful magnets.

**CALIPER SENSORS**  
measures any dents on the pipe.

**BATTERY AND DATA STORAGE CONTAINER**



**DRIVE CUPS**  
for propulsion  
through the pipe.

**ODOMETER WHEELS**  
keep the PIG centered in the pipe and  
measure speed and distance traveled.

# Smart Clean Pigs

**Zhe Xu**



**Smart Clean Pigs:**

Delve into the emotional tapestry woven by Emotional Journey with in Dive into the Emotion of **Smart Clean Pigs** . This ebook, available for download in a PDF format ( \*), is more than just words on a page; itis a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

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