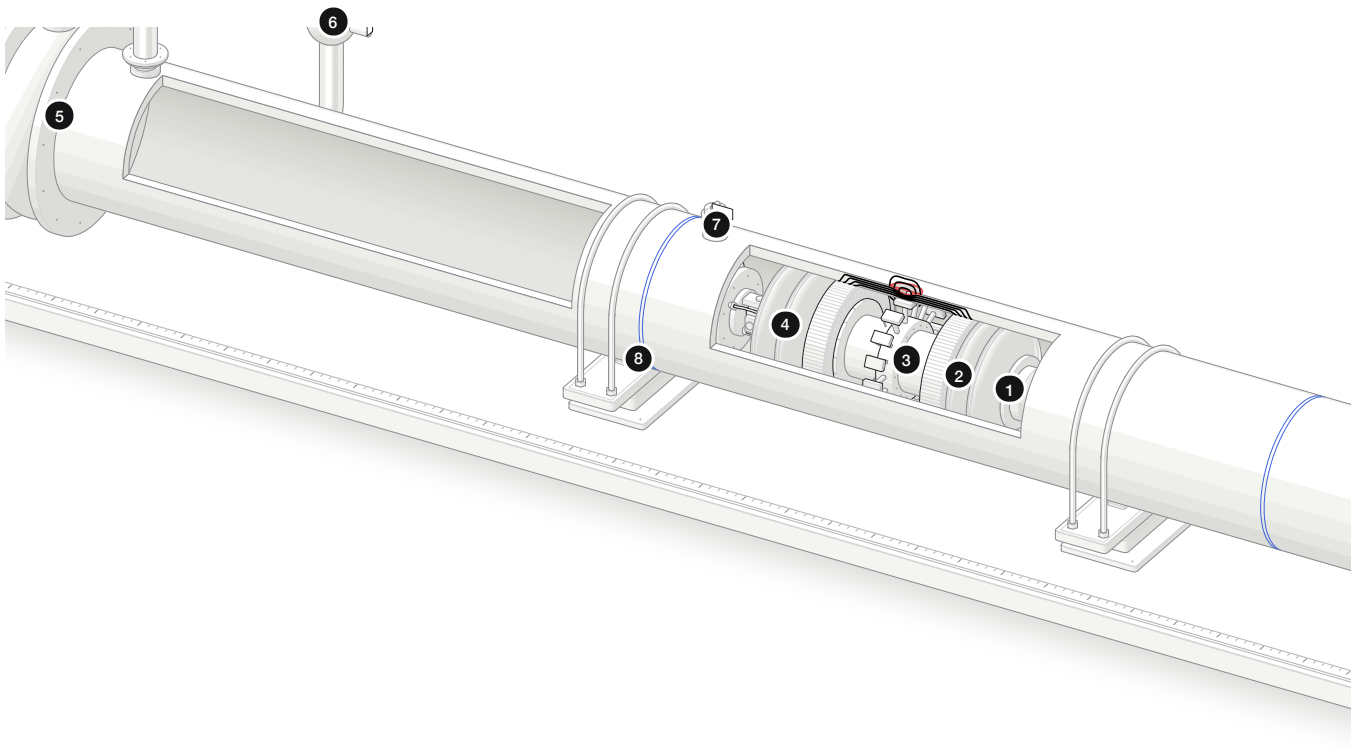


MFL pipeline run

AN-MFL-2
HOW IT WORKS
ILLUSTRATIVE, NOT TO SCALE



How does a tool inside a pipe find metal lost from its wall?

The tool is pushed along the pipe by the flow behind its cups. Magnets and steel brushes carry flux through the wall between two poles. Where the wall is thinner, some of that flux leaks out of the steel, and a ring of sensors riding the wall reads it. A recorder logs the reading against the odometer.

16

SENSORS IN THE RING

6

GIRTH WELDS

2

PASSAGE INDICATORS

8

ROWS IN THE RECORD

3

METAL-LOSS FEATURES

01 **Drive cups**
Seal against the wall; the flow behind them pushes the tool along.

02 **Magnets and steel brushes**
Two poles that drive flux through the wall between them.

03 **Sensor ring**
Sensors on sprung arms ride the wall between the poles and read the leak.

04 **Line pipe, cut away**
Girth-welded spools; a window shows the wall in section.

05 **Trap valve**
Opened before the launch so the tool can leave the barrel.

06 **Mainline branch**
Carries the flow on into the line once the tool is away.

07 **Passage indicator**
A flag that falls as the tool goes by and stays down.

08 **Pipe support**
Post, cap, wear pad and two U-bolts holding the line.