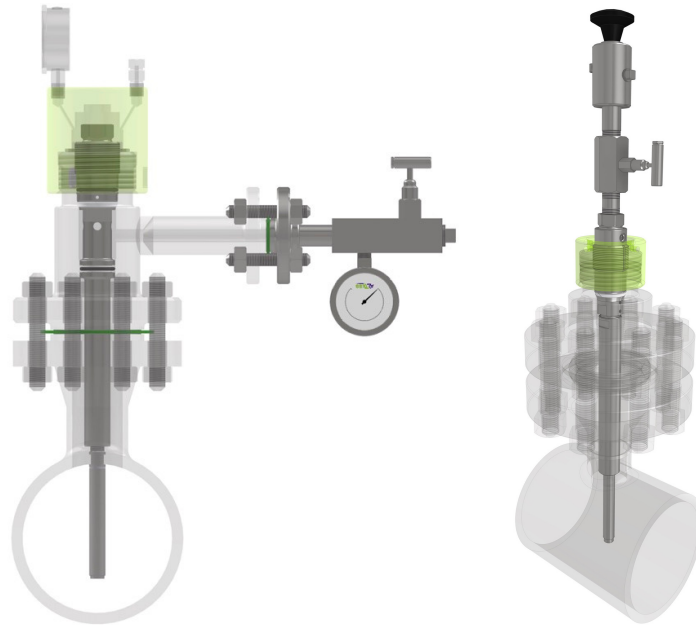


KAMIKAZE SAND PROBE



Kamikaze Technique & Configuration

The 'Kamikaze' sand erosion probe is designed to monitor erosion in flowlines. Impingement effects of sand or other abrasive materials on interior surfaces can lead to rapid and severe internal pipe wall metal loss. Pipe bends or reduced diameter sections are most prone to erosion effects.

The sensing element of the probe is a sacrificial tube. The tube is closed at one end and threaded at the other end to mate with multiple use injection/sampling/sand probe nut. The standard tube is 5/8" OD and is available in three thicknesses; .016", .028" and .035". The nut enables the sand probe to be attached to a solid plug installed within a 2" access fitting.

Axess provide a range of custom configurations based on the clients access system and material selection.

**SAND DETECTION WITH
ALARM OPTIONS**

**DIRECT IN-LINE OR SIDE
TEE OPTIONS**

**NPT, 1" INSERTS AND 2"
HP FITTING OPTIONS**

**EXTENSIVE MATERIAL
OPTIONS FOR FITTINGS
AND PROBE ELEMENTS**

**PRESSURE AND
TEMPERATURE RATED TO
6000PSI & 260C**

Remote Alarm & Shut-off

Sand or abrasives eventually erode the sacrificial tube exposing the sealed system to operating pressures. The pressure is directed through ports in the sand probe nut to the side tee portion of the access fitting and can be connected through valves to a remote alarm. The location of sand monitoring points is critical to effective integrity management. Experience has shown that the most erosion occurs immediately downstream of every change of flow direction, especially on the outside of a turn. Sand normally returns to the approximate middle of the flow stream about ten to twenty pipe diameters downstream of each turn. Additionally, changes of direction which occur after a long straight run tend to experience more severe erosion rates.

The Kamikaze Valve with Sensor is a three-way block and bleed valve which detects the presence of abrasive material in a flowstream that could cause the piping to be cut out.

The valves shifts position when an abrasive gas or liquid erodes the sand probe sufficiently to allow flowline pressure to act against the sensor's lower stem. The Sand Probe instrument pressure working range is from 0 to 250 psi with 1/4" NPT connections.

The section attached to the flow line has a working pressure range of 100 to 10,000 psi and has a 1/2" 14 NPT mounting connection with a 1/4" female port for connecting the probe.

TECHNICAL DATA:

- Input from Sand Probe – 100 – 10,000 psi
- Control Supply – 0 – 250 psi
- Overall Length – 5-3/4"
- Diameter – 1-3/4"
- Material: 303 Series Stainless Steel
- Seals – Buna-N or Viton
- Weight – 1.75 lbs.



Replacement Probe Inserts

The carrier plug and probe can be retrieved under pressure utilizing the Janus™ Retrieval Tool Kit, allowing for probe changeout whilst under full operating conditions. Probe inserts are available in many materials including 316, Duplex and Inconel as standard. Select the correct thickness based on your maximum acceptable wall loss prior to triggering and alarm. .016", .028", .035"

Reference Links

[Axess High Resolution Sand Probes](#)

[DCU & HHU](#)

[Axess Online Instrumentation. Wired and Wireless](#)

Access Fitting: AX2HP-RF600-STHRF600-A4/SP/2PRC

Model	Pipe Connection	Configuration	Material	Plug	Cover
2" HP Access Fitting	600# Raised Face Flange	1/2" 600# Raised Face Flanged Tee	A105 CS	Solid Plug	2-Hole Pressure Retaining Cover

Sand Probe Nut: SAND10.00-Q

Model	Length	Size
Sand Probe Nut	10.00"	1/4"

Sand Probe Nut: KSP-Q-A3-35-5.50

Model	Size	Material	Element Thickness	Length
Kamikaze Sand Probe	1/4" NPT	316L SS	35mil	5.50"

