

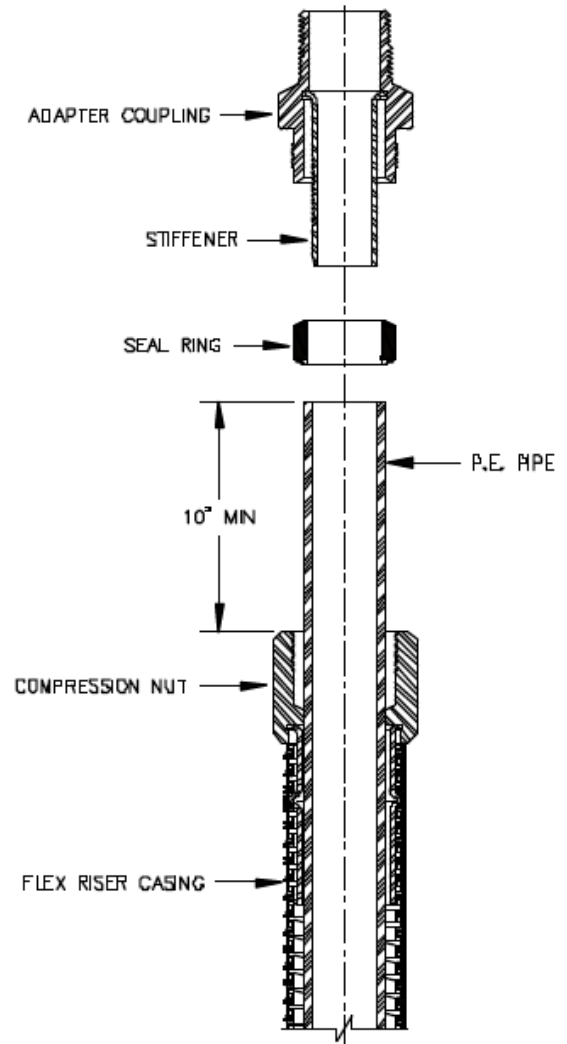
ECSI-Risers

Flexible and Rigid Service Risers



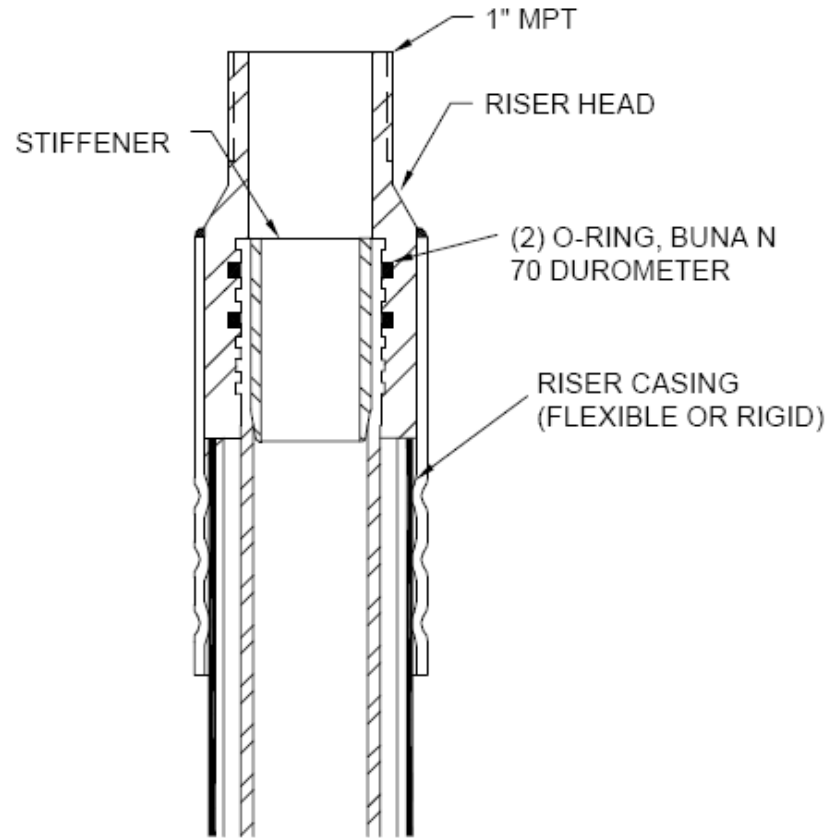
Service Head Adaptor Design

- **Early technology incorporated service head adaptors**
 - Compression joint made by installer
 - Functionally adequate but operator errors could lead to weak joints



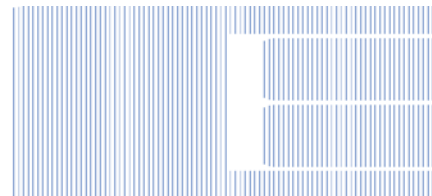
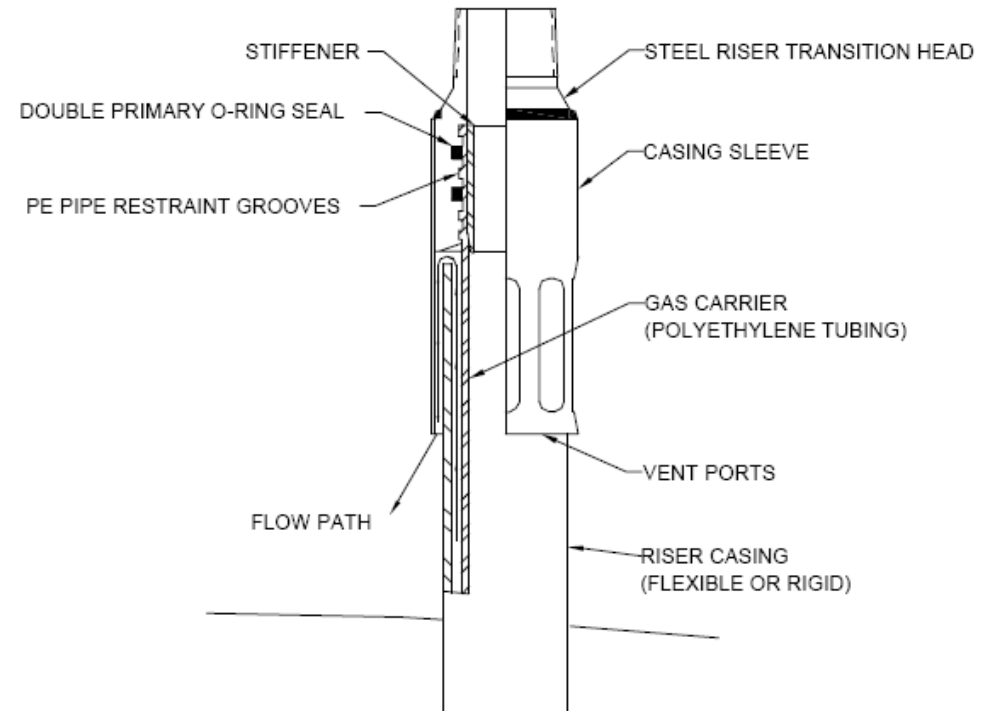
Factory-made connection

- **Industry moved to factory made PE to metal connection**
 - Repeatable assembly procedure in a controlled (factory) environment
 - 100% factory testing of joint
 - Significantly reduced chance for operator error



Factory-made connection with safety vent

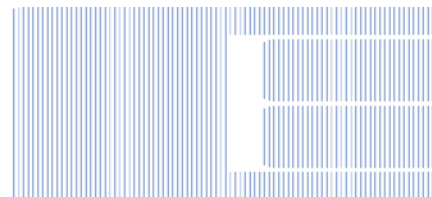
- **Newest design in evolution provides positive venting for early leak detection**
 - Same factory-made connection
 - 100% Pressure tested
 - Patented design provides vent channels for evacuation of fugitive gas

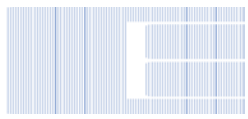


ECSI-VENT™

Flexible and Rigid Service Risers

U.S. Patent #7740284 and 7753412





Contents

- Description and Purpose
- Leak Migration and Joint Integrity
- How the ECSI-VENT™ Works
- Design and Installation
- Advantages



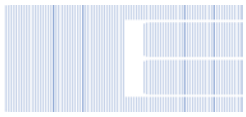


Description and Purpose

ECSI-VENT™ ...the transition style vented service riser for that extra peace of mind...

- Alerts the homeowner that gas may be leaking along the service line in the vicinity of his home
- Allows migrating gas to be vented safely to atmosphere
- Available with a rigid or flexible casing

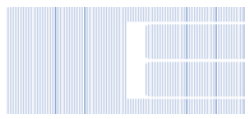




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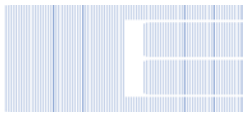


Leak Migration and Joint Integrity

Couplings can leak when improperly installed...

- Leaks along gas mains can migrate toward service lines...
- Fuel gas can migrate along natural gas service lines...
- Whether directly buried or inserted...
- Sometimes with devastating results...





Leak Migration and Joint Integrity



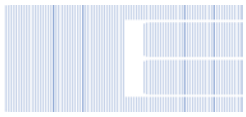


Leak Migration and Joint Integrity



Reduce the risk and exposure to unwanted fuel gas accumulation with the ECSI-VENT™ service riser





Contents

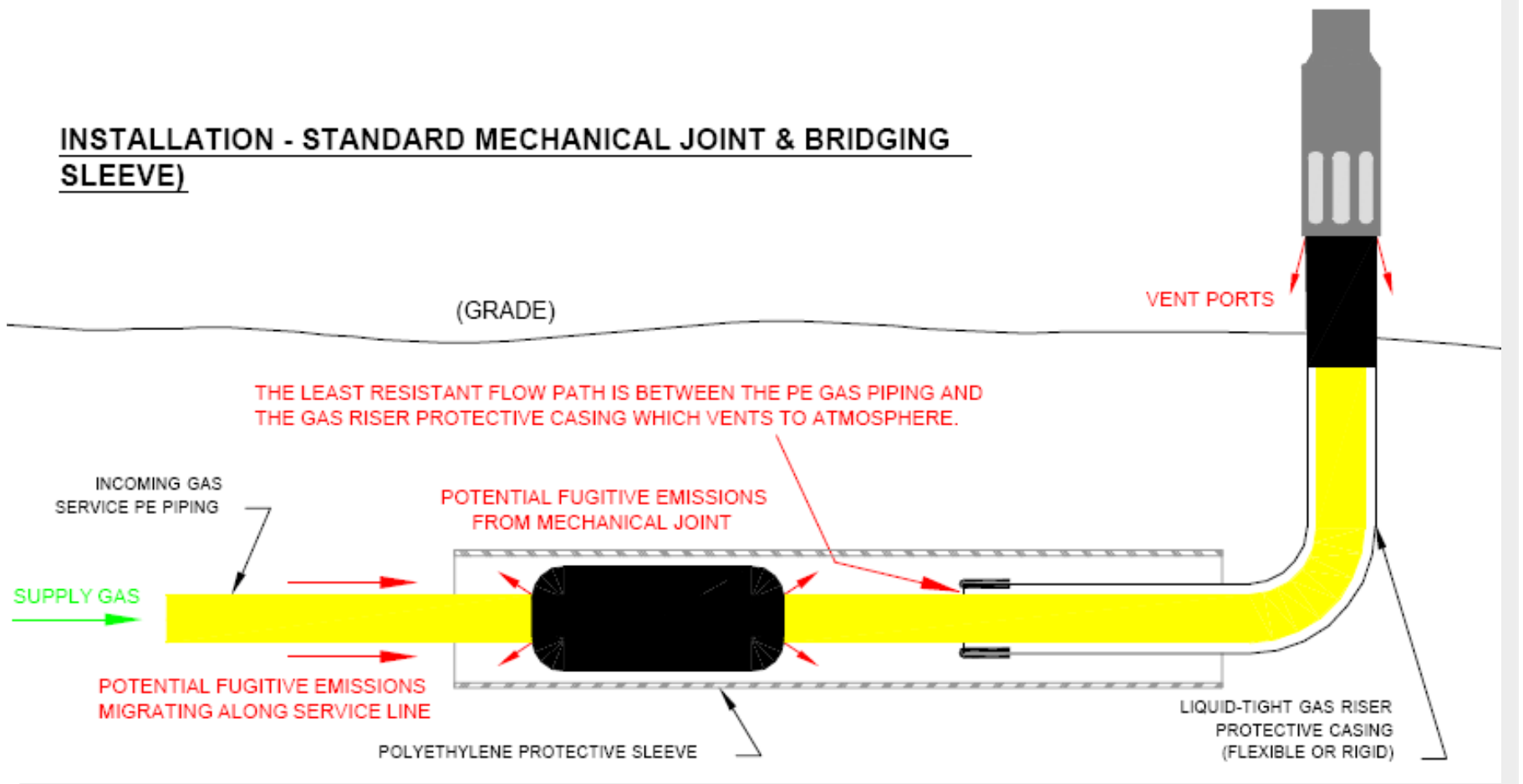
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How the ECSI-VENT™ Works

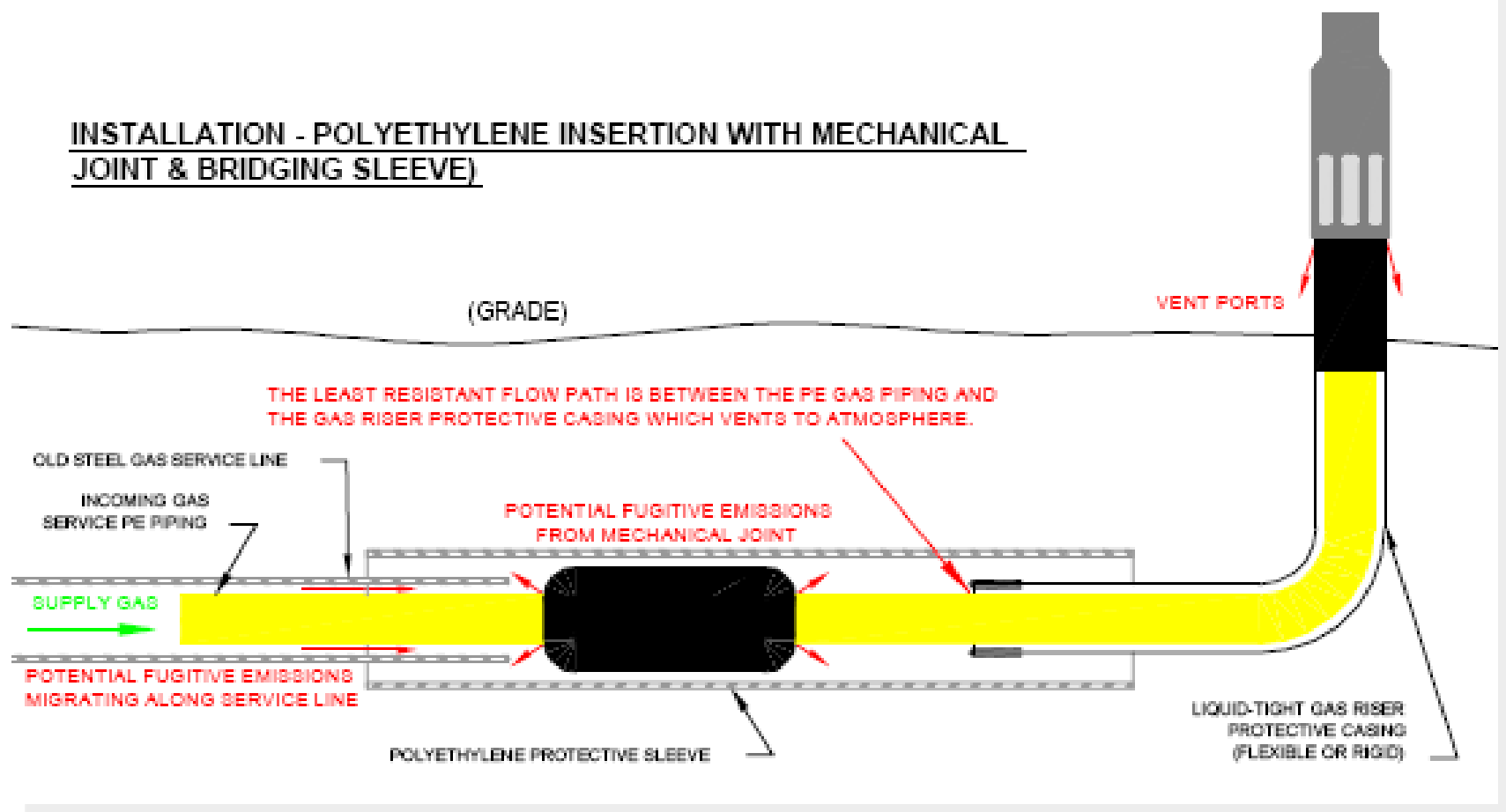
INSTALLATION - STANDARD MECHANICAL JOINT & BRIDGING SLEEVE)





How the ECSI-VENT™ Works

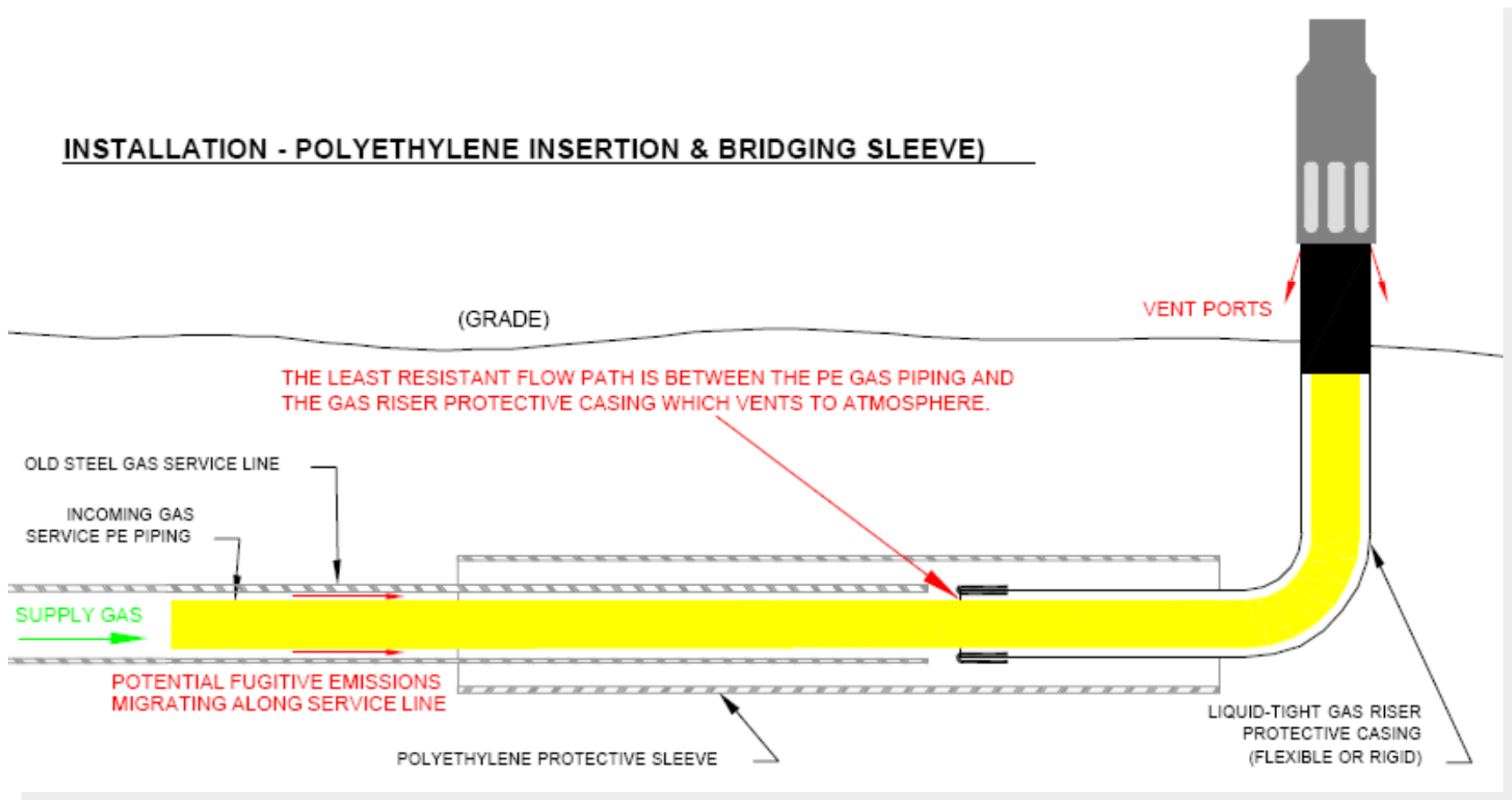
INSTALLATION - POLYETHYLENE INSERTION WITH MECHANICAL JOINT & BRIDGING SLEEVE





How the ECSI-VENT™ Works

INSTALLATION - POLYETHYLENE INSERTION & BRIDGING SLEEVE)





How the ECSI-VENT™ Works

The ECSI-VENT™ riser provides simple leak (odor) detection by the homeowner or...

- By a routine utility “sniff” under the riser head
- Higher flow rate leaking may be detected audibly



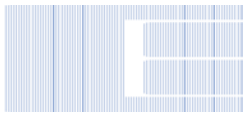


How the ECSI-VENTtm Works

The use of a bridging sleeve is recommended...

- Shields the underground end of the riser from backfill
- Protects the coupling from stresses associated with axial misalignment

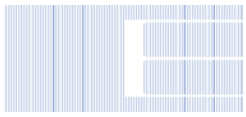




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Design and Installation

Product Design

- Field proven “transition head” design identical to the design used on our non-vented risers
- Rigid, flexible or “hybrid” protective casings
- The unique factory made connection between the riser head and the protective casing provides the venting...
- Multiple venting ports...safely protected from the weather and from infiltration by insects





Design and Installation

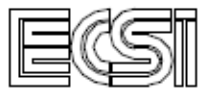
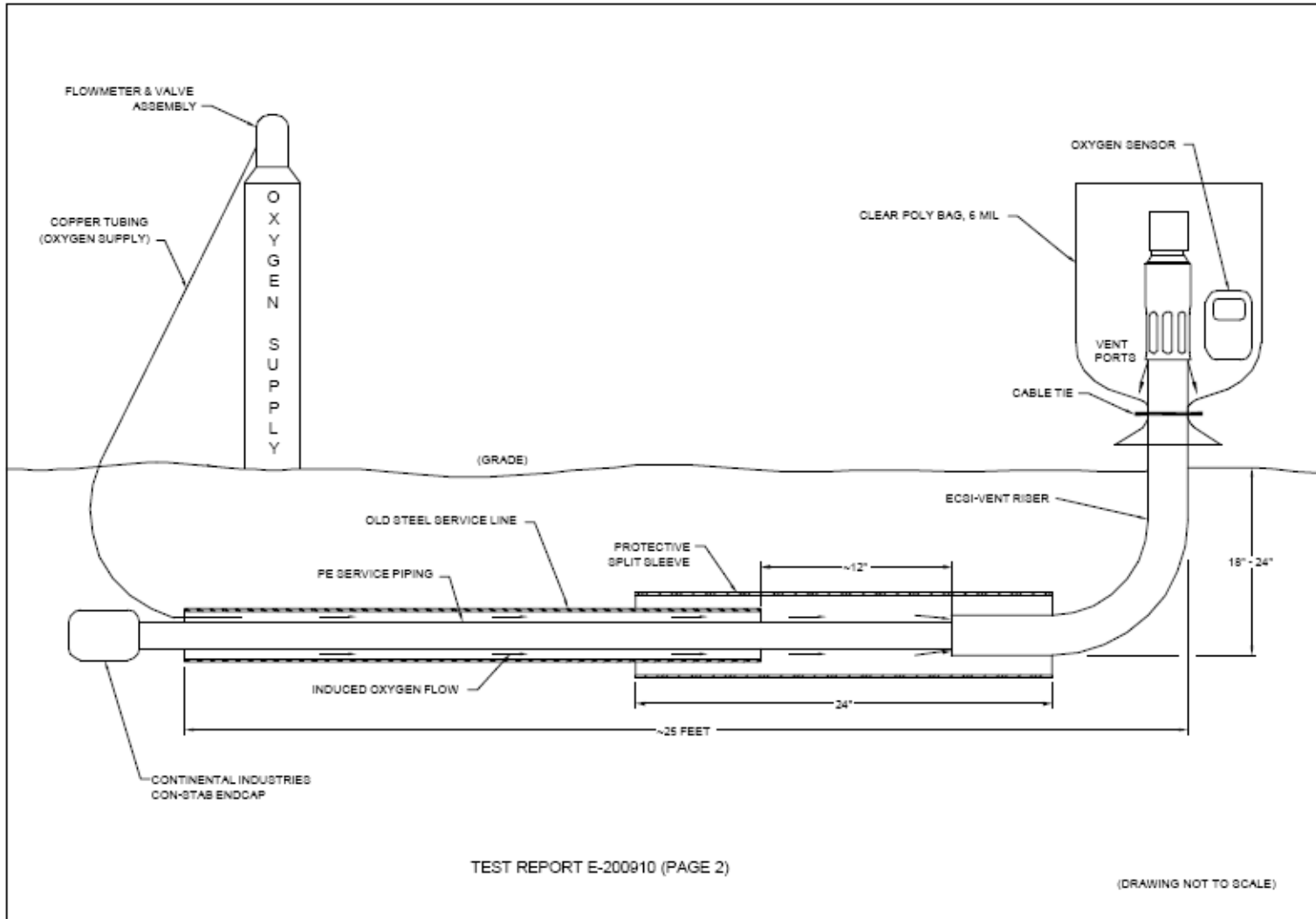
Installation

- No special tools needed
- No special training required
- ECSI-VENT[™] is installed just like any standard riser





Testing – Insertion in Steel Casing

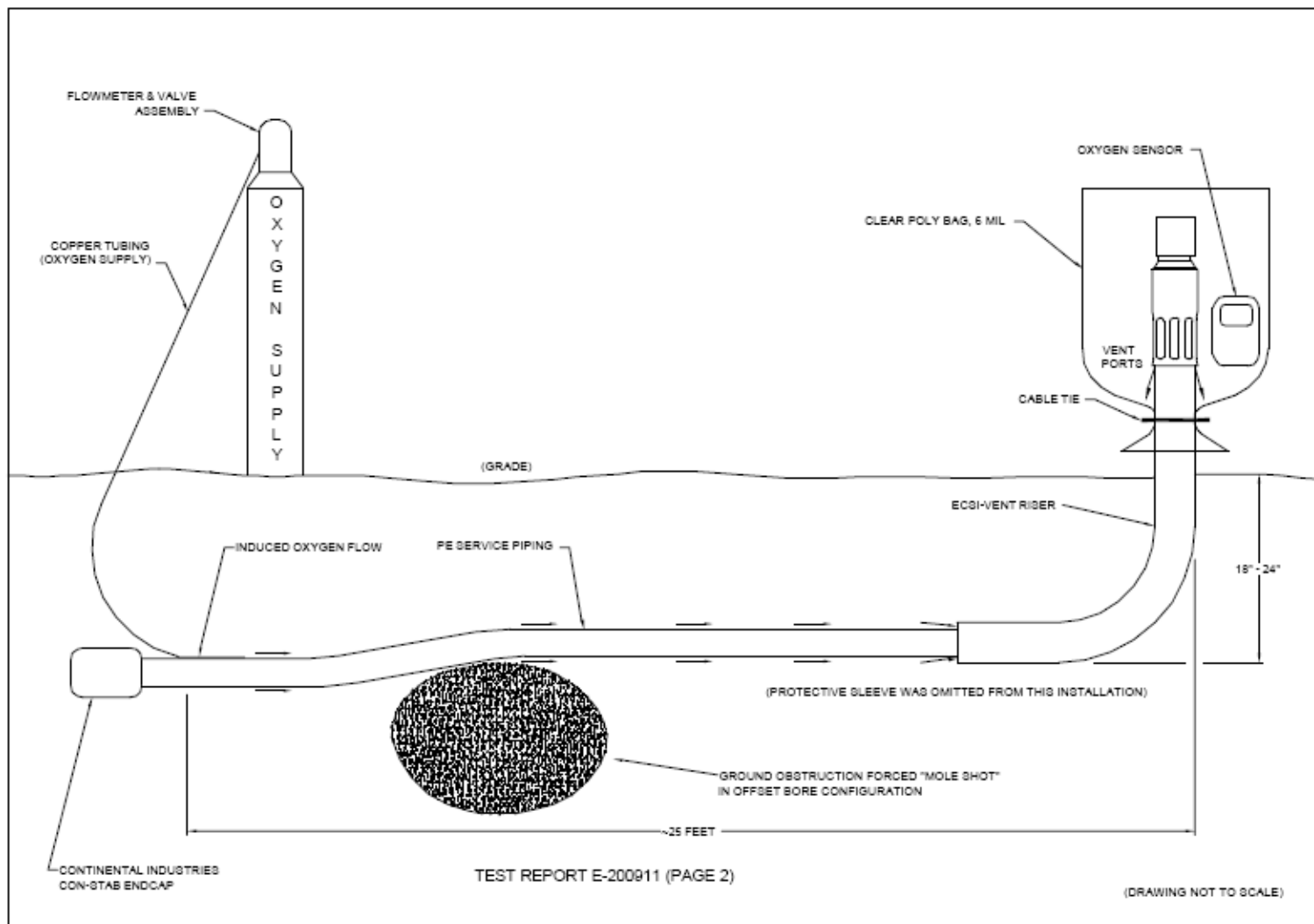


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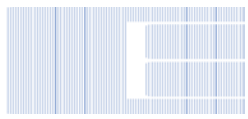


Testing – Mole Shot Installation



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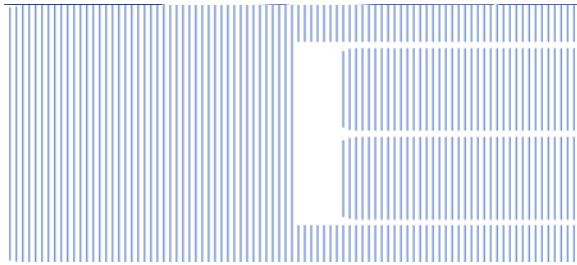


Advantages

- Utility preferred transition style technology
- Multiple venting ports allowing fugitive gases to escape safely to atmosphere
- Eliminates the buildup of dangerous fuel gas at the base of the riser in the vicinity of a structure
- Safely vents minor leaks and identifies elevated flow rate leaks
- Cost is nearly identical to a standard, non-vented riser...

With an additional margin of safety! Peace of mind for a homeowner at little or no added cost!





Energy Control Systems, Inc.

100 Hafner Avenue Pittsburgh, PA 15223

Telephone: 412-781-8500

Fax: 412-781-4498

Email: sales@ecsi4gas.com