



Pipeline and Hazardous
Materials Safety Administration

Mechanical Couplings

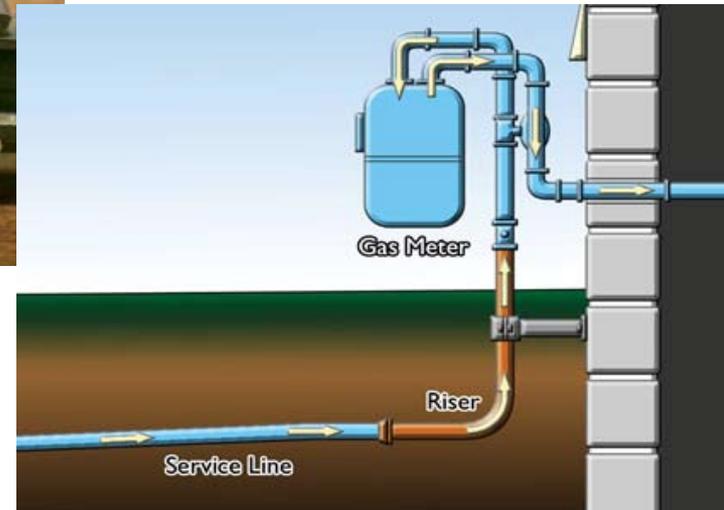
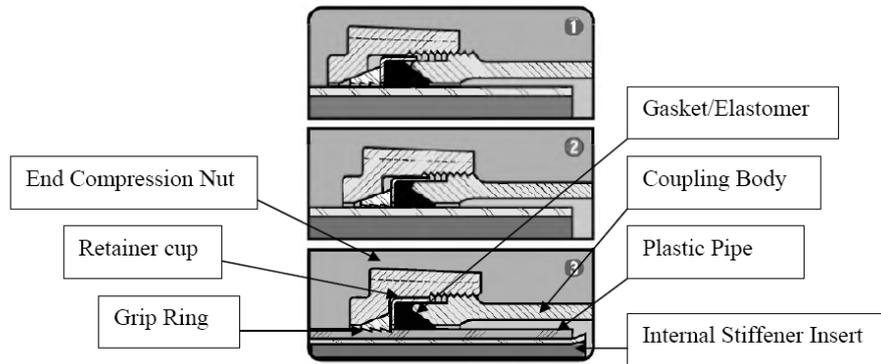
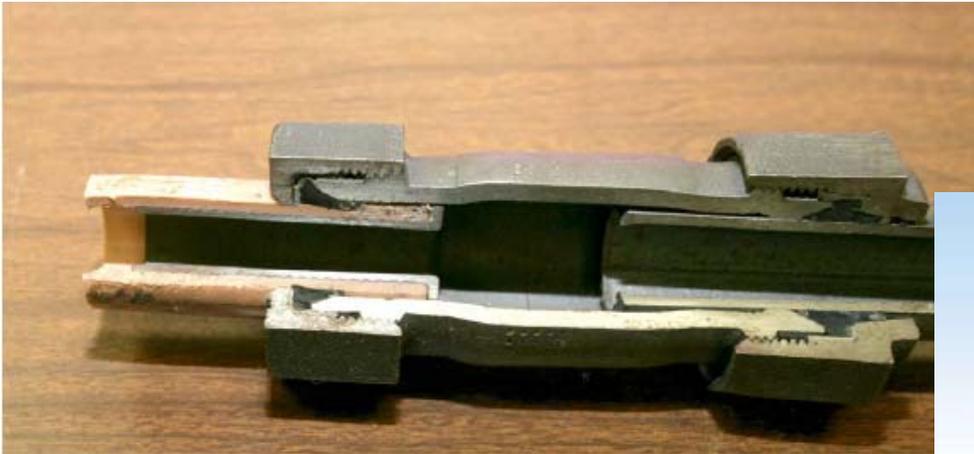
December 2009
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Clarifying Focus

- Not all couplings and designs are the same
- Looking at all for any trends, but initial areas of concern through advisories:
 - 2-inch and under in diameter
 - Both in-line and risers
 - Typically steel-bodied couplings used on steel services, plastic services, or steel to plastic transition
 - Typically where compression mechanism design includes elastomer and wrench-tightened nut



In-line cutaway and riser



**Pipeline and Hazardous
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*... safe, reliable, and environmentally sound operation
of the Nation's pipeline transportation system*

Couplings

- Information to support hundreds of thousands or more mechanical couplings and similar fittings have provided decades of excellent service, and are still performing well today.
- Decades ago prior to better excavation damage best practices, was even part of design to serve as a weak link in the system to prevent more serious damage to life or property
- While only 4-8% of all distribution incidents reported to PHMSA through February 2008, concern over increased risk/impact per incident based on typical placement in the system (i.e. near homes/businesses)
- Have been implicated in natural gas pipeline failures resulting in incidents involving hazardous leaks, explosions, injuries, fatalities and property damage



Timeline/Initiatives – So far

- PHMSA Advisory Bulletin in 1986
- Some states conducted studies and/or issued commission orders for repair replacement based on state-reportable incidents
- PHMSA Advisory Bulletin in 2008 following incidents since 1986 and actions from States
 - Awareness to the concerns in general, not specific to State, operator, manufacturer or type
 - Bulletin and other “ex-parte” communications on Regulations.gov, docket PHMSA-RSPA-2004-19856
- DIMP NPRM included among other things proposing increased reporting specific to couplings (involving hazardous leaks only)
- Information sharing with NTSB
 - NTSB at one point was contemplating study/report on compression couplings, but undetermined if/when report may be issued
 - NTSB has included couplings within their NPRM comments
- Continued discussion with committees including PHMSA/NAPSR-only committee and PPDC (PHMSA/NAPSR/Industry)



Timeline/Initiatives – Going forward

- PPDC traditionally focused on plastic-only, initially through-wall failures, but is considering expanding the scope to include failures involving metallic appurtenances on plastic piping systems
- DIMP Rule published Dec xx, '09
- PHMSA will give DIMP some time to implement, collect failure data before considering additional and more specific action to couplings.

