



Pipeline and Hazardous
Materials Safety Administration

PHMSA Construction Observations/Issues

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New Construction Increase in Observed Issues

- Pipeline construction a major focus for past 2 years
 - Special permit pipelines were the initial focus
 - Inspectors observed very serious issues covering all aspects of construction
 - Issues indicative of:
 - Failure to follow procedures
 - Lack of quality control
 - Inattention to detail
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Summary of Construction Issues

Topic	Frequency
Coating*	117
Welding*	87
Excavation	20
Nondestructive testing	20
Pipe material*	12
Bending	9
Lowering in*	7
Hydrotesting	4
Design	3
Other	8



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Observation: Coating

- Coating and other cathodic protection systems are interdependent
 - Most persistent area of issues
 - Failure to follow manufacturers instructions
 - Need to ensure personnel are properly trained
 - Long term impact to pipeline integrity
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Observation: Welding

- This issue covers a wide range of areas
 - Improperly qualified or wrong procedures
 - No procedures on site/ not following procedures
 - Preheat issues
 - Observation: cracked welds and possible long term integrity issues
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Observation: Materials

- Low yield strength pipe found through hydrostatic tests
 - Non-integrated mills: rolling mill in one country, steel supplier in multiple countries
 - PHMSA is currently addressing this issue with various parties
 - Is there an issue with the rolling mill?
 - Is there an issue with the steel mill?
 - Is there an issue with API 5L?
 - Do operators know what they are buying?
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Observation: Pipe support while lowering in

- Volumetric welding NDT relies on certain assumptions on pipe stresses
 - Is it four or five side booms?
 - Does the contractor know and understand the expectations?
 - Clear communications are needed
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So, what does PHMSA expect?

- Focus on the common theme for this workshop - **Quality Control**
 - Purchase quality materials and understand what is being purchased
 - Ensure contractors understand and follow procedures; monitor performance.
 - Hire qualified inspection personnel
 - Communicate when issues come up
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Moving forward

- Construction will remain a PHMSA focus
 - PHMSA anticipates further enhancement of inspection protocols to achieve inspection consistency
 - Panels today will bring a variety of focus on issues and how they were resolved
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