Pictures of Pipeline Material and Construction Quality Issues

PHMSA
June 15, 2012
Fittings - low strength

- Coating is cracking due to expansion of fitting during testing
Fittings – pressure test failure

Hydrotest failure at 80% of test pressure
Hot Bend – bevel alignment

- Welding, NDT, Transitions, & Alignment
- Cut Induction Bends
Pipe – low strength

- Low strength pipe
  - Inconsistent mechanical properties
  - PHMSA Advisory Bulletin (PHMSA 2009-1048)
Pipe - low strength

- Low strength pipe
Coatings – application & handling

- Poor Factory Application of Fusion Bonded Epoxy (FBE) coating
- 199 jeeps on pipe joint
Coating - application

- Coating Disbondment
Pipe - bevel alignment

- Weld Transitions

[Diagram showing bevel alignment with dimensions and notes]
Pipe - bevel alignment

- Weld misalignment (high-low)
Pipe – flat spot on bevel

- Pipe bevel ends and alignment – high/low
- Flat spot on pipe at girth weld bevel
Construction Issues

• Pipe Alignment – does it meet standards for API 1104
Girth Welds - Recent Incidents