Research Is Affecting Consensus Standards!

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Standards: Critically Important!

- Standards when first issued are an example of the best available knowledge and uniform engineering or technical criteria, methods, processes, and practices!
- Pipeline operators rely on some of them for a variety of technical needs.
- Pipeline regulators incorporate some of them in part or in whole into their regulations.

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The Challenge with Standards

- How can standards remain germane to the issues there are to address?
  - They need periodic new knowledge from:
    - Industry/government experience in using them
    - Research

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PSDOCC?

- Did you know about the Pipeline Standards Developing Organizations Coordinating Council (PSDOCC)?
  - Formed in late 2000.
  - The PSDOCC provides a forum for coordination of the development and implementation of *operating* standards used in the pipeline industry; and
  - PSDOCC is tracking research impact with standards along with PHMSA.

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PSDOCC Members

- **ASTM International**
- **American Gas Association**
- **American Public Gas Association**
- **American Petroleum Institute**
- **ASME International**
- **Association of Oil Pipe Lines**
- **National Fire Protection Association**
- **Pipeline Research Council International**
- **NACE International**

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PHMSA – PSDOCC MOA

- Tracking the research impact on standards
  - PHMSA/PSDOCC entered into a Memorandum of Agreement (MOA) in 2006.
  - The MOA enhances cooperation and coordination, facilitating more effective and efficient research integration into standards development.
  - The systematic process described in the MOA is vital to ensure knowledge from pipeline safety research is transferred to end users.

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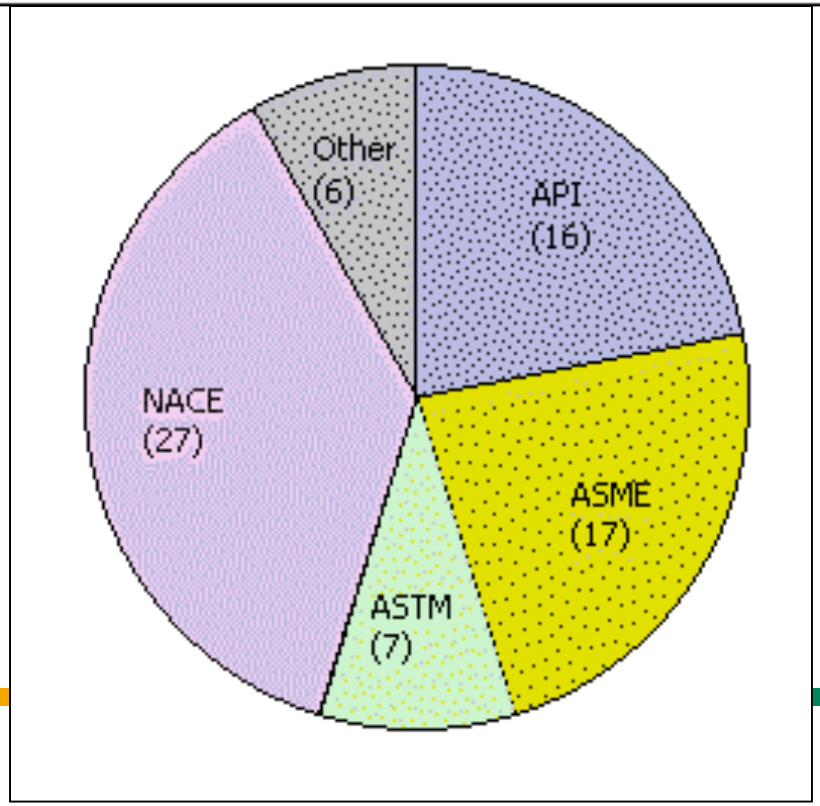
Overall Investment with Strengthening Standards

Objective	Standards Affected by Projects	Projects Affecting Standards[A]	PHMSA	Industry	Total
Strengthening Standards	39	42	$12.64M	$16.65M	$29.29M

Footnotes:

A. Some projects impact multiple standards; thus the count shown here will be different from more-detailed counts shown further below.



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Impacts on Standards Developing Organizations

No.	Organization Name	Standards Affected by Projects	Standard Meter	Projects Affecting Standards[A]	Project Meter	PHMSA[A]	Industry[A]	Total[A]
1.	American Society of Mechanical Engineers (ASME)	7		17		$ 7.23M	$10.22M	$17.46M
2.	American Petroleum Institute (API)	6		16		$ 6.06M	$ 8.38M	$14.44M
3.	NACE International (NACE)	14		27		$ 6.11M	$ 8.22M	$14.33M
4.	National Fire Protection Association (NFPA)	1		1		$ 0.21M	$ 0.22M	$ 0.43M
5.	American Society for Testing and Materials (ASTM)	6		7		$ 2.84M	$ 2.38M	$ 5.23M
6.	Det Norske Veritas (DNV)	1		1		$ 0.17M	$ 0.16M	$ 0.33M
7.	American Welding Society (AWS)	3		3		$ 1.36M	$ 3.75M	$ 5.12M
8.	Society for Protective Coatings (SSPC)	1		1		$ 0.14M	$ 0.39M	$ 0.53M

Footnotes:

A. Some projects impact multiple standards sometime from multiple SDOs; thus the counts and funding values shown here includes some double counting (sums to more than 100%), and has differences from more-detailed values shown further below.

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Research Program Category and SDO Impact

SDO	Projects Affecting Standards	Revised Standards	Standards Out for Revision
Category: Damage Prevention			
American Petroleum Institute (API)	1		1
American Society of Mechanical Engineers (ASME)	1		1
Category Sub-Totals:	**2**	**0**	**2**
Category: Pipeline Assessment and Leak Detection			
American Petroleum Institute (API)	4	1	2
American Society of Mechanical Engineers (ASME)	4		
American Society for Testing and Materials (ASTM)	1		
Det Norske Veritas (DNV)	1		
NACE International (NACE)	20	2	5
Category Sub-Totals:	**30**	**3**	**7**
Category: Defect Characterization and Mitigation			
American Petroleum Institute (API)	3	1	
American Society of Mechanical Engineers (ASME)	4		
American Society for Testing and Materials (ASTM)	1		
NACE International (NACE)	1		1
Category Sub-Totals:	**9**	**1**	**1**
Category: Improved Design, Construction and Materials			
American Petroleum Institute (API)	8		1
American Society of Mechanical Engineers (ASME)	8		
American Society for Testing and Materials (ASTM)	5		
American Welding Society (AWS)	3		
NACE International (NACE)	6		
Society for Protective Coatings (SSPC)	1		
Category Sub-Totals:	**31**	**0**	**1**
Category: Safety Issues for Emerging Technologies			
National Fire Protection Association (NFPA)	1		1
Category Sub-Totals:	**1**	**0**	**1**
Grand Totals:	**73**	**4**	**12**

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Future Impact Measurement?

- The measurement process is now defined/refined
  - Quarterly PSDOCC meetings for coordination
  - SDOs to annually review and report R&D impact status
- It's going to take time to measure impact!
  - Revision cycles vary
  - SDOs to review/report at different times during a year
- The PHMSA Web site exists and will always report current impact

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Thank You!

- Remember that your work in these tracks begins the collaborative process in getting to our mutually desired impacts!
- PSDOCC Web site

  http://www.psdocc.org
- PHMSA Research Performance Page for Standards

  http://primis.phmsa.dot.gov/rd/performance_cs.htm

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