

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.

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

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.

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**

PHMSA – PSDOCC MOA

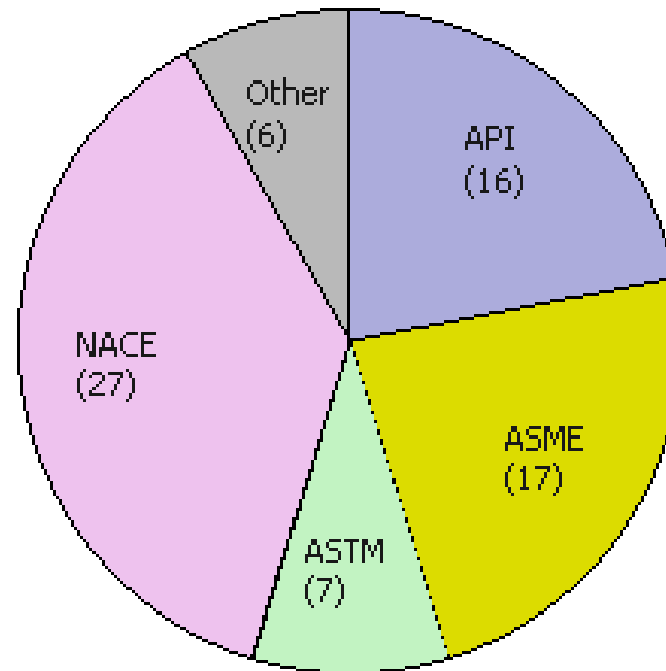
- Tracking the research impact on standards
 - PHMSA/PSDOCC entered into a Memorandum of Agreement (MOA) in 2006.
 - The MOA enhances cooperation and coordination, facilitating more effective and efficient research integration into standards development.
 - The systematic process described in the MOA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

Research Is Impacting Standards!






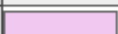










Overall Investment with Strengthening Standards					
Objective	Standards Affected by Projects	Projects Affecting Standards ^A	PHMSA	Industry	Total
Strengthening Standards	39	42	\$12.64M	\$16.65M	\$29.29M

Footnotes:

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



Research Is Impacting Standards!

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.



Research Is Impacting Standards!

Research Program Category and SDO Impact			
SDO	Projects Affecting Standards	Revised Standards	Standards Out for Revision
<i>Category: Damage Prevention</i>			
American Petroleum Institute (API)	1		1
American Society of Mechanical Engineers (ASME)	1		1
<i>Category Sub-Totals:</i>	2	0	2
<i>Category: Pipeline Assessment and Leak Detection</i>			
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
<i>Category Sub-Totals:</i>	30	3	7
<i>Category: Defect Characterization and Mitigation</i>			
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
<i>Category Sub-Totals:</i>	9	1	1
<i>Category: Improved Design, Construction and Materials</i>			
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		
<i>Category Sub-Totals:</i>	31	0	1
<i>Category: Safety Issues for Emerging Technologies</i>			
National Fire Protection Association (NFPA)	1		1
<i>Category Sub-Totals:</i>	1	0	1
Grand Totals:	73	4	12

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

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