ASTM D 01.48

Durability of Pipeline Coatings and Linings
Committee Chair, Don Kathrein, Tapecoat/Royston,
Sub-committee of ASTM D 01, Paints and Related Coatings, Materials and Applications
Staff Manager, Timothy Brooke, ASTM

Scope: ASTM D 01.48 Committee creates, approves fox ballot, rejects, reviews, modifies and ballots the ASTM standards that directly relate to pipeline coatings and linings. All new standards, standard renewals and non-editorial changes are re-balloted.

Membership: Open to members of ASTM (annual fee required). Committee normally consists of volunteer members representing pipeline owners and operators, steel pipe manufacturers, pipeline coating manufacturers, pipeline;lining manufacturers, testing laboratories, contractors, academics, government agency members and interested individuals.

Meeting: Traditionally, twice per year (Jan. & Jun.). Extra meetings if necessary. All standards are reviewed at least every five years. Task groups may be formed to deal with special issues regarding standards or standards themselves.

Standards: ASTM D 01.48 is currently responsible for 18 standards. These are well established pipeline coating industry, minimum testing standards for:

- abrasion resistance
- cathodic disbondment resistance (6 standards)
- water penetration resistance
- outdoor weathering resistance
- impact resistance
- blunt rod penetration resistance
- chemical resistance
- bendability (2 standards)
- holiday detection
- non-destructive thickness determination
- joints, fittings and patching materials evaluation (2 standards)

These ASTM standards are widely referenced in other organization's standards or recommended procedures (ANSI/AWWA, NACE, etc.)

Status: Eight standards have been reviewed, re-balloted and re-approved since 2001. Seven additional standards have been reviewed and will be re-balloted this summer. The remaining three standards in the five year cycle will be reviewed at the Jun 2005 meeting in Pittsburgh, PA.

The most common revision is the addition of Precision and Bias statements to standards that have not previously addressed Precision and Bias.

One standard, ASTM G l3, the impact resistance by limestone drop standard, was reviewed and removed from the list of standards. Reasons for the removal of the standard included:

1. lack of use by testing laboratories contacted
2. lack of use by coating manufacturers contacted
3. lack of correlation to actual field conditions (improper design of test apparatus)
4. availability of ASTM G 14 impact resistance standard
5. possible OSHA concerns with dust generated in the laboratory from the numerous limestone drops.

Task Group: A task group has been formed to investigate and resolve the controversy between the "current divider" school and the "voltage divider" school of circuit design for cathodic disbondment testing.

Trends: ASTM D 01 meetings with ISO counterparts to harmonize individual standards between ASTM and the international standards community.

Challenges: Keeping ASTM D 01.48 committee membership and attendance at a sufficient level to prevent being absorbed into a committee with a larger scope and membership that could switch the control of the pipeline industry standards away from the Pipeline industry community.

ASTM D 01.48
Sub-Committee on Durability of Pipeline Coating and Linings
18 ACTIVE standards and 9 WORK ITEMS in progress (May 2005)

18 ACTIVE standards under the jurisdiction of D01.48:

D6676-01e1	Standard Test Method for Cathodic Disbonding of Exterior Pipeline Coatings at Elevated Temperatures Using Interior Heating
G6-88(1998)	Standard Test Method for Abrasion Resistance of Pipeline Coatings. *See also WK2881 for information on a proposed revision to this standard.*
G8-96(2003)	Standard Test Methods for Cathodic Disbonding of Pipeline Coatings
G9-87(1998)	Standard Test Method for Water Penetration into Pipeline Coatings. *See also WK2882 for information on a proposed revision to this standard.*
G10-83(2002)	Standard Test Method for Specific Bendability of Pipeline Coatings
G11-04	Standard Test Method for Effects of Outdoor Weathering on Pipeline Coatings. *See also WK5645 for information on a proposed revision to this standard.*
G12-83(1998)	Standard Test Method for Nondestructive Measurement of Film Thickness of Pipeline Coatings on Steel *See also WK2883 for information on a proposed revision to this standard.*
G14-04	Standard Test Method for Impact Resistance of Pipeline Coatings (Falling Weight Test) *See also WK5646 for information on a proposed revision to this standard.*
G17-88(1998)	Standard Test Method for Penetration Resistance of Pipeline Coatings (Blunt Rod)
G18-88(1998)	Standard Test Method for Joints, Fittings, and Patches in Coated Pipelines. *See also WK2884 for information on a proposed revision to this standard.*
G19-04	Standard Test Method for Disbonding Characteristics of Pipeline Coatings by Direct Soil Burial. *See also WK5647 for information on a proposed revision to this standard.*
G20-88(2002)	Standard Test Method for Chemical Resistance of Pipeline Coatings

G42-96(2003)	Standard Test Method for Cathodic Disbonding of Pipeline Coatings Subjected to Elevated Temperatures
G55-88(1998)	Standard Test Method for Evaluating Pipeline Coating Patch Materials
G62-87(1998)e1	Standard Test Methods for Holiday Detection in Pipeline Coatings
G70-81(1998)	Standard Test Method for Ring Bendability of Pipeline Coatings (Squeeze Test)
G80-88(1998)	Standard Test Method for Specific Cathodic Disbonding of Pipeline Coatings. *See also WK2885 for information on a proposed revision to this standard.*
G95-87(1998)e1	Standard Test Method for Cathodic Disbondment Test of Pipeline Coatings (Attached Cell Method). *See also WK2886 for information on a proposed revision to this standard.*

9 WORK ITEMS in progress under the jurisdiction of D01.48:

WK2881 Proposed Revision of G6-88(1998)
WK2882 Proposed Revision of G9-87(1998)
WK2883 Proposed Revision of G12-83(1998)
WK2884 Proposed Revision of G18-88(1998)
WK2885 Proposed Revision of G80-88(1998)
WK2886 Proposed Revision of G95-87(1998)e1
WK5645 Proposed Revision of G11-88(1996)e1
WK5646 Proposed Revision of G14-88(1996)e1
WK5647 Proposed Revision of G19-88(1996)e1