

Reference Documents**ASTM Standards**

ASTM D429	Test Methods for Rubber Properties – Adhesion to Rigid Substrates
ASTM D2240	Test Methods for Rubber Properties – Durometer Hardness
ASTM D4258	Practice for Surface Cleaning Concrete for Coating
ASTM D4259	Practice for Abrading Concrete
ASTM D4285	Test Method for Indicating Oil or Water in Compressed Air
ASTM D4417	Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel
ASTM D5162	Practice for Discontinuity (Holiday) Testing of Non-conductivity Protective Coating on Metallic Substrates
ASTM D7602	Standard Practice for Installation of Vulcanized Rubber Lining

NACE Standards

NACE SP0178	Standard Recommended Practice - Fabrication Details, Surface Finish Requirements and Proper Design Considerations for Tanks and Vessels to be Lined for Immersion Service
NACE SP0188	Discontinuity (Holiday) Testing of New Protective Coatings
NACE No. 1	White Metal Blast Cleaning
NACE No. 2	Brush Blast Off
NACE RP0287	Field Measurement of Surface Profile of Abrasive Blast Cleaned Steel Using Replica Tape
NACE SP0298	Sheet Rubber Linings for Abrasion and Corrosion Service
SSPC Standard	
SSPC-SP 1	Solvent Cleaning
SSPC-SP 2	Hand Tool Cleaning
SSPC-SP 5	White Metal Blast Cleaning
SSPC-VIS 1	Guid and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning
SSPC-SP10	Brush Blast Off

RMA (Rubber Manufacture Association) Publications

IP-4-1	Specifications for Welded Steel Tanks, Stacks, Ducts or Other Welded Parts for Protective Lining and/or Covering
IP-4-2	Specification for Pipe and Fittings for Protective Lining and/or Covering
IP-4-3	Requirements for Field Installation of Elastomeric Sheet Linings
IP-4-4	General Procedure for Application of Elastomeric Sheet Lining
IP-4-5	Elastomeric Sheet Lining Inspection Before and After Vulcanization
IP-4-6	Standard for Surface Appearance of Elastomeric Sheet Lining Materials
IP-4-7	General Precautionary Measures for Use with Elastomeric Materials
IP-4-8	Storage of Elastomeric Lined or Covered Equipment
IP-4-9	Chemical Resistance of Elastomeric Sheet Linings
IP-4-10	Abrasion Resistance of Elastomeric Sheet Linings
IP-4-11	General Procedure for Applying Elastomeric Sheet Lining in Pipe
IP-4-12	Suggested Standard Specifications for Elastomeric Lined Equipment
IP-4-13	Procedure for Spark Testing Elastomeric Sheet Lining
IP-4-14	Effects of Brick Lining at Elevated Temperatures
IP-4-15	Care and Use of Elastomeric Lined Equipment
IP-4-16	Chemical Cure Elastomeric Sheet Linings
IP-4-17	Glossary of Terms
IP-4-18	Procedure for Use of Durometer Indentation Hardness of Elastomeric Sheet Lining
IP-4-19	Repairs to Elastomeric Sheet Lining
IP-16	Quality Assurance Manual for Applicators of Elastomeric Sheet Linings

Terminology*

Autoclave – a pressure vessel used for the curing or vulcanization of rubber parts by means of steam under pressure.

Blister – an isolated convex deformation arising from the detachment of one or more layers of lining material.

Bond failure – a separation of two adjoining surfaces.

Calender blister – trapped air between calender plies of a multi-ply rubber buildup.

Chemical Cure – a rubber lining system which can cure at low temperatures by topically applying a liquid curing agent

Cutting table – a table used for laying out, cutting and cementing rubber sheets prior to application to the component to be lined; often, the table is heated when used.

Closed skive (down skive) – a reverse-angle cut along the edge of a rubber panel that enables the installer to stitch down the cut edge so that the bottom layer of rubber to tie gum is protected from exposure to the commodity contained within the tank or pipe.

Defect – a condition that prevents the lining from serving its function.

Durometer – an instrument used for measuring the hardness of rubber and plastics; the “A” durometer scale is used for flexible materials and the “D” for rigid materials.

Face stock – the commodity-contacting stock in a multi-component lining.

Freshening – solvent washing of a rubber surface to provide tack.

Open skive – a cut made on an angle to the surface producing a tapered or feathered edge with bottom layer of rubber or tie gum exposed to the commodity contained within the tank or pipe.

Overlay – a layer of uncured stock applied to uncured sheet stock to achieve at least the minimum thickness specified.

Patch or repair – the remedy to a defect that is done after vulcanization necessitating application of uncured sheet stock to fully cured or vulcanized stock.

Primer – a coating applied to the surface of the material, prior to the application of an adhesive, sometimes considered as a part of the adhesive system.

Semi-hard rubber – a term used for hard rubber which when fully cured is flexible and can be bent without shattering.

Skive – a cut made on an angle to the surface producing a tapered or feathered edge.

Soft rubber – a term used for rubber with hardness after cure of 70 A Durometer scale or less.

Stitch – the act of joining two pieces of uncured rubber compound together by means of a stitch roller, which is a handheld tool comprised of a wheel with a narrow edge that is often serrated.

Tack cement – a formulated rubber/cement mixture which can be rolled or brushed on surfaces which will hold the rubber panel in place until cure takes place; normally considered a part of the adhesive system.

Tie gum – an intermediate layer of the rubber employed to promote bonding of two surfaces, usually a soft rubber compound.

** Referenced from ASTM D7602 – Standard Practice for Installation of Vulcanized Rubber Linings*