

ROTATIONAL LINING SPECIFICATION
SPECIFICATION FOR TRANSPORT AND
PRESSURE VESSELS

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Description

Rotational lining, or rotolining, is accomplished by charging a preweighed amount of a fluoropolymer resin (such as ETFE 1020™) into a process vessel, such as the Code2 Shipping and Dispensing Containers manufactured by Alloy Products, and others. The vessel is placed into a heated oven and rotated in two axis while the vessel and resin reach proper temperatures. By careful control of the rotation and heating conditions, very uniform linings are routinely achieved.

Advantages

The advantages of rotational linings over other techniques include a seamless construction with a very smooth interior surface. Thicker linings are possible with rotolining compared to electrostatic spray depositions. Several of the fluoropolymer resins, including ETFE 1020™, become bonded or adhere to the vessel substrate and can therefore be used in vacuum conditions. Rotational lining insures perfect conformation of the liner to the vessel wall. Rotolining allows for great uniformity and repeatability of parts as once the molding parameters are established they are entered into the computer controls of the machinery and duplicated without further testing or trial.

Quality Assurance

QA procedures insure conformity of the vessel and lining to the customer's specifications, requirements and industry standards. Final inspection of lined vessels includes electronic spark testing at 5kV DC to insure the lining is free of holidays or voids. A visual inspection is also performed to determine surface smoothness, freedom from inclusions or contaminants as well as removal of particulate matter generated during any post machining or mechanical operations.

Rotational Lining Resins

ETFE 1020™ is the fluoropolymer resin used in most applications because of its unique ability to provide a very smooth surface to the process chemicals as well as adhere to the metal substrate. ETFE 1020™ is trade marked by **Fisher|Moore**.

Post Molding Operations

Such operations can include machining of bushings and installation of dip tubes, valves or other piping connections. Machining is done by **Fisher|Moore** employees and is not subcontracted out. By this means cleanliness of the vessel can be assured from machine oils and metallic particles.

Cleaning and Shipping

Following any post molding operations the canisters are cleaned with 18 mega ohm DI water, dried with filtered nitrogen gas and immediately sealed for shipment. Documentation of procedures, including, molding, inspections, testing and cleaning are completed by the QA manager and preserved with the permanent shop traveler in the customer's file. Such records are preserved for a minimum of 5 years. All records are available for customer review and inspection.