



Application Brief

Chemical Processing Industry

APPLICATION

Large-diameter ETFE-lined mining process vessels

PRIMARY USE

Tumbling high-purity quartz and microcrystalline silica in an acidic solution

MATERIALS

Carbon steel substrate rotationally lined with ETFE

TECHNICAL DATA

Dimensions:

- 60" diameter x 118" length
- 72" diameter x 104" length
- 84" diameter x 120" length

Part geometries: Vessels required diameter changes and multiple inlet and outlet nozzles; flanges were integrated into the lining

Wall thickness of lining: 0.188" throughout each vessel

Options: Initial vessel fabrication, liner removal and relining at end of service life, custom painting

Maximum service temperature: 150°C/302°F

FEATURES AND BENEFITS

- Seamless, permanently bonded ETFE linings
- Exceptional resistance to chemical reactions, high temperatures, corrosion and stress cracking
- Extremely durable: ETFE exhibits mechanical toughness; rotational lining delivers a thicker liner than sheet lining or powder coating
- Longer service life than sheet lining or powder coating
- Optimal design flexibility: Nozzle sizes were increased to enable more material to be processed at one time

Before coming to RMB Products, the customer relied on PTFE sheet lining to protect processing vessels used in its mining operations. Each liner (thickness 0.09") lasted only 3-6 months. We rotationally lined the vessels with a layer of ETFE twice as thick as the PTFE sheet liner, increasing service life to 2-3 years. Because our ETFE liners are fully bonded, thick and long-lasting, the company can process more material at one time, improving operational efficiency.

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84" ETFE-lined leach vessel



Seamless lining of complex parts