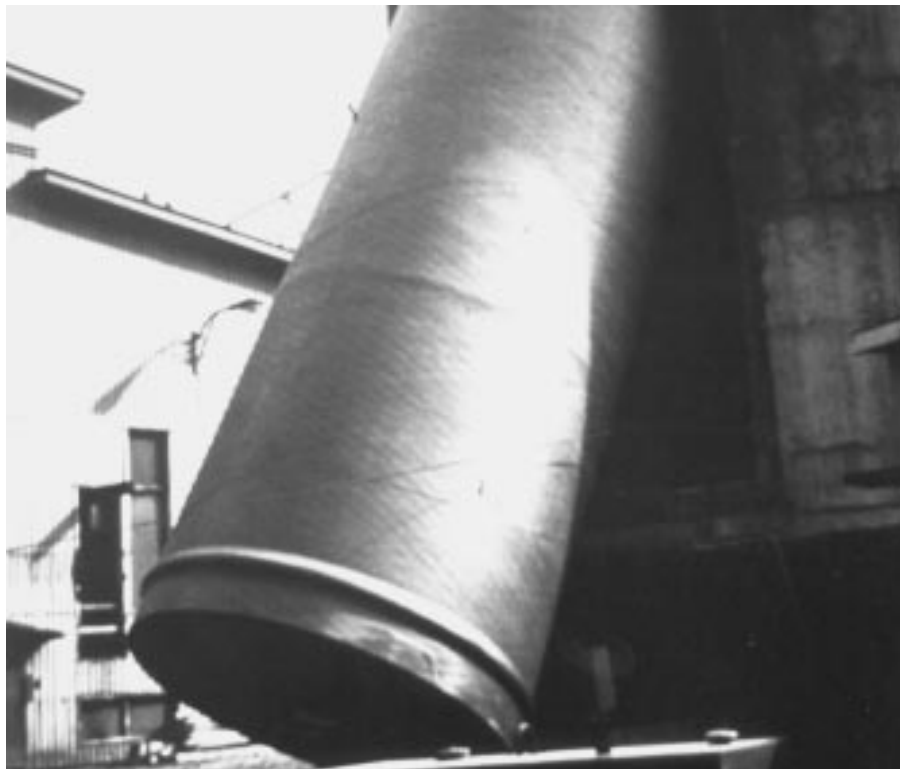


Liner for Zinc Smelter Stack

DERAKANE Epoxy Vinyl Ester Resins – Case History



Location / Year

Cominco, Ltd. Trail,
British Columbia.
The original brick stack was
constructed in 1922 and relined
with DERAKANE resin in 1973.

Fabricator

ICL Engineering, Ltd.,
Richmond, British Columbia.

Technical Data

A 122 m high x 3.4 m diameter
(400 ft high x 11.3 ft diameter)
liner in a zinc smelting stack.
Each 15 m long (50 ft) piece
weighs close to five tons, with
walls measuring 6 to 20 mm
(0.25 to 0.75 in) thick.

Fabrication

The liner, which replaced a deteriorating brick liner, was fabricated in eight sections using **DERAKANE 510A** epoxy vinyl ester resin. Each section was inserted separately into the bottom of the stack, and then raised to meet the one above it.

Design / Comment

During an inspection of the outside of the liner in 1978, superintendent of material engineering and testing for Cominco, Rodney T. Saxon (now retired), noted, "It showed no evidence of deterioration. Essentially, there doesn't appear to be any loss of effectiveness in the liner."

Service Conditions

The stack discharges 4 250 m³ (150 000 ft³) / min. of wet gases containing ammonium bisulfite particulates and traces of sulfur dioxide at a service temperature of 40-42°C (104-108°F).
The smelter is used to process zinc concentrate.

Maintenance

The liner was reported to be in good condition in January 1996, after 23 years.

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