rst INSTRUMENTS

innovation in geotechnical instrumentation

TEL 604 540 1100
info@rstinstruments.com
www.rstinstruments.com

RST Instruments Ltd.
11545 Kingston St.,
Maple Ridge, BC V2X 0Z5 Canada

Certified System
ISO 9001

WORKS WITH

READY TO RUN

flexDAQ DATALOGGERS

pre-assembled
pre-wired
pre-tested
pre-programmed

Paste Backfill Monitors shown being lowered into an underground mine.

PRODUCT CATEGORY:
LOAD CELLS + PRESSURE SENSORS + STRESS METERS

Paste Backfill Monitor

RST's Paste Backfill Monitors are used in mine paste backfill to improve extraction and to increase safety. They provide useful engineering feedback to allow paste and stope designs to be optimized.

A typical Paste Backfill Monitor consists of 3 or more vibrating wire total stress sensors (orthogonal), 1 vibrating wire piezometer to measure pore water pressure, a biaxial tiltmeter and optional magnetic compass to measure "as-placed" orientation, matric suction, volumetric water content sensors, and conductivity sensors. A compact and sturdy stainless steel frame surrounds the unit and is designed to withstand the rigors of installation.

Because stope geometries vary depending on the mining situation, Paste Backfill Monitors are typically customized for the situation, including orientation sensors for suspended placements, different pressure sensor ranges depending on geometry, extra total stress sensors for a more complete stress tensor, etc.

All sensors are connected to a single, Kevlar® reinforced, multi-conductor cable that can be extended outside the mining area for remote data acquisition.

> APPLICATIONS

For underground mines, in mine paste, where a need for improved extraction and increased safety measures are required.

Feedback to allow paste and stope design to be optimized.

> FEATURES

Durable, compact design for excellent portability and field installation.	Customized options (at time of ordering) to suit various project parameters.

Ideal for use with RST's flexDAQ Data Logger Systems (separate brochure at rstinstruments.com)

Compatible with bulkhead Total Pressure Cells and Deformation Sensors.

> REFERENCE

Monitoring Barricade Performance in a Cemented Paste Backfill Operation, Thompson, B.D., W.F. Bawden, M.W. Grabinksy, and K. Karaoglu, Proceedings of the Paste2010 conference, Editors: R. Jewell and A. Fourie, page 185, Toronto, Canada, 2010.

> BENEFITS

✓ **Increase Safety**	✓ **High Accuracy**
✓ **Custom Options**	✓ **High Reliability**

SPECIFICATIONS

DESCRIPTION	SPECIFICATION
Total Stress	0.7-3 MPa FS
Piezometer	0.7-3 MPa FS
Matric Suction	0.01-2.5 MPa
Water Content	1-100%
Conductivity	0-2.3 S/m
Temperature	-25°C to 65°C

ORDERING INFO

ITEM	PART #
Paste Backfill Monitor	LPPBM-230