UNDERGROUND LUNCH&LEARN

MODERN VERSUS CONVENTIONAL: COMPARING TBM AND DRILL & BLAST METHODS

In the modern-day tunneling industry, one outdated perception remains: Traditional, tested methods are always the best. When presented with difficult ground—from fault zones to water inflows to mixed face conditions—many consultants and contractors rely on decades-old field studies and conclude that conventional excavation methods like drill and blast are the best option. With today's Tunnel Boring Machine (TBM) technology, this assumption couldn't be further from the truth. Modern TBMs are highly adaptable and capable of offering all of the same ground support and excavation capabilities of their conventional counterparts—most often with a safer setup and faster performance, not to mention at a lower overall cost.

In this presentation, Robbins President Lok Home will analyze recent and ongoing tunneling projects in difficult ground conditions where TBMs have proven their worth, from Turkey to the U.S. and Peru. At these projects TBMs have performed well in incredibly difficult conditions—from volcanic rock to more than a mile of cover--alongside drill and blast operations that proceeded more slowly or failed altogether. A critical analysis of the benefits and risks of each method will be examined with an eye towards case studies that provide real-world results.

NOVEMBER 15, 12-1 P.M. BERTHOUD HALL 243

Lok Home began his more than 45-year career in the tunneling and mining industry after graduating with a degree in mining technology from the Haileybury School of Mines in Ontario, Canada.

PHOTOS FROM THE KARGI HYDROPOWER PROJECT IN NORTH-CENTRAL TURKEY, UTILIZING BOTH TBM AND DESIGN/BLAST TECHNIQUES. COMPLETED IN MAY 2015.





Between 1965 and 1968, Lok worked as a project manager at several Canadian mines before joining The Robbins Company in Field Service, where he then progressed through several management positions. He founded Boretec, Inc. which was later acquired Robbins in 1998 with Lok serving as president. Today, The Robbins Company is a worldwide business that supplies all types of Tunnel Boring Machines (TBMs), related equipment, and services and holds the majority of the world's TBM performance records.







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