Technical Tour 2 - Bogala Graphite Mine

One-day Technical Tour Scheduled for Dec. 7, 2023; Registration fee: US$ 50

Minimum Number of Participants Needed for the Technical Tour: 4

Bogala Graphite Mine has a rich history dating back over 150 years and is renowned for its high-quality vein graphite deposits. The Bogala mine came under the management of the State Mining and Mineral Development Corporation, Sri Lanka in 1979. Following the mine's subsequent privatization in 2000, Bogala Graphite Lanka PLC acquired ownership of it. Graphit Kropfmühl GmbH (Graphit Kropfmühl is a subsidiary of AMG Critical Materials N.V.), a German corporation, currently owns 80% of the business.

Graphit Kropfmühl GmbH/Bogala Graphite Lanka PLC has maintained its reputation as a trusted name in the global market, including the United States, United Kingdom, Japan, India, Pakistan, and Germany, to name a few. Bogala Graphite Mine's constant commitment to sustainable mining techniques is one of the company's pillars of success. By using cutting-edge mining techniques and strict environmental controls, Bogala Graphite Mine lessens its ecological impact and aids in the preservation of the fragile ecosystems surrounding the mine. Obtaining the ISO 9001: 2015 quality management certificate, ISO 14001: 2015 environmental management certificate, and ISO 45001: 2018 health and safety management certificate could serve as evidence of the effectiveness of business practices.

The mine development involves digging horizontal crosscuts from a shaft at intervals of about 60 to 70 meters to join the vein system. In the Bogala mines, the average thickness of the graphite vein ranges from 30 to 80 cm. Following vein interest, horizontal drifts are driven at 30-meter intervals along the vein. A block of graphite (60m x 60m) is formed inside the vein as a result of these drifts being connected by winzes at 60m intervals. Stoping can start after a block of graphite has been formed.

Overhand Cut-and-Fill mining is the main technique used for Bogala narrow vein mining (it has a long history). When stoping in a block, a horizontal slice is taken starting just above the bottom drift (about 2.2 m height). Therefore, mining begins at the bottom and moves upward. Upward horizontal slicing keeps going until it reaches the upper drift. As the block is mined upwards, the lower void is filled with rock debris. A stope with dimensions of 1.5 m x 2.2 m offers enough workspace. Graphite is hoisted to the surface, whereas backfilling is typically done with rock debris. Whenever excess barren rock is available only, it is hoisted to the surface. Typically, explosives are used to break both the graphite vein and the face rock during the stoping process. To avoid dilution, rock, and graphite vein blasting are organized separately. Graphite is carefully extracted at the stope to reduce dilution and maximize recovery.

Recognizing the numerous applications of graphite, Bogala Graphite Mine provides a comprehensive range of high-quality goods suited to fulfill the specific needs of various sectors by producing raw materials with a purity of more than 99%. From expandable graphite for fire retardant materials to high-purity graphite used in the manufacture of lithium-ion batteries, the company's diverse product line demonstrates its adaptability and versatility. Graphit Kropfmühl GmbH /Bogala Graphite Lanka PLC maintains a competitive edge in the worldwide graphite market by always inventing and staying ahead of market trends.

Further, Bogala Graphite Mine plays an important part in powder metallurgy. Their graphite compounds are utilized in the production of metal powders, where they act as lubricants and help to generate precise and detailed shapes during the sintering process. Bogala Graphite products are in high demand in the rapidly expanding battery and fuel cell industries. Their solutions meet the rigorous standards for energy storage systems, including exceptional conductivity and stability, both of which are critical for the successful operation of batteries and fuel cells.

Bogala Graphite Mine is always exploring new opportunities for innovation and product development with a strong focus on satisfying diverse client needs. They remain at the forefront of the graphite business, providing high-quality raw materials that drive technological developments in a variety of areas.

Exploration the Black:
Graphite exploration at underground

Into the Black:
Underground Mining

Drilling at underground

Transportation at underground