

ROPE UP AT OYU TOLGOI MINE (SHAFT 2)



Haiger, January 2020.

Rope up at Oyu Tolgoi Mine Shaft 2 completed ahead of schedule

Oyu Tolgoi is a large copper and gold deposit in the southern Gobi Desert of Mongolia. The mining complex is operated by Oyu Tolgoi LLC. Copper ore is mined both open pit and underground in the medium term.

Oyu Tolgoi consists of a number of ore deposits that contain copper, gold and silver, with over 80 percent of the total value of Oyu Tolgoi being underground. The plan is to develop an underground mining complex in which the ore is extracted using the *Block Caving* mining technology and transported to the surface for processing. 31 kms of lateral development has been done to date in Oyu Tolgoi. Up to 200 kilometers of tunnels are planned at depths of up to 1,300 meters to allow safe mining of the deepest parts of the Oyu Tolgoi ore body.

Use of the latest mining technology

Block caving is an underground mining technique in which an ore body is undermined so that it can gradually collapse under its own weight. The collapsed ore mass falls into a pre-constructed row of funnels and access tunnels below the ore body. The collapse progresses upwards through the ore body.

Comprehensive equipment and rope handling know-how supplied

SIEMAG TECBERG has supplied extensive equipment to Mongolia for the roping up of the ropes and for the subsequent rope-changing procedure at hoisting systems in both production and service hoisting in shaft 2 of the mine: One 6-rope mobile friction winder (completely mounted on a trailer), one 6-rope clamping and lifting device (CLD), one 1-rope clamping and lifting device, various horizontal and vertical deflector sheaves, eight compressed air cable winches, eight auxiliary winches, as well as various aids and accessories for rope handling.

The SIEMAG TECBERG team, consisting of employees from various subsidiaries, together with employees from the mine, was once again able to prove that safe and efficient rope laying with SIEMAG TECBERG rope handling equipment is possible on the basis of an efficient preparation (in May 2019) and well thought-out process organisation on site. In addition, the rope laying of both hoisting systems was completed in July / August 2019 a few days before the planned end date. During this project, ropes with a total length of approx. 24 km were laid in cooperation with the Oyu Tolgoi LLC team.



Preparations for rope laying: Assembly and functional tests of the equipment. On the right in the picture the 6-rope clamping and lifting device with hydraulic system.



Preparations for rope laying: the mobile friction winder in front of the machine house, in the foreground the horizontal deflector sheaves.



Preparations for rope laying in shaft 2 with mobile friction winder and horizontal deflector sheaves.



Employees of the service team while working on the mobile friction winch.



Installation of the 6-rope clamping and lifting device (CLD) in shaft 2 of Oyu Tolgoi.



View from the mobile friction winch onto the horizontal deflector sheaves with incoming ropes.

The company

The SIEMAG TECBERG group is the world's leading supplier of shaft hoisting technology. The group provides knowledge-based services for the supply of individual machines and systems for a total of six industrial applications: Shaft hoisting technology for raw material hoisting as well as storage of contaminated raw materials, hoisting and transport of heavy materials loads, ventilation and cooling of underground mines, technologies for the horizontal conveying of bulk materials including handling technology for raw materials, as well as technologies for the efficient use of energy in hoisting technology, ventilation and cooling.

The SIEMAG TECBERG group focuses its technical activities on the development, design, manufacture, commissioning and technical service of shaft hoisting systems for vertical and inclined hoisting of raw materials. The SIEMAG TECBERG group has distinctive engineering competences for mechanics, hydraulics, drive and automation technology. Worldwide unique reference projects prove the overall plant competence and leading position of the SIEMAG TECBERG group.

The technology of the niche specialist emerged from a blacksmith's shop founded in 1871 in Siegerland, which produced equipment for local ore mining and the iron and steel industry. Following a management buy-out in 2007, SIEMAG TECBERG was founded by Jürgen Peschke, who is still CEO and managing partner today.

The SIEMAG TECBERG group is represented on all continents by at least one subsidiary and cooperates with partners worldwide. In addition to the headquarters with assembly plant in Haiger, north of Frankfurt am Main, there are locations in Rugby/UK, Katowice/Poland and Moscow/Russia, supplemented by further locations with their own assembly plants in Tianjin/China, Sydney and Mayfield East/Australia, Johannesburg/South Africa and Milwaukee and Denver/USA. The group employs around 400 people worldwide. The business volume amounts to approx. EUR 120 million per annum. (as of 12/2019).

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