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SUEK's Apsatsky open-pit mine located in the Zabaikalye region, purchased new equipment for the Technical Control Department laboratory to determine the total sulphur content in coal. This state-of-the-art equipment can make the analysis quicker and simpler.

Measurement of the total sulphur content in solid fuels is one of the main tasks of coal chemistry laboratories. The amount of this element in coal affects its quality. When burning fuel, sulphur causes the corrosion of metal surfaces and reduces the calorific value of the fuel, and during coking, it deteriorates coke properties and the quality of the smelted metal.

Thanks to the new equipment, analysis will take just 2 minutes. The principle of the analyser's operation is quite simple. A certain amount of sample is placed in a ceramic boat. Then, it is put into the furnace heated to 1,350 degrees. The material burns and generates gases. Finally, the system measures the concentration.

All data and results are displayed on the touch screen. The analyser is computer-controlled.

'Previously, the Eshka method was used to determine sulphur content. It takes three days to measure the sulphur content. We also had to use various chemicals. We burnt samples and dried and soaked them. It was a long process. Now, we have purchased a LECO device. It has greatly simplified our work. The main thing is that we are confident in the results we obtain. This is important because coke is produced from Apsatsky coking coal. Data on sulphur content are also of great importance for exported coal,' said Tatyana Nepomnyashchikh, Head of the Coal Chemistry Laboratory at Apsatsky.

The Apsatsky thermal coal deposit is one of the biggest in Russia in terms of size and reserves of coking coal. This fuel is in demand in the metallurgy industry, including international customers from South Korea, Japan and the entire Asia-Pacific region.