



53 Ltd

660041, Svobodniy prospect 75, office 419. Krasnoyarsk, RUSSIA

M +79058066776

e-mail: 53wedgelock@gmail.com

Dear colleagues and potential partners!

Our company has developed and is producing a new type of mining tamping named "WEDGE-LOCK®". This device is used in drilling and blasting operations at underground mines. This innovative mining device is designed for raising of the blast-hole efficiency ratio (BER) and allows you to:

- ▶ Get maximum efficiency from drilling and blasting operations (maximize the breakaway of the massif [increase 20-40%], minimize the drill steel consumption).
- ▶ Decrease to 10-25% the amount of blasting agent (explosive)
- ▶ Pay the minimum price for the tamping device (the lowest price in a mining industry).

Thus, the use of "WEDGE-LOCK®" decrease the cost of mining works.

The product idea is based on an improved tamping technology through the usage of our "WEDGE-LOCK®" device, which keeps the blasting agent within blast-hole during the explosion. It maximises the effect of an explosion, concentrating it into the rock instead of allowing expanding gases to escape through the blast hole. **As a result blast-hole efficiency ratio (BER) is rising up to 20-40% without the change of a blasting agent quantity and using the same blasting pattern.** The efficiency of "WEDGE-LOCK®" as a tamping device has been proved by many technical trials conducted in several leading mining companies of Russia. **Technical trial reports are available on demand.**

The industrial production of "WEDGE-LOCK®" has been launched in Krasnoyarsk since Y2014 beginning. Deliveries are going on to several mining companies in Russia and Kazakhstan.

A design of the tamping device "WEDGE-LOCK®" was developed and is owned by 53 Ltd.

Author and developer: Shustov Aleksey Nikolaevich, Chief Executive Officer.

(the Utility Model Patent No 139745, 02.08.2013, the Russian Federation)

An international patent application on 08.07.2014.

Herewith we offer you a meeting with a purpose to discuss the possibility to implement our product in your processes. The meeting could be arranged in any form: face-to-face or online meeting etc. Furthermore, we are ready to send to You the free of charge samples of our products for you to make a tests on mines. We guarantee full technical support during this tests.

Attached, please find the pictures describing the main points of "WEDGE-LOCK®" usage.

Please feel free to contact us, we speak English.

Best regards

Marat Nanaev

Development manager

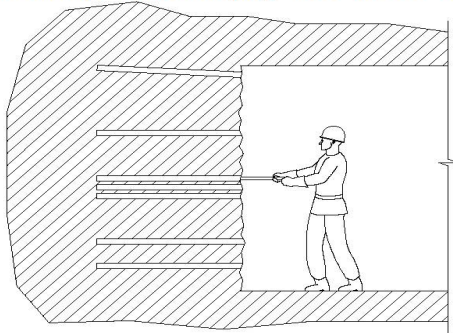


53 Ltd

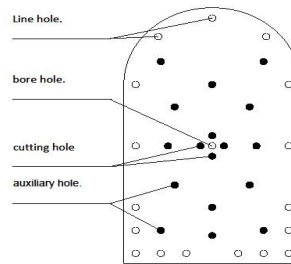
660041, Svobodniy prospect 75, office 419. Krasnoyarsk, RUSSIA
M +79058066776
e-mail: 53wedgelock@gmail.com

The usage of product "wedge-lock"

Scheme for injection of tamping device into the blast-hole



Scheme for filling the blast-hole

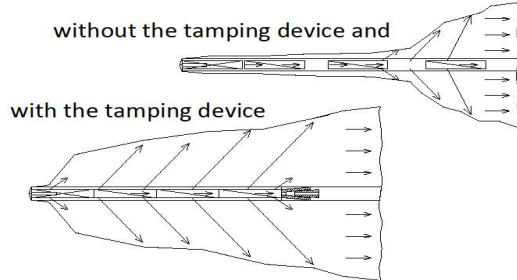


Recommendations.

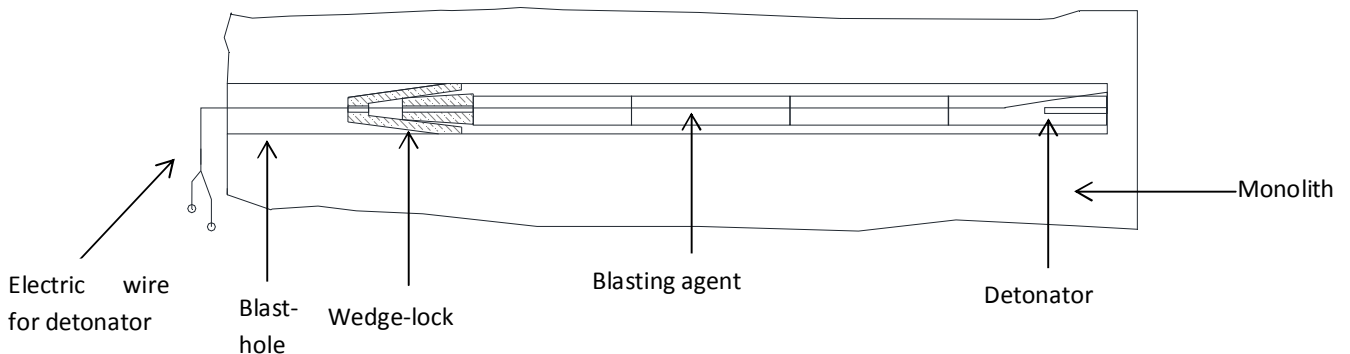
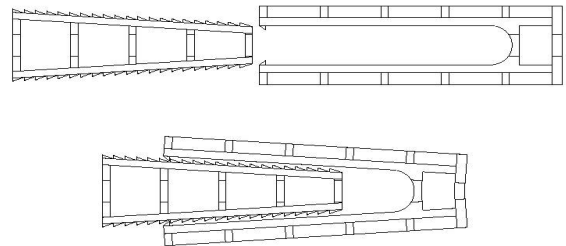
In the mines safe in gas and dust, in order to save tamping material filling of the residual space of the blast-holes is recommended only in the cutting holes and auxiliary bore holes.

In the mines, hazardous in gas and dust filling of the the residual space of the blast-hole is recommended for all blast-holes.

Breakaway of the massif



Scheme for fixation of tamping device



The WEDGE-LOCK® plug are manufactured from a size 36 up to a size 53 mm blast hole diameter. The plug can also be sized to fit any requirements of any mine.



53 Ltd

660041, Svobodniy prospect 75, office 419. Krasnoyarsk, RUSSIA

M +79058066776

e-mail: 53wedgelock@gmail.com

WEDGE-LOCK®

