# Automatic system for methane and coal dust explosions localization in coal mines

25th World Mining Congress

June 19-22, 2018 | Astana, Kazakhstan

**ASVP-LV.1M**

wmc2018.org

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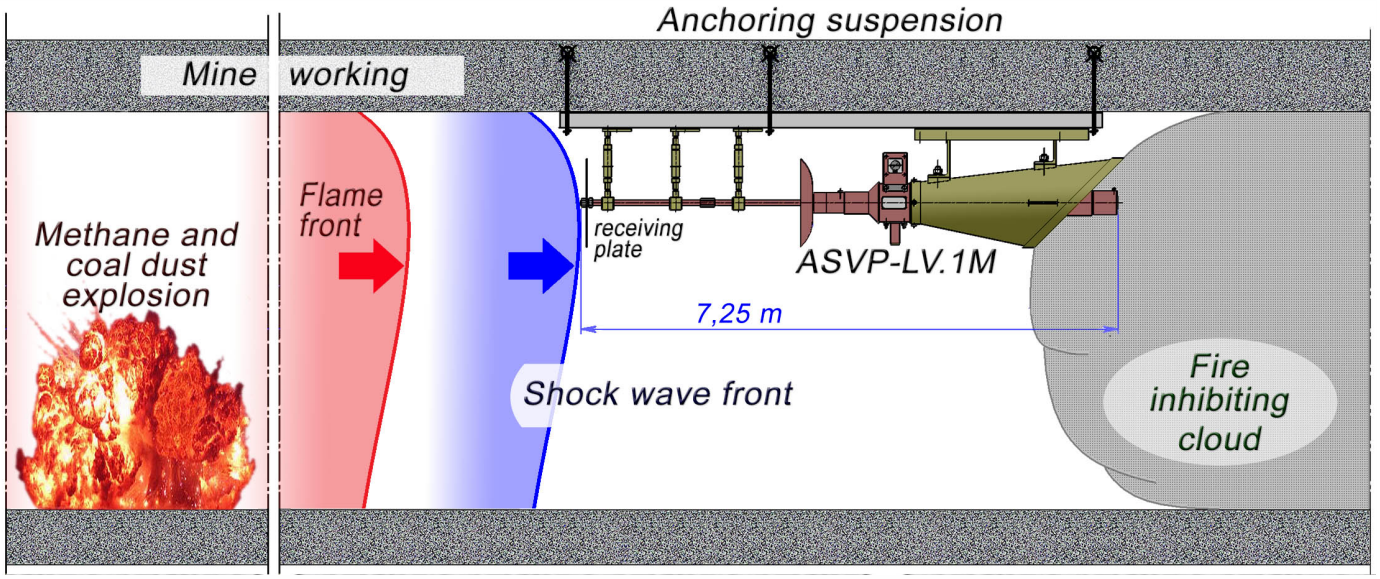
Ministry of Investments and Development of the Republic of Kazakhstan

ITE GROUP

ITECA

# Explosion in the mine workings

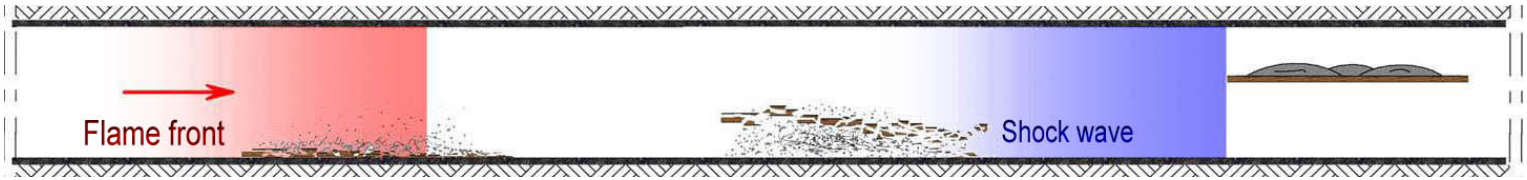




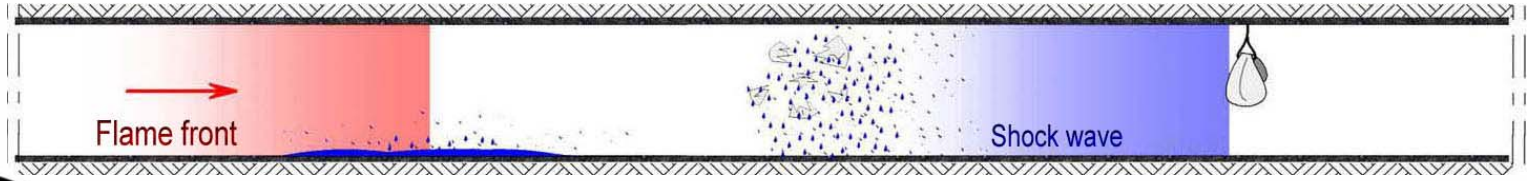
# Explosion localization in mines



Stone-dust barrier




Water barrier

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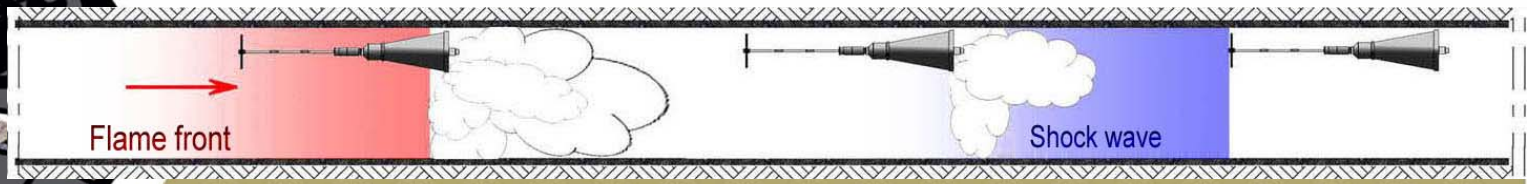

# Comparative technical parameters

of devices for explosions localization



| | Stone-dust barrier | Water barrier | ASVP-LV.1M |
|---|---|---|---|
| Response speed | 200-400 ms | 150 ms | 25 ms |
| Effectiveness of the inhibiting agent | 400 kg/m$^2$ | 440 L/m$^2$ | 0,01 kg/m$^3$ |
| Average cloud life time | < 1 s | 0,25 s | > 370 s |
| Spraying distance of fire extinguishing agent cloud | 4-7 m | 3-5 m | > 30 m |

# ASVP-LV.1M in action

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Testing of
ASVP-LV.1M
in 2011

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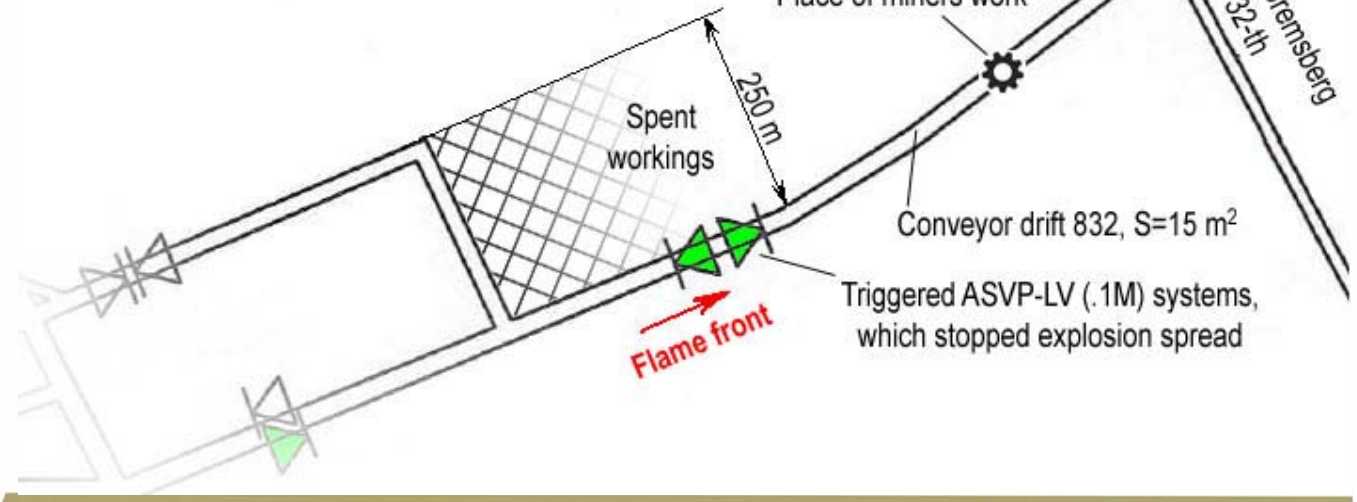
# Real explosion localization



At the mine Vorkutinskaya (Russia) the barrier of two our ASVP-LV in the Conveyor drift 832 has worked efficiently, and the explosion spread to the Ventilation Bremsberg the 32-th did not occur



# Participation in exhibitions

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ASVP-LV.1M were awarded with diplomas and medals at Russian and International exhibitions and congresses

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# Production of ASVP-LV.1M

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# Permits for usage

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Russia
and EACU

China

Ukrain

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