

RUSSIAN ACADEMY OF ARTILLERY AND MISSILE ENGINEERING
North-West Regional Center

“SPECIAL MATERIALS, LTD.”

**MILITARY HISTORY MUSEUM OF ARTILLERY,
ENGINEERING AND COMMUNICATION TROOPS**

INTERNATIONAL RESEARCH AND APPLICATION WORKSHOP

“ Ways and Means of Blast Protection ”

PROGRAM

Saint-Petersburg

15-16.01 2002

ORGANIZING COMMITTEE

Silnikov Mikhail Vladimirovich	chairman president of “Special Materials, Ltd.” academician of RAAME
Gelfand Boris Efimovich	co-chairman Semenov Institute of Chemical Physics RAS, Head of Laboratory
Mikhailin Andrey Ivanovich	scientific secretary vice-president of “Special Materials, Ltd”
Krulov Valeriy Mikhailovich	Director of Military History Museum of Artillery, Engineering and Communication Troops, academician of RAAME
Selivanov Viktor Valentinovich	Bauman Moscow State Technical University, Professor, academician of RAAME

OBJECTIVES OF THE WORKSHOP

Discussion of the problem state in a multitude of areas of theoretical and experimental investigations forming the basis of developing blast suppression and localizations devices and their practical applications.

The Workshop will specialize on the following areas:

- research and application aspects of developing protective devices against high energy explosives;
- effective mechanisms of shock wave attenuation;
- means of suppression fragmentation effect;
- practice of using blast protective devices by the Law Enforcement and the Ministry of Defense bodies.

TIMETABLE

January 15

9.00-10.00 – Registration, Military History Museum of Artillery , Engineering and Communication Troops (Alexandrovskiy Park,7, Metro station “Gorkovskaia”)

10.00-11.30 – Opening

1.Workshop opening

2.Opening address

3.Talks

11.30-13.00 – Coffee break, press conference, a tour of the Museum

13.00-14.30 – Talks

14.30-15.30 – Lunch

15.30-18.00 –Talks and Discussions

18.00 – Conference Banquet

January 16

9.00-10.00 – Visit to “Special Materials, Ltd.”

10.00-17.00 – Field Testing of Blast Inhibitor devices

Please mind that your talk shall not exceed 15 minutes.

PROGRAMME OF TALKS

1. Transformation of Blast Wave by Two - Phase Layer

B.E.Gelfand, M.V.Silnikov

Semenov Institute of Chemical Physics RAS, SPECIAL MATERIALS, LTD.

2. Blast Mitigation Studies at the Defence Research Establishment Suffield

S.B.Murray, J.Slater, D.Bergeron, D.V.Ritzel

Defence Research Establishment Suffield

3. Evaluation of Blast Inhibition Device Effectiveness on the Basis of Numerical Simulation of Shock-Wave Processes

A.A.Kostin, V.V.Goncharov

15CSRI RMD

4. Evaluation of Fragmentation and Damage Blast Effects on Biological Objects

M.V.Turin, V.I.Khrupkin

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5. System of Detection, Localization and Destruction of Blast Devices

U.I.Olshanskiy., S.G.Filippov, N.A.Ivanov

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6. Practice of Opposing to Terrorist Blast Devices and Recommendations on Means of Protection and Localization Harmful Blast Effects

V.S.Lisgumov

Regional Department of Technical Means, FSS, Russia

7. Effectiveness of "Fountain" Blast Inhibitors estimated on the basis of Analysis of their Practical Application

A.I.Mikhailin, A.V.Orlov

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8. On TNO-PML developments of blast resistant doors and walls

Andre G. van Erkel, Leon F. Galle

TNO-PML, DMKM, Martech

9. Fire-explosion-proof designs

T.A.Mirzeabassov, D.O.Belov, N.I.Gordin

Ltd. Company «ANTER»

10. Blast Camera for Localizing Blast Fragmentation Effect

N.P.Mikhailov

UBSTU

11. Automatic System for Analyzing Consequences of Non-Authorized Blasts
V.S.Solovyev, V.V.Leonov, D.V.Gelin, S.A.Lushnin, V.A.Markov
BMSTU

12. Damage Effects of Energy Carriers and Ammunition
A.A.Klukvin
SRI AM

13. Calculation and Experimental Investigations of Mines and HE Fragmentation
Projectiles Action on Wheeled Vehicles
H.A.Кулаков
MAMI

14. Evaluation of Protective Properties of a Heated Gas Layer
V.N.Okhitin, S.S.Menshakov
BMSTU

15. Practical Experience of Applying Locally adaptive non-structural cells
(graticules) to Blast and Shock Waves Propagation Problems in Complicated
Geometry Areas
P.A.Voynovich, E.V.Timofeev, A.O.Galukov
Soft-Impact, Ltd., PTI RAS

16. Mitigation of Blast Shock Wave Front by Thin Insert
A.I.Sadirin, E.O.Malakhova
Nidgorodskiy University, Mechanics Reserach

17. Investigation of soft soil, concrete, brick behavior under the action of blast
shock waves
A.M.Bragov, V.V.Balandin, P.V.Demenko, A.K.Lomunov, I.V.Sergeichev
Nidgorodskiy University, Mechanics Reserach

18. Biomechanical model of Projectiles and Fragments Interaction with a Bio-
object
A.U.Letnikov, I.F.Kobytkin
BMSTU, SRI

19. Risk Factors Causing by Grenade Launcher Fire in the Closed Structures.
L.B.Ozeretskovskiy, S.M.Logatkin, A.I.Kunaev, E.P.Tyrnov
Military Medicine Academy , military unit 33491, Ministry of Defense Armament
Headquarter

20. Problems of Illegal weapon Turnover Control in North-West Federal Region
V.U.Vladimirov

St. Petersburg University of Russian Ministry of Interior Affairs

21. Opportunities of Blast Effects Examination in Terrorism Control

V.U.Vladimirov

St. Petersburg University of Russian Ministry of Interior Affairs

22. Blast Destruction of Constructions and Devices Equipped with High Energy Explosive with the Help of Hollow charges without causing detonation inside the Equipment

I.F.Kobylykin, N.V.Kravchenko, P.I.Rizdel, V.V.Selivanov

BMSTU

23. Destroyers of Dangerously Explosive Objects

V.I.Novikov

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24. Three Stage-Scheme of Blast Wave Attenuation

V.I. Novikov

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25. Ways of Efficiency Enhancement for Blast Inhibition Devices

M.V.Silnikov, N.N.Vasiliev, A.V.Ermolaev, A.I.Mikhailin, A.V.Orlov

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26. Method of Comparison Evaluation of Barrier Effect on Fragmentation Flow Caused by Explosive Detonation

N.N.Vasiliev, A.V.Orlov, S.A.Podgoretchkiy

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27. Sapper equipment

A.N.Sautkin, A.E.Tarassenko

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28. Complex Protective Device Designed against Damage Fragmentation and Blast Effects

M.V.Silnikov, N.N.Vasiliev, V.A.Khimichev

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29. Blast Methods of Remote Neutralization of Ammunitions

A.L.Mikhaylov