

XIII International Conference

THE LATEST TRENDS IN THE CONSTRUCTION AND APPLICATIONS OF BALLISTIC ARMOUR

Lodz, December 4 - 5, 2013

UNDER THE AUSPICES OF



Ministry
of the Interior

MINISTRY OF THE INTERIOR



Ministry of Science
and Higher Education
Republic of Poland

MINISTRY OF SCIENCE
AND HIGHER EDUCATION



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INSTITUTE OF SECURITY TECHNOLOGY "MORATEX" - POLAND

CO-PROMOTERS:

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HIGH STRENGTH MATERIAL CENTRE "ARMOCOM" - RUSSIA

LODZ 2013

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December 4, 2013

REGISTRATION - Golden Floor, University Business Park Wólczanska 178, 90-001 Łódź	8:00 - 8:30
REPRESENTATIVE OF MINISTRY OF INTERIOR	8:30 - 8:40
REPRESENTATIVE OF MINISTRY OF SCIENCE AND HIGHER EDUCATION	8:40 - 8:50
REPRESENTATIVE OF THE MAYOR OF LODZ	8:50 - 9:00
REPRESENTATIVE OF THE MARSHAL OF THE REGION OF LODZ	9:00 - 9:10
REPRESENTATIVE OF THE „MORATEX” INSTITUTE	9:10 - 9:20
COFFEE BREAK	9:20 - 9:40

SESSION: Breakthrough technologies I		4-12-2013
Chairman: YE.V. KUPRIYANOVA		
DEL CZYK-OLEJNICZAK B., ZIELIŃSKA D, WIERZBICKI Ł	SHEAR THICKENING FLUID IMPREGNATED FABRIC COMPOSITES	9:40 - 10:00
WIERZBICKI Ł., LEONOWICZ M., KOZŁOWSKA J	RHEOLOGICAL PROPERTIES OF FLUIDS BASED ON NANOSIZED SILICA SUSPENSIONS	10:00 - 10:20
WIŚNIEWSKI A., PACEK D., ŻOCHOWSKI P., WIERZBICKI Ł., KOZŁOWSKA J., ZIELIŃSKA D., DEL CZYK-OLEJNICZAK B., STRUSZCZYK M. H., LEONOWICZ M., GRABOWSKA G., OLSZEWSKA K.	CONCEPT OF THE PROTECTION ARMOR CONTAINING RHEOLOGICAL FLUIDS	10:20 - 10:40
WIŚNIEWSKI A., PACEK D., ŻOCHOWSKI P., WIERZBICKI Ł., KOZŁOWSKA J., ZIELIŃSKA D., DEL CZYK-OLEJNICZAK B., STRUSZCZYK M. H., OLSZEWSKA K., LEONOWICZ M., GRABOWSKA G.	CONCEPT OF THE PROTECTION ARMOR CONTAINING MEAGNETORHEOLOGICAL FLUIDS	10:40 - 11:00
COFFEE BREAK		11:00 – 11:20

SESSION: Breakthrough technologies II (parallel session)		4-12-2013
Chairman: M.H. STRUSZCZYK		
STRUSZCZYK M.H., MIKLAS M., ŁANDWIJT M., PUSZKARZ A., KRUCIŃSKA I.	MODIFICATION OF FIBROUS BALLISTIC MATERIALS WITH A USE OF LOW TEMPERATURE PLASMA TREATMENT	11:20 - 11:40
STRUSZCZYK M.H., REDLICH G, KUCINSKA-KRÓL I., SOLINSKA E.	INTRODUCTION IN THE D-BOX PROJECT - APECT OF THE PERSONAL PROTECTION IN HUMANITARIAN DEMINEING USED.	11:40 - 12:00
M. FEJDYŚ, K. KOŚLA, A. KUCHARSKA-JASTĄBEK, OLSZEWSKA, L. MADEJ-KIEŁBIK, M. ŁANDWIJT, W. HABAJ	COMPOSITE ARMOR SYSTEMS WITH ADVANCED CERAMICS	12:00 - 12:20
GRABOWSKA G., ZIELIŃSKA D., BŁASZCZYK J., ŁANDWIJT M., WAŁĘZA J., PAWŁOWSKA A., STRUSZCZYK M.H.	MULTIFUNCTIONAL VESTS WITH BULLET-, FRAGMENT-, KNIFE- AND SPIKE RESISTANCE DESIGNED BY ITB "MORATEX" IN ASPECT OF NEW EDITION OF PN-V-87000:2011 STANDARD	12:20 - 12:40
LUNCH		12:40 – 14:00

SESSION: Evaluation of the ballistic products I (parallel session)		4-12-2013
Chairman: W. BERNAT		
BESPALOV I.V., KOBYLKIN I.F., SMIRNOV V.P.	PENETRATION MAXIMUM VELOCITY ENERGY METHOD FOR COMPOSITE TEXTILE ARMOR PACKAGE	11:20 - 11:40
MEULMAN J.H.	HIGH TEMPERATURE PERFORMANCE OF ARTICLES, MADE OF DYNEEMA® UD	11:40 - 12:00
PADOVANI M., MEULMAN J.H., LOUWERS D.	EFFECT OF REAL AGEING ON BODY ARMOR ARTICLES MADE OF DYNEEMA® UD	12:00 - 12:20
CEGŁA M., HABAJ W., STĘPNIAK W.	THE BALLISTIC MATERIAL SYSTEMS CONTAINING CERAMICS WITH FUNCTIONAL DEFRMATIONS - ELABORATION AND VERFICATION	12:20 - 12:40
LUNCH		12:40 – 14:00

SESSION: New ballistic products I (parallel session)		4-12-2013
Chairman: M. LEONOWICZ		
BESPALOV I.V., GRIGORYAN V.A., SMIRNOV V.P.	PERSPECTIVES OF APPLICATION OF PROTECTIVE MATERIALS MADE OF ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE IN BODY ARMOR FACILITIES	14:00 - 14:20
FEJDYŚ M., HABAJ W., STRUSZCZYK M.H., ŁANDWIJT M.	BALLISTIC HELMET DEVELOPMENTS USING UHMWPE MATERIALS	14:20 - 14:40
BŁASZCZYK W.	BALLISTIC COMPOSITE SHIELDS	14:40 - 15:00
CEGŁA M., HABAJ W., STĘPNIAK W.	CERAMIC-BASED COMPOSITE ARMOR SYSTEMS RESISTANT TO 5.7X28 MM SS190 PROJECTILES FOR PERSONAL BODY ARMOR APPLICATIONS	15:00 - 15:20
COFFEE BREAK		15:20 – 15:40

SESSION: New materials applicable in ballistic protections (parallel session)		4-12-2013
Chairman: G. REDLICH		
OBERSZTYN E., BARTCZAK A.	REQUIREMENTS FOR THE OPTICAL CAMOUFLAGE (VIS AND IR) IN TERMS OF CURRENT STANDARDS	14:00 - 14:20
SZUGAJEW L., JARZEMSKI J.	TEST METHODS FOR EVALUATING MICROWAVE MASKING MATERIALS PROPERTIES	14:20 - 14:40
GORE-TEX	COMPATIBILITY OF PERFORMANCE CONCEPT WITH BALLISTIC PROTECTION	14:40 - 15:00
COFFEE BREAK		15:00 – 15:40

SESSION: POSTERS		4-12-2013
Chairman: M.H.STRUSZCZYK		
GAVZE A.L., CHUSOV S.Y., YANKOV V.P., BONDARYUK N.N., ZHLOBA A.V., TETYUKHIN V.V.	APPLICATION OF SPARSELY-ALLOYED TITANIUM ALLOYS IN ARMORED VEHICLES AND BODY ARMOR	15:40 – 17:00
ARTSRUNI A.A., ZAZHILOV A.A., KUPRYUNIN D.G., TSURGOZEN L.A., PONOMAREV A.V.	METHODICAL EVALUATION OF FOAM ALUMINIUM PLATE PERFORMANCE AS PART OF MINE PROTECTION SYSTEM	
CZERWIŃSKI K., FORTUNIAK K., OBERSZTYN E., REDLICH G.	COMPARISON OF ASSESSMENT OF IMPACT-RESISTANCE OF THE TORSO AND LIMB PROTECTORS ACCORDING TO THE METHODS INCLUDED TO BS 7971 AND TO HOSDB PUBLICATION	
KOZŁOWSKA J., WIERZBICKI Ł., LEONOWICZ M., ZIELIŃSKA D., OLSZEWSKA K., STRUSZCZYK M.H., GRABOWSKA G., WIŚNIEWSKI A., PACEK D.	THE BALLISTIC AND STAB RESISTANCE OF COMPOSITES BASED ON HIGH-STRENGTH MATERIALS AND MAGNETORHEOLOGICAL FLUIDS	
WRZEŚNIEWSKA-TOSIK K., DUTKIEWICZ S., RYSZKOWSKA J., ZAJCHOWSKI S.	FLAME RETARDANT MATERIALS PREPARED BY BLENDING OF VARIOUS POLYMERS WITH POWDER OF CHICKEN FEATHERS	
ZIELIŃSKA D., STRUSZCZYK M. H., OLSZEWSKA K., DELCZYK-OLEJNICZAK B., WIERZBICKI Ł., KOZŁOWSKA J., LEONOWICZ. M.	IMPACT-RESISTANT ELASTOMERIC PADS	
CHICHECKA M., HAŁGAS-WILBIK B.	RISK ASSESSMENT OF PROTECTIVE CLOTHING AND EQUIPMENT FOR USE IN VIOLENT SITUATIONS AND IN TRAINING	
CONFERENCE DINNER Golden Floor, University Business Park Wólczańska 178, 90-001 Łódź		19:00 – 23:00

December 5, 2013

SESSION: New ballistic products II (parallel session)		5-12-2013
Chairman: A. WIŚNIEWSKI		
STRUSZCZYK. M.H., DELCZYK-OLEJNICZAK B.	COMPOSITE BALLISTIC INSERTS FOR BULLET- AND FRAGMENT-PROOF VESTS	9:00 - 9:20
YE.V. KUPRIANOVA	ANALYSIS OF SOME WORLD TENDENCIES IN THE AREA OF DESIGNING ARMOR HELMETS	9:20 - 9:40
YE.F. KHARCHENKO, DSC, V.A. ANISKOVICH, PHD, I.S. GAVRIKOV AND V.A. PRIKHODKO	USE OF COMPOSITE-CERAMIC MATERIALS FOR ARMORING OVER- LARGE PRODUCTS	9:40 - 10:00
YE.A. SOLOVYOVA, T.N. ROSTOVTSEVA, I.A. KURMASHOVA AND YE.D. KORMAKOVA	COMPLEX PERSONAL PROTECTION MEANS	10:00 - 10:20
COFFEE BREAK		10:20 – 11:00

SESSION: Evaluation of the ballistic products II (parallel session)		5-12-2013
Chairman: E. WITCZAK		
KOSIŃSKA B., CZERWIŃSKI K.	REQUIREMENTS FOR DEVELOPING THE BULLET- AND FRAGMENT-PROOF VESTS BASED ON THE STUDY OF THE EMPIRICAL DISTRIBUTION OF INDIVIDUAL SIZES OF BODY AMONG POLISH POLICE OFFICERS	9:00 - 9:20
BUKOWIECKA D., HOROSZKIEWICZ J.	CONCEPT OF VALIDATION IN THE ERGONOMIC FIELD OF BULLETPROOF VEST USED BY OFFICERS OF SECURITY AND PUBLIC ORDER SERVICES	9:20 - 9:40
BARNAT W., SOKOŁOWSKI D., GIELETA R.	NUMERICAL AND EXPERIMENTAL RESEARCH ON STAB RESISTANCE OF BODY ARMOUR PACKAGE	9:40 - 10:00
YE. F. KHARCHENKO	METAMORPHOSES OF ORGANIC FIBERS WHEN FORMING ARMOR-PROTECTIVE STRUCTURES	10:00 - 10:20
COFFEE BREAK		10:20 – 11:00

SESSION: Ideas, Research & Commercialization (parallel session)		5-12-2013
Chairman: M.H. STRUSZCZYK		
REDLICH G.	THE INNOVATIVENESS OF POLISH ECONOMY - ANALYSIS OF SELECTED FACTORS OF THE „INNOVATION UNION SCOREBOARD” RANKING	11:00 - 11:20
STRUSZCZYK M., KOSIŃSKA B., CZERWIŃSKI K., OLEJNIK M.	INNOVATION AND THE BARRIERS IN THE BRANCH OF BALLISTIC PRODUCTS	11: 20 - 11:40
SOLIŃSKA E., MAŁOLEPSZY H., WAWRZYŃIAK J.	CRITERIA FOR PRODUCT ASSESSMENT THAT AUTHORISE FOR MARKING WITH THE ERGOBAL MARK	11:40 - 12:00
M. KUBICA	PROTECTION SYSTEMS FOR HELICOPTERS AND VEHICLES IN LUBAWA GROUP OFFER	12:00 – 12:20
LUNCH		12-20 – 14:00

SESSION: Evaluation of the ballistic products III (parallel session)		5-12-2013
Chairman: M. FEJDYŚ		
ŁANDWIJT M., FEJDYŚ M., DZIERŻAWSKA J., STĘPNIAK W., HABAJ W.	MATERIAL COMPOSITIONS FOR AN APPLICATION IN INTERNAL WEAR VEST	11:00 - 11:20
ŁANDWIJT M., PRACHT M., WRÓBLEWSKI A.	INTERLABORATORY COMPARISON OF FRAGMENTPROOF SOFT BALLISTIC VEST INSERTS ACCORDING TO NOVELISATION OF PN V-87000:2011 STANDARD	11: 20 - 11:40
ŁANDWIJT M., ROMEK R.	DETERMINATION OF THE RISK FOR HEAD AND NECK TRAUMA OF BULLET PROOF HELMET'S USER	11:40 - 12:00
ŁANDWIJT M., DZIERŻAWSKA J., TAPOROWSKI M., MADAJ T.	DESTRUCTION EFFICACY ANALYSIS OF SHOOTING AMMUNITION TYPE 7,62x25	12:00 – 12:20
LUNCH		12-20 – 14:00

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