PORTLAND AND NORTHWEST OREGON CLIMATE

The average maximum and minimum temperatures during the period of the conference will be approximately 29°C (84°F) and 18°C (65°F), respecitvely, and the climate will be relatively dry during this period although there will be a remote possibility of a rain shower. Portland is just a few hundred feet above sea level and generally very pleasant at this time of year.

CONFERENCE REGISTRATION

The advance registration fee (prior to July 1, 1985) is $175 (U.S.). Registration after July 1 and at the meeting will be $195. Please make registration fee payable to EXPLOMET—OREGON GRADUATE CENTER; only checks or money orders will be accepted (no purchase orders, please). Persons cancelling registration will receive one bound copy of the conference proceedings. In view of our financial commitments no refunds can be made. Registration fee includes:

- Cocktail party/reception at opening session
- Coffee or beverages at morning and afternoon breaks for four days
- Conference banquet
- Conference outing and dinner (including transportation)
- One hard-bound copy of the conference proceedings (to be published and distributed by Marcel Dekker, Inc. by March 1986)

A special program for spouses and accompanying family members will be organized. Cost for this program will be payable in the registration area at the conference. If you will be bringing a spouse or other family members please indicate on the registration form. Spouse or family members will not need to register, but you will need to purchase extra dinner tickets for them when registering. They will be welcome at the Sunday evening reception at no charge.

Please send the enclosed registration form together with your check or money order to:

Carol Hendrickson
Conference Coordinator, EXPLOMET '85
Oregon Graduate Center
19600 N.W. Von Neumann Drive
Beaverton, Oregon 97006-1999 U.S.A.

HOTEL RESERVATIONS

Please use the enclosed hotel registration form and return it *directly* to the hotel:

Portland Hilton
921 S.W. 6th Avenue
Portland, Oregon 97201 U.S.A.

Please return hotel registration via *air mail.*

HOTEL TRANSPORTATION/PARKING

The Portland Hilton can be reached from the Portland International Airport by boarding the Downtown Airporter bus. Bus departures are indicated just below the baggage area and at other locations. Buses leave every 20 minutes between 6:00 a.m. and midnight on weekdays, and every 30 minutes between 6:00 a.m. and midnight on weekends. The cost per person is $4.00. Taxis are also available at the Airport. Taxi fare is approximately $15.00.

The hotel also has underground parking for guests and can be reached by car from Interstate 5 or Interstate 405.

Marc Meyers

EXPLOMET '85
PORTLAND, OREGON U.S.A.

INTERNATIONAL CONFERENCE ON METALLURGICAL APPLICATIONS OF SHOCK-WAVE AND HIGH-STRAIN-RATE PHENOMENA

Portland Hilton
Portland, Oregon U.S.A.
July 28–August 1, 1985

PROGRAM

Conference General Chairman

Lawrence E. Murr
Oregon Graduate Center
19600 N.W. Von Neumann Drive
Beaverton, Oregon 97006-1999 U.S.A.
Tel.: (503) 690-1026

Conference Co-chairmen

Karl P. Staudhammer
Marc A. Meyers

Sponsored by

- U.S. ARMY RESEARCH OFFICE (Metallurgy and Materials Science Division)
- NATIONAL SCIENCE FOUNDATION (Division of Materials Research)
- LOS ALAMOS NATIONAL LABORATORY
- CENTER FOR EXPLOSIVES TECHNOLOGY RESEARCH, NEW MEXICO TECH
- OREGON GRADUATE CENTER

EXPLOMET '85 will provide a forum for the exchange of information on the metallurgical and other materials effects and applications of shock-wave and high-strain-rate phenomena. It will examine the state-of-the-art of explosive and related technologies in the context of metallurgical and materials processing and fabrication. The conference purposes and objectives will include the following:

- The acceleration of progress in the field of high-strain-rate deformation and fabrication.
- Provide a forum for the exchange of state-of-the-art information on the metallurgical effects of high-strain-rate deformation and fabrication, and other shock-wave and explosives technology applications in metallurgy and the materials sciences and engineering.
- Bring physicists, metallurgists, materials scientists and engineers, mechanical engineers and industrial technologists and other engineers together to address both the fundamental and practical aspects of high-strain-rate deformation and shock loading; and to emphasize applications in the metallurgical and materials sciences and engineering.
- Extend the frontiers established and documented at EXPLOMET '80 in Albuquerque, New Mexico, by organizing the existing information and contemporary research into a coherent body of knowledge in order to focus on significant and new areas and applications.

SUNDAY, JULY 28 4:00 p.m.–10:00 p.m.

4:00–5:00
Registration (Ballroom Foyer)

7:00–8:00
Evening Cocktail Reception (Pavilion Room)

8:00–8:10
Welcome and Introduction: L.E. Murr

8:10–9:00
Keynote Presentation:

THE PHYSICS CONNECTION: George E. Duvall; Shock Dynamics Laboratory, Department of Physics, Washington State University, Pullman, Washington 99164

9:00–10:00
Open Bar (Cash Bar)

MONDAY, JULY 29 8:00 a.m.–12:10 p.m.

8:00–8:30
Late Registration (Ballroom Foyer)

DYNAMIC CONSOLIDATION I, Chairman: M.A. Meyers, New Mexico Institute of Mining and Technology

8:30–10:15
Invited Presentations:

30 **THE PARTICULATE NATURE OF DYNAMIC COMPACTION:** Vonne D. Linse; Battelle-Columbus Laboratories, Columbus, Ohio 43201

30 **DYNAMIC COMPACTION OF ALUMINUM NITRIDE POWDER:** Mark L. Wilkins, Andre S. Kusubov, and Carl F. Cline; Lawrence Livermore National Laboratory, Livermore, California 94550

30 **NEW TRENDS IN EXPLOSIVE POWDER METALLURGY:** R.A. Prümmer; Fraunhofer Institute for Materials Mechanics, 7800 Freiburg, West Germany

10:15–11:30
Contributed Presentations:

12 **SHOCK-WAVE CONSOLIDATION OF ALUMINUM-LITHIUM ALLOY POWDER:** Thomas J. Ahrens, Ricardo B. Schwarz,* Andrew H. Mutz, Thad Vreeland, Jr., James A. Tyburczy, and Naresh Thadhani; California Institute of Technology, Pasadena, California 91125; and S.M.L. Sastry and T.C. Peng, McDonnel Douglas Research Laboratory, St. Louis, Missouri 63166 (* Permanent address: Los Alamos National Laboratory, Los Alamos, New Mexico)

12 **METALLURGICAL ANALYSIS OF DYNAMICALLY COMPACTED MONOSIZED ALUMINUM-6% SILICON POWDERS:** John E. Smugeresky, Sandia National Laboratories, Livermore, California 94550; and William H. Gourdin, University of California, Lawrence Livermore National Laboratory, Livermore, California 94550

12 **DYNAMIC CONSOLIDATION OF RAPIDLY SOLIDIFIED TYPE 304 SS POWDERS:** G.E. Korth, J.E. Flinn, R.C. Green, and L.H. Schoenlein, EG&G Idaho, Inc., Idaho Falls, Idaho 83415.

12 **CONTROLLED POWDER MORPHOLOGY EXPERIMENTS IN MEGABAR 304 STAINLESS STEEL COMPACTION:** K.P. Staudhammer and K. A. Johnson; Materials Science and Technology Division, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

12 **NUMERICAL MODELING OF THE EXPERIMENTAL DYNAMIC CONSOLIDATION OF RAPIDLY SOLIDIFIED STAINLESS STEEL POWDERS:** Richard L. Williamson and Ray A. Berry, Idaho National Engineering Laboratory, Idaho Falls, Idaho 83415.

11:30–12:10
Panel Discussion

MONDAY, JULY 29 2:00 p.m.–5:00 p.m.

DYNAMIC CONSOLIDATION II: Chairman, Q.T. Inal, New Mexico Institute of Mining and Technology

2:00–3:10
Invited Presentations:

EXPLOSIVE COMPACTION OF POLYMERIC AND CERAMIC POWDERED MATERIALS: T.Z. Blazynski; Department of Mechanical Engineering, University of Leeds, Leeds LS2 9JT, United Kingdom

POSSIBLITIES OF DYNAMIC COMPACTION TECHNIQUES IN CERAMIC INDUSTRIAL PROCESSING: Akira Sawaoka; Research Laboratory of Engineering Materials, Tokyo Institute of Technology, Yokohama 227, Japan, and Center for Explosives Technology Research, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

3:10–4:30
Contributed Presentations:

SHOCK CONSOLIDATION OF A GLASS-FORMING CRYSTALLINE POWDER: T. Vreeland, Jr., P. Kasiraj, A.H. Mutz, N.N. Thadhani; Division of Engineering and Applied Science, California Institute of Technology, Pasadena, California 91125

A MODEL DESCRIBING THE TEMPERATURE DISTRIBUTION DURING DYNAMIC COMPACTION OF CERAMIC POWDERS: Victor F. Lotrich, Tamotsu Akashi and Akira Sawaoka; Center for Explosives Technology Research, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801.

TEMPERATURE KINETICS DURING SHOCK-WAVE CONSOLIDATION OF METALLIC POWDERS: R.B. Schwarz; Argonne National Laboratory (now at Los Alamos National Laboratory, Los Alamos, New Mexico 87545), P. Kasiraj* and T. Vreeland, Jr., California Institute of Technology, Pasadena, California 91225 (*Now at IBM Laboratories, San Jose, California 95193)

FURTHER EXAMINATION OF IMPLOSIVELY CONSOLIDATED IRON-BASE AMORPHOUS POWDER PLATELETS: MAGNETIC, MELT, AND MICROSTRUCTURAL PHENOMENA: L.E. Murr, Oregon Graduate Center, Beaverton, Oregon 97006.

4:30–5:00
Panel Discussion

6:30
Cocktails in Pavilion Room (Cash Bar)

7:15
Conference Dinner (Pavilion Room)

TUESDAY, JULY 30 8:30 a.m.–12:00 noon, and 2:00 p.m.–2:45 p.m.

SHOCK WAVES: Chairman, K.P. Staudhammer, Los Alamos National Laboratory

8:30–9:05
Invited Presentation:

EXPLOSIVE-THERMAL TREATMENT OF METALS: A NEW CONCEPT OF POTENTIALITIES OF SHOCK TREATMENT OF METALS: A.A. Deribas, I.N. Garviliev; Special Design Office of High-Rate Hydrodynamics; T.M. Sobolenko and T.C. Teslenko; The Lavrentiev Institute of Hydrodynamics, Novosibirsk-90, 630090, U.S.S.R.

9:05 a.m.–12:00 noon; 2:00–2:45 p.m.
Contributed Presentations:

THE EFFECT OF INITIAL HEAT TREATMENT ON THE RESIDUAL MICROSTRUCTURE OF 6061 ALUMINUM FOLLOWING SHOCK COMPRESSION: C.R. Hills, W.B. Jones, J.L. Wise, and M.J. Carr, Sandia National Laboratories, Albuquerque, New Mexico 87185

THE SANDIA COMPUTERIZED SHOCK COMPRESSION DATABASE: J.S. Wilbeck, C.E. Anderson, J.C. Hokanson, J.R. Asay, D.E. Grady, R.A. Graham, and M.E. Kipp, Southeast Research Institute, San Antonio, Texas 78298; Sandia National Laboratories, Albuquerque, New Mexico 87185

WAVE-PROFILE MEASUREMENTS ON SHOCK-LOADED SPECIMENS OF STAINLESS STEEL (21Cr-6Ni-9Mn): J.L. Wise, Sandia National Laboratories, Albuquerque, New Mexico 87185 and D.E. Mikkola, Department of Metallurgical Engineering, Michigan Technological University, Houghton, Michigan 49931

THE EFFECT OF SHOCK PRESSURE AND TEMPERATURE ON SUBSTRUCTURE DEVELOPMENT IN RUTILE: Martin J. Carr and Robert A. Graham; Sandia National Laboratories, Albuquerque, New Mexico 87185

ANALYSIS OF DISLOCATION KINETICS ACROSS SHOCKS: R.B. Stout; Livermore National Laboratory, Livermore, California 94550

INVESTIGATION OF SHOCK-WAVE LOADING ON THE AMORPHOUS ALLOYS STRUCTURE BY MAGNETO-STRUCTURE METHODS: R.S. Ivkhakov, V.I. Kirko, A.A. Kuzovnikov, A.D. Balaev, M.M. Karpenko and V.P. Ovcharov; L.V. Kirensky Institute of Physics, Krasnoyarsk 660036, U.S.S.R.

SUBSTRUCTURAL CHANGES AS A FUNCTION OF PULSE DURATION IN Mo-33Re SHOCKED AT LOW TEMPERATURE: J.A. Brusso, R.N. Wright,* and D.E. Mikkola; Department of Metallurgical Engineering, Michigan Technological University, Houghton, Michigan 49931; *EG&G Idaho, Idaho Falls, Idaho 83401.

DYNAMIC CYCLIC LOADING OF 6061-T6 ALUMINUM: D.R. Ek, J.R. Asay, and J.W. Swegle, Sandia National Laboratories, Albuquerque, New Mexico 87185.

METHODICAL ASPECTS OF INVESTIGATION OF STRUCTURAL CHANGES UNDER SHOCK LOADING: M.A. Mogilevsky and L.A. Teplyokova; Lavrentyev Institute of Hydrodynamics, Siberian Division of the USSR Academy of Sciences, Novosibirsk 630090, U.S.S.R.

DYNAMIC SHOCK STUDIES OF VANADIUM: L.C. Chhabildas and C.R. Hills, Sandia National Laboratories, Albuquerque, New Mexico 87185

2:15–2:45
Panel Discussion

TUESDAY, JULY 30 2:45 p.m.–6:00 p.m.

HIGH-STRAIN-RATE DEFORMATION: Chairman, S.T.S. Al-Hassani, University of Manchester Institute of Science and Technology.

2:45–4:10
Invited Presentations:

HIGH-STRAIN-RATE DEFORMATION MECHANISMS IN FCC METALS AND ALLOYS: P.S. Follansbee; Materials Science and Technology Division, Los Alamos National Laboratory, Los Alamos, New Mexico 87545

MATERIALS FOR EXTREME DYNAMIC LOADS: H.D. Kunze and L.W. Meyer; Fraunhofer Institute fur angewandte Materialforschung, 2820 Bremen-Lesum, West Germany

4:10–6:00
Contributed Presentations:

FAST MOVING DISLOCATIONS IN SOME ANISOTROPIC FACE CENTERED CUBIC CRYSTALS: M.N. Shetty, Department of Metallurgical Engineering, Indian Institute of Technology, Kanpur-16, U.P., India.

DYNAMIC DEFORMATION OF METAL SPHERE BY IMPACT LOADING: T. Taniguchi, K. Kondo, and A. Sawaoka; Tokyo Institute of Technology, Midori, Yokohama 227, Japan

HIGH-STRAIN-RATE $\sim 10^6 S^{-1}$ RESPONSE OF 304 STAINLESS STEEL AT VARIOUS STRAINS: K.A. Johnson and K.P. Staudhammer; Materials Science and Technology Division, Los Alamos National Laboratory, Los Alamos, New Mexico 87545

A NEW TECHNIQUE FOR HEATING SPECIMENS IN SPLIT HOPKINSON BAR EXPERIMENTS USING INDUCTION-COIL HEATERS: Z. Rosenberg, D. Dawicke, and S. Bless; University of Dayton Research Institute, Dayton, Ohio 45469

A TEST METHOD FOR DYNAMIC COMPRESSION OF METALS: A. Eugene Carden and M.S. Kim; Department of Engineering Mechanics, University of Alabama, University, Alabama 35486

DYNAMIC STRESS STRAIN FUNCTION FOR SEVERAL METALS AS DETERMINED BY THE FREIGHT-TRAIN EXPERIMENT: Jerry A. Morgan and A. Eugene Carden; Los Alamos National Laboratory, Los Alamos, New Mexico and University of Alabama, University, Alabama 35486

STRAIN-RATE HISTORY EFFECT ON DYNAMIC MECHANICAL PROPERTIES OF AISI 316 STAINLESS STEEL: C. Albertini and M. Montagnani; Commission of the European Communities, Joint Research Centre—Ispra Establishment, 21020 Ispra (Va), Italy

WEDNESDAY, JULY 31 8:00 a.m.–12:00 noon

ADIABATIC SHEAR BAND PHENOMENA: Chairman, T.Z. Blazynski, University of Leeds

8:00–9:10
Invited Presentations:

ADIABATIC SHEARING: M. Stelly and R. Dormeval; Commissariat a l'Energie Atomique—Centre d'Etudes de Bruyeres-le-Chatel, B.P. n° 511 - 75752 Paris Cedex 15, France

MATERIALS ASPECTS OF ADIABATIC SHEAR BANDS: Donald A. Shockey, Donald R. Curran, Lynn Seaman, David C. Ehrlich and Jacques H. Giovanola; SRI International, Menlo Park, California 94025.

9:10–11:30
Contributed Presentations:

SCALING RULES FOR ADIABATIC SHEAR POPULATIONS: Marvin E. Backman, Stephen A. Finnegan, Jan C. Schulz, and J. Kenneth Pringle; Research Department, Naval Weapons Center, China Lake, California 93555.

ON THE RELATIVE ROLES OF WORK-HARDENING AND THERMAL SOFTENING IN ADIABATIC SHEAR BANDS: John F. Mescall; Army Materials and Mechanics Research Center, Watertown, Massachusetts 02172

CALCULATION OF THERMAL TRAPPING IN SHEAR BANDS: J.W. Swegle and D.E. Grady; Solid Dynamics Department, Sandia National Laboratories, Albuquerque, New Mexico 87185

CRITICAL ADIABATIC SHEAR STRENGTH OF LOW-ALLOYED STEEL UNDER COMPRESSIVE LOADING: Lothar W. Meyer and Sarah Manwaring; Fraunhofer Institut fur angewandte Materialforschung, Bremen 2820, West Germany; Stanford University, Stanford, California 94305

ADIABATIC PLASTIC SHEAR OF THE HIGH-PRESSURE PHASE OF STEEL: Gerald L. Moss and Dennis S. Pritchard; Ballistic Research Laboratory, Aberdeen Proving Ground, Maryland 21005

INFLUENCE OF EFFECTIVE RATE SENSITIVITY ON ADIABATIC SHEAR INSTABILITY: J.J. Burns, Sandia National Laboratories, Albuquerque, New Mexico 87185

LOCALIZED MELTING AT THE CRACK TIP IN TWO TITANIUM ALLOYS: J. Daniel Bryant, David D. Makel, and Heinz G.F. Wilsdorf; Department of Materials Science, University of Virginia, Charlottesville, Virginia 22901

HIGH-VOLTAGE TRANSMISSION ELECTRON MICROSCOPY OF SHEAR BANDS IN TITANIUM AND AISI 4340 STEEL: Han-ryong Pak, Craig L. Wittman, and Marc A. Meyers; Center for Explosives Technology Research and

Department of Metallurgical and Materials Engineering, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

11:30–12:00 Noon
Panel Discussion

WEDNESDAY, JULY 31 1:00 p.m.–2:30 p.m.

DYNAMIC FRACTURE: Chairman, H.G.F. Wilsdorf, University of Virginia.

1:00–2:30
Contributed Presentations:

STEADY-WAVE RISETIME AND SPALL MEASUREMENTS ON URANIUM (3-15 GPa): D.E. Grady, Sandia National Laboratories, Albuquerque, New Mexico 87185

RANDOM FLAW NUCLEATION AND INTERACTION IN ONE DIMENSION: M.E. Kipp and D.E. Grady; Sandia National Laboratories, Albuquerque, New Mexico 87185

SHOCK COMPRESSION AND SPALL IN POROUS BERYLLIUM OXIDE: D. Yaziv, S.J. Bless, and D.P. Dandekar; University of Dayton, Ohio 45469; Army Materials and Mechanics Research Center, Watertown, Massachusetts 02172

DYNAMIC FRACTURE CRITERIA FROM FREE SURFACE VELOCITY MEASUREMENTS: C.S. Speight and P.F. Taylor; AWRE Foulness, Essex, England.

STAGNATION CAP FORMATION ON BLUNT PROJECTILES PENETRATING METALLIC OR BRITTLE TARGETS: M.E. Backman, R.G.S. Sewell, J.C. Schulz, O.E.R. Heimdahl, and S. Finnegan; Research Department, Naval Weapons Center, China Lake, California 93555

EFFECT OF METALLURGICAL PARAMETERS ON DYNAMIC FRACTURE BY SPALLING OF COPPER: Samuel Christy, Han-ryong Pak, and Marc A. Meyers; Center for Explosives Technology Research and Department of Metallurgical and Materials Engineering, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

CONFERENCE OUTING AND SPECIAL DINNER:

3:00 p.m.
Buses will leave the hotel for Multnomah Falls in the Columbia Gorge. We will spend approximately 45 minutes viewing the falls and relaxing before reboarding and traveling to Cascade Locks on the Columbia River where we will board the Columbia Sternwheeler for a river cruise and on-board Salmon Dinner. Cocktails will be available and there will be some light entertainment. Following dinner, the boat will dock for reboarding the buses and return to the hotel, arriving at approximately 9:30 p.m.

THURSDAY, AUGUST 1 8:30 a.m.–11:30 a.m.

EXPLOSIVE METAL WORKING: Chairman, A. Sawaoka, Tokyo Institute of Technology

8:30–11:30
Contributed Presentations:

RECORDING THE DISPLACEMENT OF A NON-UNIFORM PLATE ACCELERATED BY A DETONATING LAYER OF EXPLOSIVE: A. Persson and L-A Almgren; Nitro Nobel AB, Detonic Laboratory, Vinterviken, Box 32058, S-12611 Stockholm, Sweden

A STUDY OF WELDING WINDOWS BASED ON EXPERIMENTS WITH A GAS GUN: Jaskaran Singh: Department of Mechanical Engineering, The Queen's University of Belfast, Belfast BT9 5AH, United Kingdom

THERMOBIMETALLIC EFFECT IN EXPLOSIVELY CLAD Mo-INCONEL-COMPOUND MATERIAL: R.A. Prümmer and D. Stoeckel; Fraunhofer Institut fur Werkstoffmechanic, D-7800 Freiburg and G. Rau GmbH & Co., D-7530 Pforzheim (now with Raychem Corp., Menlo Park, California)

THE CYCLIC PRESSURE DISTRIBUTION AT EXPLOSIVELY WELDED INTERFACES: A. Szecket, D.J. Vigueras, O.T. Inal and Ashok Singh; Center for Explosives Technology Research and Department of Metallurgical and Materials Engineering, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

EXPLOSIVE WORKING OF SOME METALS AND ALLOYS AT HIGH TEMPERATURES: Akakiy B. Peikrishvilli and Nikoloz M. Chakradze; Institute of Mining Mechanics, Academy of Sciences of Georgian Republic, Tbilisi 380086, U.S.S.R.

USING EXPLOSIVE WELDING TO FABRICATE BLANKING DIES AND PUNCHES: V.M. Ogolikhin; Special Design Office of High-Rate Hydrodynamics; V.A. Simonov; The Lavrentiev Institute of Hydrodynamics, Novosibirsk-90, 630090, U.S.S.R.

EXPLOSIVE WELDING OF AN AMORPHOUS RIBBON TO A MILD STEEL SUBSTRATE: D.J. Vigueras, O.T. Inal, and A. Szeckert; Center for Explosives Technology Research and Department of Metallurgical and Materials Engineering, New Mexico Institute of Mining and Technology, Socorro, New Mexico 87801

SPOT WELDING BY HIGH SPEED WATER SLUG: S.A.L. Salem and S.T.S. Al-Hassani; Department of Mechanical Engineering, U.M.I.S.T., Manchester, United Kingdom

THE MODEL OF WAVE FORMATION UNDER EXPLOSIVE WELDING: V.M. Kornev and I.V. Yakovlev; Lavrentyev Institute of Hydrodynamics, Siberian Division of the USSR Academy of Sciences, Novosibirsk 630090, U.S.S.R.

EXPLOSIVE WELDING OF VARIABLE THICKNESS: L. Lazari; Vetco (U.K.) Aberdeen and S.T.S. Al-Hassani; Department of Mechanical Engineering, U.M.I.S.T., Manchester, United Kingdom

11:30–12:00 Noon
Panel Discussion

THURSDAY, AUGUST 1 1:30 p.m.–2:50 p.m.

SHOCK SYNTHESIS AND PROPERTY MODIFICATION OF MATERIALS: Chairman, R.A. Prümmer; Fraunhofer Institute fur Werkstoffmechanik

1:30–2:05
Invited Presentation:

SHOCK COMPRESSION PROCESSES IN INORGANIC POWDERS: R.A. Graham; Sandia National Laboratories, Albuquerque, New Mexico 87185

2:05-2:50
Contributed Presentations:

INFLUENCE OF DYNAMIC SHOCK COMPRESSION ON THE SPECIFIC SURFACE AREA OF INORGANIC POWDERS: Frank L. Williams; Chemical and Nuclear Engineering, University of New Mexico, Albuquerque, New Mexico 87131; Bruno Morisin and Robert Graham; Sandia National Laboratories, Albuquerque, New Mexico 87185

OBSERVATIONS ON THE SHOCK-SYNTHESIS OF INTERMETALLIC COMPOUNDS: Y. Horie, I.K. Simonsen, D.E.P. Hoy, and R.A. Graham; North Carolina State University, Raleigh, North Carolina 27695; Sandia National Laboratories, Albuquerque, New Mexico 87185

X-RAY DIFFRACTION STUDIES ON SHOCK-MODIFIED MATERIALS: B. Morisin and R.A. Graham; Sandia National Laboratories, Albuquerque, New Mexico 87185

THURSDAY, AUGUST 1 2:50 p.m.–5:00 p.m.

NOVEL CONCEPTS AND APPLICATIONS OF HIGH PRESSURES: Chairman, Jack H. Devletian, Oregon Graduate Center

Contributed Presentations:

EFFECTS OF HOT, DENSE GASES ON THE STRUCTURE AND COMPOSITION OF MATERIALS: J. Dash, M. Takeo, and A. Trzynka, Department of Physics, Portland State University, Portland, Oregon 97207

FERROELECTRIC POLARIZATION OF PVF_2 and VF_3/C_2F_3H COPOLYMERS: PIEZOELECTRIC PROPERTIES UNDER DYNAMIC PRESSURE AND SHOCK LOADING: Francois Bauer; Institut Franco-Allemand de Recherches de Saint-Louis (ISL), 12 rue de l'Industrie — B.P. 301, 68301 Saint-Louis Cedex, France

RAPID PRESSURE APPLICATION DURING SOLIDIFICATION: J.A. Sekhar; Defense Metallurgical Research Laboratory, P.O. Kanchanbagh, Hyderabad 500258 (A.P.), India

EXPLOSIVE CONSOLIDATION OF ALUMINUM, Al-Li, AND Al-Fe-Ce ALLOYS: T.C. Peng, S.M.L. Sastry, J.E. O'Neal, and R.J. Lederich, McDonnell Douglas Research Laboratories, P.O. Box 516, St. Louis, Missouri 63166

NEW PROCESSES FOR EXPLOSIVE METAL FORMING OF SHEET PARTS IN BATCH PRODUCTION: Adolf Neubauer, Horst Steinicke, Klaus Dinzens, Harald Schmicker; Autowerke, Ludwigsfelde, GDR (East Germany)

4:30–5:00
Panel Discussion and Closure