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CONSULTANT

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17 May 1975

Dr. S. Antonov
State Comm. of U.S.S.R. Council of Ministers
11, Gorky St., Moscow

Home
file Electromet
allars

Dear Dr. Antonov:

Although we shall be meeting in about two weeks, I thought you and Dr. Kashin, your responsible contact for Solid State Joining, would be interested in the enclosed brief pre-view of our specific topics under this subject and the research places and investigators with whom we have been discussing this subject. Our responsible contact, Dr. Heckel, has been informally communicating with Dr. Kashin and Dr. Shorshorov.

I am pleased to point out that there is good general agreement between the enclosed list of topics and the list you sent us. With this good start, we should be able to arrive at a detailed protocol in this area very readily. I should emphasize, however, that the names of places and people on our list are only tentative at this stage and will require further selection and discussion. Progress in other technical areas under our Protocol and details of our investigators in these areas will be presented to you at our meeting.

I look forward to seeing you in about two weeks and anticipate good, productive results from our meeting, as on previous occasions. In the meantime, best regards and wishes to you.

Electrometallurgy

State Dept. declassification & release instructions on file

Sincerely,
N. E. Promisel
N. E. Promisel
Chairman, U.S. Working Group
on Electrometallurgy

S:P
Enc.

TOPIC

1. Diffusion Bonding
 1. Kinetics of homogeneous diffusion bonding Owczarski (?) - Pratt & Whitney
 2. Intensification of bonding (heterogeneous and homog.) (new methods) Fisher/Speich - U. S. Steel
Male (?) - Westinghouse
Hamilton (?) - Rockwell
 3. Kinetics of intermediate phase formation (strength effect) Owczarski (?) - Pratt & Whitney
Goldstein/Notis/Hilton - Lehigh
 4. Mathematical models of interdiffusion Sekerka/Heckel - Carnegie-Mellon
Goldstein - Lehigh

2. Heterogeneous Bonding - Metal/Ceramics - Composites
 1. Thermodynamic calculations for bonding Rapp (?) - Ohio State
 2. Power and structural characterization of plastic deformation (?)
 3. Kinetics of contact formation (soft metal/ceramic contacts-friction)(new equipment and control) Fisher/Speich - U. S. Steel
Bauer - Carnegie-Mellon
 4. Centers of chemical interaction (formation of new phases) Goldstein/Notis/Hilton - Lehigh
Bauer - Carnegie-Mellon
 5. Mathematical models of joint formation Sekerka/Heckel - Carnegie-Mellon
Goldstein - Lehigh

3. Formation and Mechanical Behavior of Composites
 1. Investigation of bonding (hot pressing study) (?)
 2. Roll bonding of fiber composites (?)
 3. Residual stress effects in composites Ebert - Case Western
Heckel - Carnegie-Mellon
 4. Acoustical study of work hardening and fracture in composites Fisher/Speich - U. S. Steel