

EUROMECH

EUROPEAN MECHANICS SOCIETY

Final Report

Please send this report to the Secretary-General of EUROMECH, within one month after the Colloquium.

EUROMECH Colloquium No: 362

Title: Structural Damage and Failure under Intense Loading

Dates and location: 21-23 April 1997, UMIST, Manchester, England

Chairman: Professor S.R. Reid

Co-Chairman: Professor S.T.S. Al-Hassani

Is there need of another Colloquium on the same or a related subject? Which year? Yes, in 2/3 years.

Full registration fee: £50 + £96 (residential delegates) per day
or £27.50 (non-residential delegates) per day

What other funding was obtained? Nil

What were the participants offered? Full use of the Manchester Conference Centre facilities + Colloquium Dinner.

Number of members of EUROMECH (reduced registration fee):

Number of non-members of EUROMECH (full registration fee):

Number of participants from each country:

Austria	___	Germany	<u>4</u>	Romania	___
Belgium	___	Great Britain	<u>17</u>	Russia	___
Byelorussia	___	Greece	___	Slovakia	___
Bosnia	___	Hungary	___	Slovenia	___
Bulgaria	<u>1</u>	Ireland	___	Spain	___
Croatia	___	Italy	___	Sweden	<u>2</u>
Czech Republic	___	Latvia	___	Switzerland	___
Denmark	___	Lithuania	___	Ukraine	___
Estonia	___	Netherlands	___	Yugoslavia	___
Finland	___	Norway	<u>4</u>	Others	<u>3</u>
France	<u>1</u>	Poland	___	Total	<u>32</u>
Georgia	___	Portugal	___		

Please turn

Scientific Report

EUROMECH 362, Structural Damage and Failure under Intense Loading, was held from 21-23 April 1997 at UMIST in Manchester, England. There were 32 full delegates and several additional attendees (primarily postgraduate research students and assistants from UMIST) for particular sessions. Three of the delegates were from Brazil, Canada and South Africa. There were several presentations offered by researchers from the former Soviet Union. Whilst several of these were accepted for presentation, the authors were unable to participate due to lack of funds. Professor W. Johnson, FRS, FEng attended the Colloquium as a special guest on the occasion of his 75th birthday and participated in most of the sessions.

21 presentations were made in 8 Sessions each of which was linked to a specific area within the general scope of the Symposium. Each delegate was allocated 40 minutes for their presentation and ensuing discussion. The details of the programme and the Session titles are given in the accompanying copy of the Symposium booklet. This also contained the one page summaries which the authors provided. The meeting ended with a very fruitful open discussion prior to lunch on the final day. Three participants below the age of 35, Mr. F.D. Schneider (a Research Assistant originally from Germany currently working in the University of Liverpool who attended as a full delegate), Dr. J.J. Harrigan (a Research Associate working at UMIST, a full delegate who also delivered one of the papers in Session 6) and Dr. H.M. Wen (a Research Associate at UMIST who attended as a full delegate) were awarded EUROMECH fellowships.

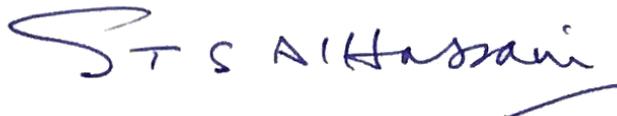
The proposed scope of the Colloquium is reproduced on the first page of the booklet and it is satisfying to note that each aspect was addressed in the set of papers that were selected for presentation. Thus, whilst the scope was somewhat focused, it was sufficiently broad to attract researchers from across the range of appropriate disciplines who benefitted from interacting with those working in neighbouring areas to their own primary area of interest.

The overwhelming consensus from comments received from the participants was the meeting was a success at all levels. Many commented favourably on our success in creating the right atmosphere for a conference of this type and the facilities available in the Manchester Conference Centre were ideal for our purposes. The quality of the presentations was excellent and each paper generated lively discussions. There was an informal yet focused atmosphere throughout each of the sessions and extensive interactions during the various breaks in the programme. Several key areas associated with the modelling of some of the damage and deformation phenomena presented at the Symposium and the need for experimental verification of some of the analytical/computational procedures proposed were the focus of the final open discussion. It is clear that most of the participants made useful new contacts with others working in the field of dynamic structural response which will no doubt lead to constructive collaboration in the future.

The field covered by EUROMECH 362 is an important one which bears on a wide range of safety related problems covering several engineering disciplines including the demolition of offshore structures, the use of composite materials in the aerospace industry and in offshore installations, nuclear power plant, impact energy absorption relating to automobiles, aircraft and ships and the fundamental aspects of the behaviour of a wide range of material under high rate loading conditions. Current and continuing work on several generic and fundamental problems was presented by some of the leading researchers in this field. With reference to future meetings, we believe that another Colloquium on this topic in two or three years time would be extremely useful in keeping the community up-to-date with developments in this difficult and challenging field of research.



Professor S.R. Reid (Chairman)



Professor S.T. S. Al-Hassani (Co-Chairman)

UMIST
14th May 1997

Please use additional pages if needed. Put date and signature at the end.