intricate and complex manner, irreversible phenomena which occur at different length scales and lead to failure of materials. Until recently, in most of the work in this area, special cases were considered separately and various *ad hoc* models were proposed to describe particular aspects of anisotropic phenomena. Moreover, most of the present experimental techniques are not entirely suitable to study intricate and possibly important aspects of anisotropic behaviour, so that an experimental assessment of theoretical models is often lacking. Clearly, more interdisciplinary and unifying work is needed in the study of these multifaceted problems. Thus, the Symposium proposes to bring together specialists in mechanics of solids, material scientists and engineers, to evaluate the present state of knowledge and to stimulate unifying approaches in the field of yielding, damage and failure of anisotropic solids.

Topics

(a) Mathematical modelling of non-linear inelastic behaviour of solids, which exhibit initial or (and) deformation induced anisotropy; plasticity, creep, internal damage, localization and failure. Representation of initial and deformation induced anisotropy. Methods for incorporating relevant aspects of oriented internal microstructures into the macroscopic description of mechanical behaviour in the inelastic and failure ranges.

(b) Experimental studies of the macroscopic inelastic behaviour of anisotropic solids; multiaxial stressing; influence of the loading path; rate effects; thermal effects. Development of experimental techniques to obtain, in anisotropic solids, macroscopically homogeneous fields of stress and deformation.

(c) Microscopic study of the deformation induced changes in internal structures (initiation and growth of voids, micro-cracks, dislocation cells, etc.; anisotropy of the resultant microstructures). Systematic study of the influence of evolving microstructures on the macroscopic behaviour of solids, including failure. Non-destructive experimental techniques.

(d) Novel methods for solving boundary and initial value problems in cases where anisotropy is of importance and where localization, damage and failure might take place.

(e) Approximate analysis of engineering structures (e.g. bounds for load carrying capacity, life time, etc.) in the presence of yielding, internal damage and anisotropy.

A few survey reports are intended to give the current state of knowledge in some fields.

Call for papers and participation

Participation at the symposium is by invitation. Interested authors are requested to send a summary (800–1000 words) by the end of November 1986. The summary should clearly state the problem considered, the objectives to be attained, the method employed and the novel results arrived at. The authors will be informed by the end of February 1987 on the status of their submitted proposals. Manuscripts of accepted contributions must be submitted by the end of April 1987. Proceedings are planned to be published in a special volume.

Attendance by non-speakers is possible. Interested persons are required to write, by the end of November 1986, to: Professor Jean-Paul Boehler, Institut de Mécanique de Grenoble, B.P. 68, 38402 Saint Martin d'Heres Cedex, France. The symposium will be dedicated to the memory of Professor Antoni Sawczuk (1927–1984).

INTERNATIONAL CONFERENCE ON COMPUTATIONAL METHODS FOR PREDICTING MATERIAL PROCESSING DEFECTS

Cachan, France, 8–11 *September* 1987

Defects arising in both bulk and sheet forming operations on metals, polymers and composite materials will be considered. Appropriate methods for explaining and avoiding the

occurrence of defects leading to fracture, high porosity or strain localization and undesirable geometrical imperfections and also elastic springback are of major current interest and practical significance.

The recent advances in finite plasticity and viscoplasticity, damage modelling, bifurcation and instability theory, fracture mechanics and computer numerical techniques offer new tools for the prediction of defects.

The present conference aims to focus on these topics and to provide a forum for presentation and exchange of innovative approaches in this field.

Papers are invited on topics outlined above and others which lie within the general scope of the conference. Abstracts (one page) should be submitted before *1 November 1986*. Authors will be notified of the acceptance by *1 December 1986*. Final manuscripts will be required by *1 April 1987* for inclusion in the Conference Proceedings.

To obtain information and submit an abstract write to: Professor M. Predeleanu, Laboratoire de Mécanique et Technologie, 61, avenue du Président Wilson, 94230 Cachan, France (Tel.: 46.64.99.55; Telex: 250 948 F).