Sheet classification:

restricted

restricted



Documentation Sheet

Document No. PD ST-8916

Document Classification

Evaluation of Fatigue and Fracture properties

1/5/89 Date of issue:

25

of Al-Li Alloys - Annual Report 1988-89.

Contents

Author(s)

K. Anandan, K.K. Brahma, P.K. Dash, K.N. Raju,

S.A. Seetharam, R. Sunder

Structural Sciences

Division

DMRL

External :

:

No. of copies:

participation Sponsor :

NAL Project No.

Title

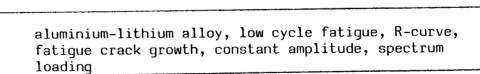
Sponsorship of ADA

 $MT - \Omega - 170$ Sponsor's Project No.

Approval

Remarks

Keywords



Abstract

This annual report describes results obtained to-date on fatigue and fracture properties of Lital-A aluminium lithium alloy. Low cycle fatigue data on 12.5mm thick material and R-curve results on thinner

1. 2 and 3mm thick material are presented. Fatique crack growth data under constant amplitude loading reflecting the effect of stress ratio, rolling direction and material thickness are presented. Typical results on the effect of rolling direction under spectrum loading are

shown. Fatigue crack growth behaviour of Lital-A series of Al-Li alloys is different from conventional Al-alloys. Lital-A exhibits a higher threshold stress intensity and lower fracture toughness, resulting in less favorable damage tolerance properties.