

80-A189 111

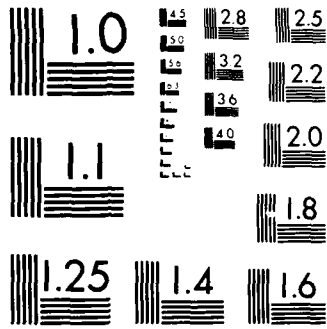
REQUEST FOR AN ANALYTICAL TRANSMISSION ELECTRON  
MICROSCOPE(U) ILLINOIS UNIV AT URBANA DEPT OF  
METALLURGY AND MINING ENGINEERING H L FRASER 16 OCT 87  
AFOSR-TR-87-2029 AFOSR-86-8212 F/G 14/2

1A

NL

UNCLASSIFIED





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER  
AFOSR-TR-87-2029

2. GOVT ACCESSION NO.

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)  
Request for an Analytical Transmission Electron Microscope

5. TYPE OF REPORT & PERIOD COVERED  
Final Report  
07/01/86 to 06/30/87

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)  
Hamish L. Fraser

8. CONTRACT OR GRANT NUMBER(s)  
AFOSR 86-0212

9. PERFORMING ORGANIZATION NAME AND ADDRESS  
University of Illinois, Department of Metallurgy & Mining Engr., 1304 W. Green St., Urbana, IL 61801

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS  
61102 F  
29177A 3

11. CONTROLLING OFFICE NAME AND ADDRESS  
AFOSR/NE  
Building 410  
Bolling AFB DC 20332-6448

12. REPORT DATE  
October 16, 1987

13. NUMBER OF PAGES  
Two

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)  
JAN 25 11

15. SECURITY CLASS. (of this report)  
Unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)  
unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)  
DTIC SELECTE  
JAN 25 1988

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  
Analytical Electron Microscopy

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  
see attached

AD-A189 111

FINAL REPORT

on

"REQUEST FOR AN ANALYTICAL TRANSMISSION ELECTRON MICROSCOPE"

Submitted by

Hamish L. Fraser  
Department of Materials Science and Engineering  
University of Illinois  
Urbana, IL 61801

October 16th., 1987

Introduction

A request was made in response to the DoD/URIP FY86/FY87 University Equipment Program. At that time, an advanced analytical transmission electron microscope was requested. Following the award of funds, the microscope has been chosen, ordered and is to be delivered shortly. It will be in essence the most advanced microscope of it's kind.

Action to Date

Following the award of funds, the first item of action was to select the given electron microscope. All available literature on the competing instruments was gathered, and in two instances two site visits were made for the purposes of demonstration. The choice of a Philips CM12 was made, since it was felt that this microscope would be able to fulfil the needs of the research effort to which it will be applied. Thus, an order was made for the microscope, scanning transmission electron microscopy unit, energy dispersive x-ray analysis system, and other smaller items as detailed in the proposal. The delivery date for this equipment has been estimated as being on or about the first week of November, 1987. At that time, acceptance tests will be made following installation. We estimate full operation by the end of November. A supplemental report on the performance of this microscope will be made to the technical monitor after some period of operation.

Approved For	
Approved by	J
Approved Date	12
Approved by	11
By	
Date	
Available to	
Cost	
A-1	



EMD  
DATE  
FILMED  
3-1988  
DTIC