

**Active**

Project #: E-19-564  
Center # : 05920-0A0

Cost share #:  
Center shr #:

Rev #: 0  
OCA file #:  
Work type : INST  
Document : OTH  
Contract entity: GIT

Contract#: MEMO DTD 890110  
Prime #:

Mod #:

Subprojects ? : N  
Main project #:

Project unit: CHE  
Project director(s):  
TEJA A S CHE

Unit code: 02.010.114  
(404)894-3098

Sponsor/division names: EXXON CORPORATION  
Sponsor/division codes: 204

/ BATON ROUGE, LA  
/ 040

Award period: 880901 to 890630 (performance) 890630 (reports)

Sponsor amount	New this change	Total to date
Contract value	5,000.00	5,000.00
Funded	5,000.00	5,000.00
Cost sharing amount		0.00

Does subcontracting plan apply?: N

**Title:** SUPPORT TO PURCHASE A TECHNE HIGH TEMPERATURE CALIBRATION FURNACE MODEL FB-08

### PROJECT ADMINISTRATION DATA

OCA contact: E. Faith Gleason 894-4820

Sponsor technical contact

**Sponsor issuing office**

NA

**C. TSONPUOLOS, SR. ENGINEERING ASSOC.**

NA

EXXON RESEARCH & ENGINEERING COMPANY  
P.O. BOX 101  
FLORHAM PARK, NEW JERSEY 07932

Security class (U,C,S,TS) :  
Defense priority rating :  
Equipment title vests with:

ONR resident rep. is ACO (Y/N): N  
supplemental sheet  
GIT X

Administrative comments -  
INITIATION



GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Closeout Notice Date 11/28/89  
Original Closeout Started \*\*\*\*\*

Project No. E-19-564 \_\_\_\_\_ Center No. 05920-0A0 \_\_\_\_\_

Project Director TEJA A S \_\_\_\_\_ School/Lab CHE \_\_\_\_\_

Sponsor EXXON RES & ENGR/ \_\_\_\_\_

Contract/Grant No. MEMO DTD 890110 \_\_\_\_\_ Contract Entity GIT\_

Prime Contract No. \_\_\_\_\_

Title SUPPORT TO PURCHASE A TECHNE HIGH TEMPERATURE CALIBRATION FURNACE MODEL F

Effective Completion Date 890630 (Performance) 890630 (Reports)

Closeout Actions Required:	Y/N	Date Submitted
Final Invoice or Copy of Final Invoice	N	_____
Final Report of Inventions and/or Subcontracts	N	_____
Government Property Inventory & Related Certificate	N	_____
Classified Material Certificate	N	_____
Release and Assignment	N	_____
Other _____	N	_____
Comments _____		

Subproject Under Main Project No. \_\_\_\_\_

Continues Project No. \_\_\_\_\_

Distribution Required:

Project Director	Y
Administrative Network Representative	Y
GTRI Accounting/Grants and Contracts	Y
Procurement/Supply Services	Y
Research Property Management	Y
Research Security Services	N
Reports Coordinator (OCA)	Y
GTRC	N
Project File	Y
Other _____	N
_____	N

## FINAL REPORT

PROJECT E-19-564

EQUIPMENT GRANT FROM EXXON RESEARCH AND ENGINEERING COMPANY.

PRINCIPAL INVESTIGATOR : Aryn S. Teja, Professor  
School of Chemical Engineering.

This equipment grant of \$ 5000 from Exxon Research & Engineering Company was combined with a grant of \$ 4500 from The Georgia Tech Foundation to purchase a calibrating furnace ( Model FB-08 ) from Techne Inc. The furnace is capable of maintaining constant temperatures of 700 C, within  $\pm 0.01$  C, and will greatly enhance the high temperature measurement capabilities of the Fluid Properties Laboratory in the School of Chemical Engineering.

A temperature calibration facility is an essential part of any thermodynamic property measurement laboratory. Our present calibration facilities include water and oil baths, which can be used to calibrate instruments up to 300 C. An air bath is presently used at higher temperatures. However, the air bath temperature fluctuates by as much as 1 C over a period of time. The fluidized bed bath purchased with the Exxon grant will greatly improve the situation and allow us to increase the accuracy of our data. Current experiments which will benefit from this acquisition include:

(i) The measurement of the critical properties of high boiling substances of interest in heavy oil processing, in synthetic fuel production, and in supercritical extraction;

(ii) The measurement of the thermal conductivity of molten salts of interest in energy storage and other applications; and

(iii) The measurement of fluid properties of industrial interest.

The high temperature bath will also be available for calibration of instruments in the Chemical Engineering undergraduate laboratories. Both graduate and undergraduate students will therefore benefit.