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MANUFACTURING METHODS AND TECHNOLOGY (MMAT)
SPECIFICATIONS FOR MINIATURE CATHODE RAY TUBE(U) THOMAS
ELECTRONICS INC MAYNE NJ F M BRUNO 30 APR 84

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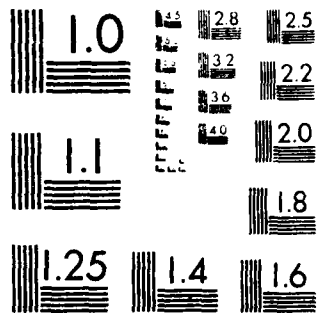
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30 April 1984

Thomas Electronics, Inc.
100 Riverview Drive
Wayne, N.J. 07470

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FOURTEENTH QUARTERLY REPORT

for period

1 January 1984 - 31 March 1984

Approved for public release; distribution unlimited

Manufacturing Methods and Technology (MM&T) Specifications for Miniature Cathode Ray Tube

prepared by

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USA MERADCOM
Fort Belvoir, VA 22060

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ACKNOWLEDGEMENT

This project has been accomplished as part of the US Army Manufacturing Methods and Technology (MM&T) Program which has as its objective the timely establishment of manufacturing processes, techniques, or equipment to insure the efficient production of current or future defense programs.

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of this test required improved resolution of the CCTV monitor.
 REL (life) testing began at the end of the quarter.

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Manufacturing Methods and Technology (MM&T) Specifications for
Miniature Cathode Ray Tube

FOURTEENTH QUARTERLY REPORT

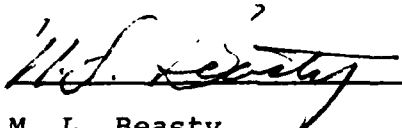
for period

1 January 1984 - 31 March 1984

The object of this study is to develop design, performance, and test specifications for the Miniature Cathode Ray Tube (CRT) assembly suitable for use in the Integrated Helmet and Display Sight System (IHADSS) of the Army Advanced Attack Helicopter (AAH).

Contract Number: DAAK70-80-C-0168

Approved by:


M. L. Beasty
Vice President - Engineering

Approved by:


F. M. Bruno
Program Manager

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ABSTRACT/SUMMARY

TEI rechecked the Sine-Wave Modulation test at 600 TV lines and had excellent correlation to Fort Belvoir's 1982 readings. Retesting of Phase II - Confirmatory Samples indicated that thirteen (13) of the fourteen (14) Environmental tests had not caused any changes in electrical parameters. Testing for the radiated-emission phase of Electromagnetic Compatibility (the 14th Environmental test) was begun. The radiated-susceptibility phase of this test required improved resolution of the CCTV monitor. REL (life) testing began at the end of the quarter.

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1.0 PURPOSE

The purpose of this Manufacturing Methods and Technology (MM&T) contract is to establish production methods and facilities required to produce the Miniature Cathode Ray Tube Assembly required for the Integrated Helmet and Display Sight System (IHADSS) of the Army Advanced Attack Helicopter (AAH).

The primary objectives are to develop vendor sources for the required individual components and establish viable production techniques to meet the necessary monthly production rate.

The product produced will be required to meet the mechanical, electrical, performance, and environmental parameters of MM&T H799838.

2.0 GLOSSARY

AAH.....	Advanced Attack Helicopter
ATP.....	Acceptance Test Procedure
CCTV.....	Closed-Circuit Television
CDRL.....	Contract Data Requirements List
COR.....	Contracting Officer's Representative
CRT.....	Cathode Ray Tube
ECN.....	Engineering Change Notice
EM.....	Equipment Manufacturer
IHADSS.....	Integrated Helmet and Display Sight System
MERADCOM.....	Mobility Equipment Research and Development Command
MM&T.....	Manufacturing Methods and Technology
MOD.....	Modification (to Contract)
NV&EOL.....	Night Vision & Electro- Optics Laboratory
PCO.....	Procuring Contracting Officer
PERT.....	Program Evaluation and Review Techniques
QA.....	Quality Assurance
QC.....	Quality Control
QTP.....	Qualification Test Procedure
REL.....	Reliability (Testing)
S/N.....	Serial Number
SPEC.....	Specification
TEI.....	Thomas Electronics, Inc.
TIR.....	Total Indicated Range

3.0 NARRATIVE AND DATA

As mentioned in the previous Quarterly Report, TEI planned to recheck the Sine-Wave Modulation test at 600 TV lines prior to REL (life) testing of the Phase II - Confirmatory Samples. In the January 1984 retests, TEI had excellent correlation to Fort Belvoir's 1982 readings.

Phase II - Confirmatory Samples were retested according to TEI's ATP method to determine whether thirteen (13) of the fourteen (14) Environmental tests had caused any changes in the electrical parameters. All of the CRT assemblies complied with MM&T specifications; the Sine-Wave Modulation problem was resolved; and TEI readied the designated assemblies for REL (life) testing (which was started at the end of the quarter).

Testing for the radiated-emission phase of Electromagnetic Compatibility (the 14th Environmental test) was begun.

For the radiated-susceptibility phase of this test, it was agreed that improved CCTV monitor resolution was required in order to monitor potential adverse effects on the CRT's. A plan was instituted to improve the CCTV monitor resolution. Also, the COR requested that a video recording of the raster display be made to document potential anomalies.

4.0 CONCLUSIONS

1. The radiated-emission phase of the fourteenth (14th) Environmental test for Phase II - Confirmatory Samples, was begun.
2. REL (life) testing began at the end of the quarter.

5.0 PROGRAM FOR NEXT INTERVAL

For the next quarter, TEI's plans are as follows:

1. Complete the last Environmental test, EMI, for Phase II - Confirmatory Samples.
2. Continue to conclusion the REL testing required for Phase II - Confirmatory Samples.
3. Evaluate all data after 1200 hours of REL testing and determine whether to start production for Phase III - Pilot Run Assemblies.
4. Maintain detailed test records for compiling into technical data items required by the contract.
5. Prepare and submit monthly status reports and also the draft and final quarterly reports.
6. Prepare CDRL items required during Phase II and Phase III of the contract.

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