

Operating as one of the two production divisions within Production Plant Albany (PPA), the Test Measurement and Diagnostic Equipment (TMDE) Division provides technical support, calibration support, and direct Fleet Marine support services for a wide range of external customer programs and internal support services for the Production Plant. Comprised of the Metrology Branch, Engineering and Development Branch, and Product Support Branch, technical support services are provided and executed by a diverse workforce of approximately 80 employees singularly focused on delivering world-class value-based calibration, repair and test solutions in support of the warfighter.

With a customer base that includes military units and organizations spanning the globe, and a physical footprint covering the continental United States, the TMDE Division supports fielded military weapon systems as well as keeping abreast of future test technologies and methodologies to be used with the weapon systems of tomorrow.

The TMDE Division's calibration laboratories provide internationally accredited, ISO 9001-2008 and ISO 17025-2005, calibration and calibration support services to DoD organizations worldwide. Leveraging a robust in-house staff of calibration professionals, the Division develops and provides these services to our customers where organic support was not previously available. In FY15, the calibration laboratories provided repair and/or calibration support services for approximately 10,000 components and/or Principal End Items (PEIs).

## **Globally Recognized Capabilities**

### Automatic Test Equipment Program

- Automatic Test Engineering, Research & Development
- Test Program Set Development
- Application Program Set Acquisition
- Software Lifecycle Support

- Hardware & Software Acceptance Testing

- Fleet Marine Support

### Calibration/Metrology

- ISO 17025-2005 Accredited
- Physical Dimensional Calibration/Repair
- Electronic Calibration/Repair
- Radiation Identification and Computation
- Optical Calibration/Repair
- Electro-Optical Calibration/Repair
- Survey Instrument Calibration/Repair
- High Volume Liquid Flow Calibration/Repair
- Wind Speed Calibration/Repair
- Calibration Procedure Development Support Services

## **Calibration Services, The Backbone of TMDE**

Calibration is vitally important wherever measurements are important, it enables users and customers to have confidence in the results that they monitor, record, and subsequently control. TMDE's calibration laboratories set a high standard for calibration services ensuring optimum readiness levels are met for each of the four Military Services. Calibration and repair services for Marine Corps Master Work Schedule workload comprise approximately 20 percent of the Divisions overall workload. The workload includes a diverse group of test equipment from electro-optics to Radiation Detection Indication and Computation (RADIAC) components.

## **Customer Programs and Support**

The TMDE's largest supported external program is the Automatic Test Equipment Program (ATEP). Over 30 TMDE personnel are involved with the support for this Marine Corps program to include a Project Officer group which includes one team member off-site embedded with our customer



TMDE Division Manager PPA

MARCORSYSCOM in Quantico, Virginia. The ATEP provides acquisition, technical and post deployment support for over 900 Automated Test System (ATS) platforms, 20 Application Program Sets (APSs) supporting eight different Program Management Groups within Marine Corps Systems Command. The ATEP is responsible for technical support of ATS. These general purpose platforms contain a wide variety of modular, software controlled test equipment required for testing of electrical, electronic, electro-optical, and electro-mechanical subassemblies. APSs consist of Test Program Sets (TPSs) which provide the hardware interfaces that facilitate the ability to adapt to a nearly limitless number of configured weapon systems, and their component parts, to the ATS. Software controls the test equipment and provides instructions to the test operator. This type of detailed test instruction, software controlled stimulus and response, ensures increased quality and vastly improves test repeatability. The test software allows the Marine maintainer to test the electronic items from the weapon platform quickly and accurately.

Six personnel support the General Purpose Tools & Test Sets (GPT&TS) Program by providing support actions necessary to prepare and field General Purpose Electronic

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Test Equipment (GPETE) and its associated software to Marine Corps organizations. The team supports all GPETE procured for the Marine Corps. As items are procured, the personnel receipt for, induct, test, inspect, coordinate and ensure calibration and place into storage for shipment. The team processes approximately 2,000 pieces of equipment each year with the calibration labs calibrating nearly 1,000 pieces of equipment in support of the program.

The Metrology Branch provides the Air Force with critical rebuild, repair and calibration support services for the Air Data Test Sets and Boresight/Alignment fixtures used to ensure accuracy of aircraft weapons delivery systems. Over 12 TMDE Division personnel support the rebuild and calibration of TTU-205 Air Data Test Sets and Boresight and Alignment Fixtures.

The TMDE Division provides unique and diverse support to many external customers:

- The Marine Corps Transfer Standards Program (MCTSP), executed by the TMDE Division, ensures that Marine Corps calibration facilities remain at full capability by facilitating and managing the exchange of calibration standards.
- TMDE Division personnel repair and calibrate all TMDE aboard the Navy's Maritime Prepositioning Ships prior to deployment. These ships preposition U.S. Marine Corps vehicles, equipment, and ammunition throughout the world. TMDE repairs and calibrates approximately 2,000 PEI's per year in this support role.
- The Survey Instrument Calibration Program (SICP) is a calibration capability managed and provided by TMDE Division. This

program provides calibration and repair support to all survey and wind speed instruments used by Marine Corps artillery units to ensure accurate delivery of artillery support to USMC combat units.

The TMDE Division provides several support functions to PPA:

- The Engineering and Development Branch has a graphics arts capability and produces data plates and decals for a wide range of equipment to include all PPA produced equipment.
- All PPA Calibration and Maintenance Program (CAMP) assets are supported by the Metrology Branch calibration labs. Over 3,000 pieces of CAMP equipment is supported by the Division.
- Four Engineering and Development Branch personnel support the TMDE Website (TWS) used to support a wide range of users from Fleet Marines to MDMC personnel. From the SYSCOM program level usage to the financial and production support provided, TWS is a powerful tool expanding and evolving to support customer requirements. The site currently has 1,700 registered users with an average daily page view of over 7,500.

### **Effective Support to Warfighters**

The Product Support Branch Fleet Support Team (FST) provides direct support for all Automatic Test Systems fielded to the fleet. Fleet Support Representatives (FSR) are embedded at Camp Lejeune and Camp Pendleton and provide equipment fielding, training, site visits and equipment repair support. Providing direct support enables the FSR to rapidly solve any and all unexpected issues that may impact the availability of the supported test systems.

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# Test, Measurement and Diagnostic Equipment **TMDE**

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During FY15 the FST conducted over 400 MEF site visits at over 65 locations.

TMDE Division's calibration laboratories provide repair services and calibration overflow support for Fleet calibration facilities and other DoD activities that cannot repair or calibrate.

Last year, Metrology Branch personnel calibrated over 500 PEI's in support of MEF calibration laboratories; directly contributing to their mission of providing calibration services while deployed. Branch personnel also calibrated over 400 PEI's in support of MARFORRES units in 11 states and calibrated over 50 PEI's in support of Navy units at Gulfport, Mississippi.

From the performance of thousands of calibrations, that touch virtually every piece of test equipment in the Marine Corps, to the technical support services provided for numerous DoD organizations, the TMDE Division excels at delivering timely and cost effective maintenance solutions directly to the warfighter. With a team orient-

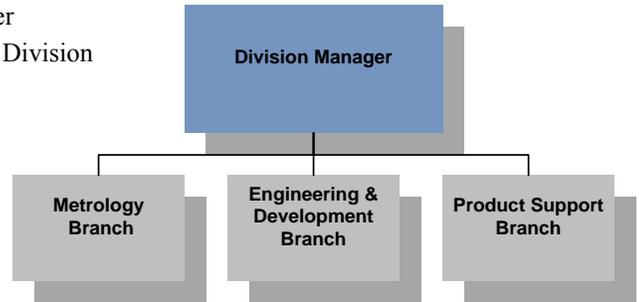


ed approach and a culture embracing innovation and results, the Division moves forward reflecting on the many accomplishments and achievements and yet striving to produce even more on behalf of the warfighter. Whether it's Safety, Mission, Process Improvement, or Support, the TMDE Division strives to Exceed the Requirements.

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**They Know That.....What YOU do is IMPORTANT, Everyday a MARINE'S LIFE will depend on it!**

Manager  
TMDE Division



## MDMC TAKES HOME THE **Robert T. Mason Award**



The award was presented by General Dennis Via, Commanding General, Army Material Command. The MDMC team was flanked on stage by Lieutenant General Michael Dana, Deputy Commandant, Installations and Logistics, and Major General Craig Crenshaw, Commanding General, Marine Corps Logistics Command. Courtesy Photo, Mr. Kauffman AFGE

Tuesday, December 8<sup>th</sup> 2015, Marine Depot Maintenance Command (MDMC) was presented with the highest award possible in the Department of Defense (DoD) for Depot-level maintenance. During the Secretary of Defense's Maintenance Awards Banquet and Ceremony, held in conjunction with the 2015 DoD Maintenance Symposium in Phoenix, Arizona, MDMC took home the Robert T. Mason Award for Depot Maintenance Excellence. This prestigious award was presented to MDMC's Test, Measurement and Diagnostic Equipment (TMDE) Program for extraordinary achievement and cost saving measures in FY14.

In FY14 TMDE calibrated, repaired, and tested equipment in excess of 20,000 pieces and provided training to approximately 900 Marines throughout the world. They also produced more than \$2M in cost avoidances, generated cost savings of more than \$600K, and realized more than \$2M in return on investments. MDMC is the only depot in the DoD to win this prestigious award three times.

**Test Diagnostic and Measurement Equipment (TMDE) Production Plant Barstow.** I recently took the reins as the TMDE Division Manager from Joe Moorman, who retired. Within the chain of command the TMDE Division Manager reports to Robert (Chip) Schwartz the Barstow Production Plant Manager. Currently the TMDE Division consists of the Metrology Branch which is comprised of four primary measurement areas, Electronic, Electro-Optical (EO), Physical Dimensional, and Radiation Indication Detection and Computation (RADIAC). Additionally we provide Marine Corps automotive systems support through the Fleet Automotive Support Team (FAST).

**Our Mission:** To provide TMDE support in the form of calibration and repair to Production Plant Barstow, USMC Fleet Marine Force customers worldwide, USMC Reserve units, and USMC Systems Command through our commitment to provide our customers the highest quality calibration services at the best value to maintain the highest state of combat mission readiness and accomplishing our objectives by familiarizing ourselves with, and staying abreast of changes in MDMC quality documentation, advancing technology, and collaborating with suppliers, customers, and other calibration laboratories in applying Continuous Process Improvement to our laboratory's Quality Assurance Program and operations.

#### **Support provided by each section:**

**Electronics Section:** Repairs and calibrates electronic TMDE such as digital multimeters, signal generators, spectrum analyzers communication service monitors and the the Virtual Instrument Portable Equipment Repair/Tester (VIPER/T) automated testing platform. Master Work Schedule TMDE repair is provided along with overflow calibration support from the Fleet Marine Force (FMF) on elec-

tronic TMDE that cannot be calibrated by the fleet labs. This section is the lead in coordinating the efforts of the FAST team.

**Electro-Optics Section:** Provides calibration and repair support to the FMF and Reserve Units on the VIPER/T electro-optical collimator, a highly complex system that can only be supported by the depot calibration laboratories. We also provide this support on the EO systems that come through the laboratory as part of the LOGCOM MWS.

#### **Physical Dimensional Section:**

Repairs and calibrates physical dimensional TMDE such as torque wrenches, micrometers, calipers, pressure gages, and physical dimensional measurement systems. Master Work Schedule TMDE repair and calibration is provided along with overflow calibration support to the FMF on physical dimensional TMDE that cannot be calibrated by the fleet labs.

**RADIAC Section:** PPB is one of two Marine Corps Laboratories throughout the entire Marine Corps that can provide calibration and repair support on RADIAC equipment used by Marines throughout the world and MDMC for the detection of radiation. This section is also the primary support section of the PPB Radiation Safety Program through the provision of two assistant radiation safety officers supplementing the Command's Radiation Safety Officer.

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TMDE Division Manager  
PPB



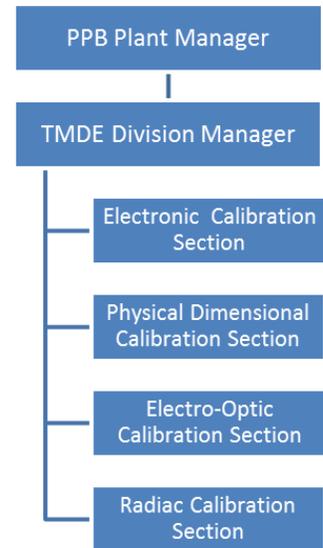
Test, Diagnostic and Measurement Equipment (TMDE) Production Plant Barstow

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**FAST Team:** This is a unique function to MDMC. Through this Marine Corps Systems Command funded program in which we provide automotive test equipment calibration and repair support to units with a team of technicians that travel worldwide. This team supports equipment such as engine dynamometers, generator test stands, hydraulic test stands, and fuel injector test stands.

### Future Plans/Goals

- Move PPB IUID program to TMDE
- Replace older laboratory reference standards
- Bring laboratory Quality Management System into compliance with ISO Standard 17025
- Work with PPA calibration laboratory to standardize procedures and processes between the two plants.
- Seek out and obtain additional workload for the division from the USMC and other services



## 2015 Defense Logistics Awards, Cost Savings and Performance Improvement Strategy

Tuesday, December 1<sup>st</sup> 2015, Marine Depot Maintenance Command (MDMC) Commander, Colonel Jeffrey Hooks, was presented with the Defense Logistics Award for the Cost Savings and Performance Improvement Category. MDMC received this award for reaching Full Operational Capability in FY15.

The goal of the Depot Consolidation Program was to achieve approximately \$65 million in net savings by the end of the Future Years Defense Program (FYDP) 2018, and then a recurring \$20 million annual savings every year thereafter. This goal was to be achieved through the reduction of 129 permanent, organic, indirect billets; reduction in reimbursable billets and costs funded to outside organizations, and the standardization of business and production processes.

In order to declare FOC, MDMC had to complete nine key objectives:

- ✓ 80% of MDMC Headquarters billets filled
- ✓ 80% of planned reductions occurred
- ✓ One Unit Identification Code (UIC) registered / one Table of Organization (T/O) established
- ✓ One Depot Maintenance Activity Group (DMAG) formulated and one Accounting System executed
- ✓ Consolidation of Training Programs
- ✓ One set of standardized policies and procedures developed
- ✓ 80% of processes standardized
- ✓ One consolidated inventory established supporting two Production Plants
- ✓ One Quality Management System implemented

All nine key objectives had been completed in FY15 and FOC was declared, leading to an exceptional year of cost savings and production throughput.