

CALIBRATION & METROLOGY

For Torque Calibration

- Torque Meters, Analyzers
- Wrenches and Drivers Torque
- Calibration at industrial level accuracy for 9.8 to 98 N-m range

For Fixed Gauges, Standard Glass Scales, Metal Rules

- Laser Interferometer System coupled with Universal Measuring System

NONDESTRUCTIVE TESTING

Ultrasonic Testing using Ultrasonic Flaw Detector
- for AWS and ASME standards

AUTO-PARTS TESTING

- Material Tests
- Product Tests
- Tests on Coating

INDUSTRIAL TRAINING

The Center designs and implements relevant training modules which continuously upgrade the competency of Filipino entrepreneurs, engineers and technicians to meet the demands of local and international markets.

Its compendium of training programs covers the following areas:

- Metalworking Technology
- Metalcasting Technology
- Analysis and Testing
- Management and Supervisory
- Engineering/Production Planning
- Quality Management System
- Productivity Improvement
- Trainer's Training Program
- High Machining Technology



VISION

Center of excellence in science, technology and innovation for a globally-competitive metals, engineering & allied industries by 2025.

MISSION

To provide both government and private sectors in the metals, engineering, and allied industries with professional management and technical expertise on the training of engineers & technicians; information exchange; quality control & testing; research & development; technology transfer; and business economics advisory services.

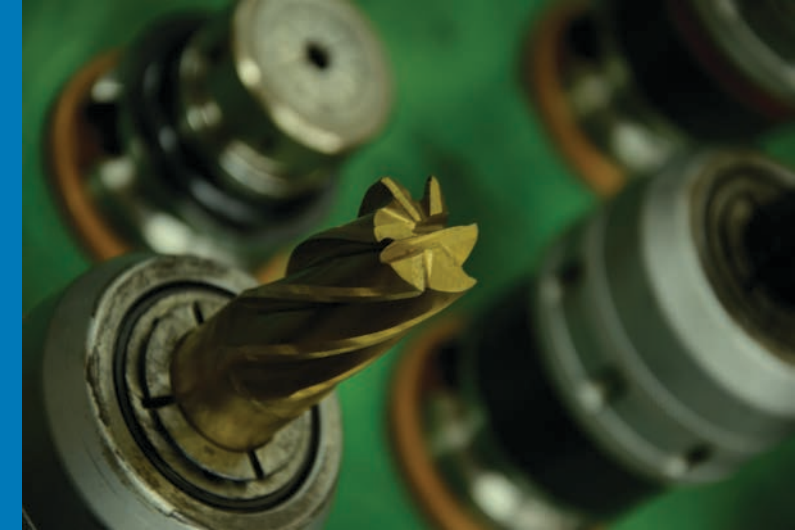
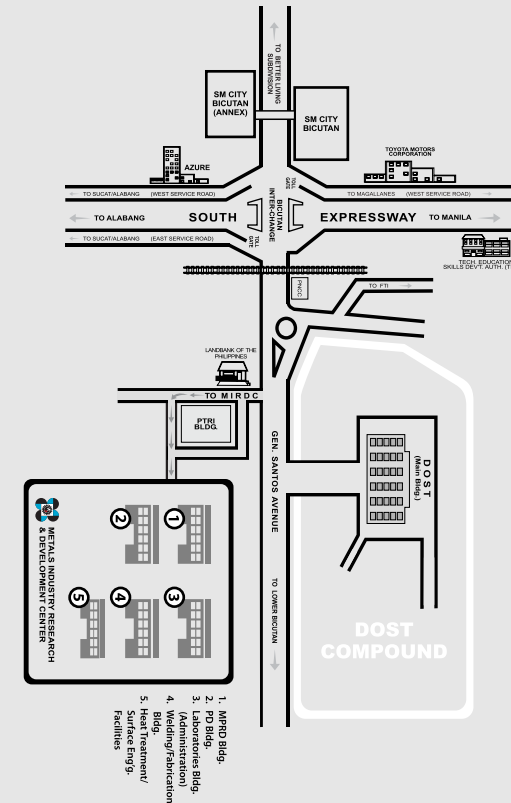
PERFORMANCE PLEDGE

- Building a reputable organization
- Excellence in all we do
- Service before self
- Trust and respect for everyone

CORE VALUES

- PROFESSIONALISM
- RESPONSIVENESS
- INTEGRITY
- DYNAMISM
- EXCELLENCE

LOCATION MAP



METALS INDUSTRY RESEARCH and DEVELOPMENT CENTER

Molding the Future of Metal Industries

for more information, please write, fax, call, or email:



DEPARTMENT OF SCIENCE AND TECHNOLOGY METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER

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Website: <http://www.mirdc.dost.gov.ph>
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TECHNOLOGY DEVELOPMENT

The Center assists metals and engineering enterprises through R&D to come up with new or improved products, processes and materials and equipment prototypes by offering:

- Contract Researches
- Joint Researches
- Engineering Design Services
- Prototype Development

DESIGN & ENGINEERING

The Center's design, engineering and prototyping capabilities are now ready to match the current technical applications for the development of machineries, parts and engineered products with higher processing power, graphics, memory capacity and multitasking capability which are all vital in displaying and manipulating complex data such as 3D mechanical design, engineering simulation results and mathematical plots as part of engineering analysis and design visualization.

The use of these design softwares allow product visualization and simulation that enable the design engineers and technicians to eliminate common design bottlenecks, detect collision among equipment assemblies, or determine stress/strain levels, etc. which are critical to improve design and performance, avoid premature failure, or correct over design factors.

METALWORKING

The Center utilizes conventional and specialized machining processes in the development of tools, dies, molds, jigs and fixtures, and components.

MACHINING

To provide a comprehensive range of advanced machining services to the industry, computer numerically-controlled (CNC) facilities are available at the Center for developing and producing precise products, specifically for the fabrication of precision cylindrical parts such as lead screws, guide pins, mold and die components. These CNC machines allow the production of parts and components of machines, dies, molds, and others with intricate, complicated or even irregular shapes at high precision, speed and tolerance, greater accuracy, smooth finish and consistency.

WELDING & FABRICATION

The Center's R&D activities and fabrication capability, particularly on equipment development and prototyping, are augmented by mechanical or automated steel sheets/plates cutting facilities such as laser plasma and shear cutters and welding machines such as TIG and SMAW.

On the other hand, the welding machines are utilized for welding of metal plates/sheets and ferrous and non-ferrous metals. These machines are also used by the Center for its industrial training services and trade testing in support of the trade accreditation program of TESDA for engineers, technicians and craftsmen from industry.

SURFACE ENGINEERING

The MIRDC employs a broad range of industrial processes, called surface finishing, to alter the surface of manufactured products in order to achieve a desired property.

The most widely used surface treatments are meant to improve appearance; adhesion or wettability, corrosion, tarnish, wear, and chemical resistance; and hardness. Moreover, these surface finishing processes modify electrical conductivity, remove burrs and other surface flaws, and control surface friction.

HEAT TREATMENT

The Center offers (1) Vacuum Heat Treatment and (2) Conventional Heat Treatment to enable MSMEs to meet prevailing and future requirements of the M&E industries.

ELECTROPLATING

This process usually employs direct current (DC). The MIRDC performs non-cyanide gold plating, copper plating, nickel plating, and chrome plating.

ANODIZING

Hard coat anodizing prevents any thermal or physical distortion of precision-engineered components made from aluminum. Anodized aluminum is used in thousands of applications. More importantly, these materials have a life cycle that is relatively benign to the environment.

PULSE PLATING

Pulse plated deposits tend to build up with straight walls. With this technology, overall plating thickness, weight, and manufacturing time are reduced.

METALCASTING

Using specialized metalcasting technology such as investment casting and conventional casting capabilities, the MIRDC undertakes prototype production of engineered parts and products. Likewise, cast product localization and alloy formulation can also be accommodated through contract research activity. The Center also offers rental of facilities to SMEs through its time-sharing scheme.

TECHNOLOGY TRANSFER

TECHNICAL CONSULTANCY & EXTENSION SERVICES

Our team of experts speeds up technology transfer by conducting consultancy services to improve productivity and upgrade product quality. Its technical assistance program includes:

- Conduct of management/technical consultancy
- Preparation of feasibility studies
- Conduct of liaison work between the private sector and government agencies
- Preparation of periodic analysis of industry status
- Extension of S&T service to the regions

To promote the development of the metals and engineering industries in the countryside, extension offices are established in the following regions:

- Region VI (La Paz, Iloilo City)
- Region X (Carmen, Cagayan de Oro City)

TECHNICAL INFORMATION DISSEMINATION

MIRDC disseminates the latest information on relevant technologies, products, processes and markets through:

- Industry and sectoral studies
- Technical information brochures on newly-developed or adopted technologies and newsletter on industry trends and events
- Technology demonstrations
- Exhibits/fairs
- Plant tours

INDUSTRY AND ACADEME LINKAGE

The perpetual drain and imbalance in the number of college educated and skilled workforce cause a gap between the supply and demand for skilled labor in the country today. To bridge the gap, MIRDC initiates linkages with the industry and the academe. In this manner, critical areas in the labor market where demand exists are identified and matched with an adequate supply of skilled workforce.

TECHNICAL SERVICES

ANALYSIS AND TESTING

A comprehensive range of new and expanded testing and analytical services is provided by the Center's laboratories to assist the industry in ensuring high quality metal products necessary for continued competitiveness in both local and foreign markets. The new range of test and calibration services involves the mandatory test requirements of the Bureau of Product Standards (BPS) using the PNS. The services include:

- Chemical Analysis
- Calibration and Metrology
- Corrosion Testing
- Nondestructive Testing
- Mechanical Testing
- Metallurgical Analysis

CHEMICAL ANALYSIS

For the determination of the composition of various metals using instrumental and wet method

- PNS 1900:2004
- PNS 1993:2004
- PNS 03-1:2000
- PNS 2003:2004
- PNS 113:2005

MECHANICAL TESTING

Burst Testing, Hydrostatic and Air Pressure Testing

*For Household LPG Cylinders**

- PNS 03-1:2000
- PNS 03-2:2000

*For Automotive LPG Cylinders**

- PNS 04:2006

For Various Metallic Materials and Products

- Tension and Bend Test
 - for ASTM and PNS requirements
- Tension and Bend Testing of Welded Material
 - for ASME, AWS and BPS requirements
- Impact Testing
- Hardness Testing
- Tensile and Bend Testing
 - for ASTM and BPS requirements

* Mandatory test requirements of the Bureau of Products Standards (BPS) using the PNS

