
50
50 YEARS OF MIRDC:
HALF A CENTURY OF PARTNERSHIP
WITH THE METALS INDUSTRY


MIRDC

50 YEARS OF MIRDC: HALF A CENTURY OF PARTNERSHIP WITH THE METALS INDUSTRY

50 YEARS OF MIRDC:
HALF A CENTURY OF
PARTNERSHIP WITH
THE METALS INDUSTRY

ISBN 978-971-95111-8-2

Metals Industry Research and Development Center
Department of Science and Technology
Bicutan, Taguig City 1631
Republic of the Philippines
Telephone: (632) 837-0431 to 38;
Telefax: (632) 837-0613; 837-0430
Email: mirdc@mirdc.dost.gov.ph.

TABLE OF CONTENTS

FOREWORD

Engineers like to think out of the box when defining and solving problems. It helps that they are open to new ideas, keep their skills current, and their technology information up to date.

For five decades, the MIRDC has approached the challenges of the metals, engineering, and allied industries the same way. In training blue collar workers for the metals industries for example, we drew upon our own knowledge, expertise, and experience as well as the knowledge, expertise, and experience of our foreign advisors. Manpower training has turned out to be one of the Center's strongest assets.

Through the assistance of the UNDP, UNIDO, GTZ and JICA, the Center has continually upgraded its metalworking facilities and testing equipment to keep the industry abreast of world standards. Quality can never be negotiable. Our accomplishments in the area of quality is a tradition that I am proud to continue, and the immediate challenge now is to maintain our various ISO certifications on the way to reach Levels 2 and 3 of the Philippine Quality Award. Our multidecade commitment to quality not only benefits our own clients but ultimately the entire nation's metalworking industry.

Allow me this opportunity to express my pride in the level of expertise and dedication of our Filipino scientists and engineers to better the lives of people through the technologies and products of the metalworking sector. We do not do science for science's sake—the overarching reason for what we do has always been to improve quality of life. MIRDC developed non-cyanide copper and gold electroplating processes which lead to a cleaner and safer working environment. We designed a trash rake capable of collecting and removing garbage along esteros so that water can flow unobstructedly to rivers and lakes, important in flood mitigation. The Center also developed the hybrid electric road train, a 40-meter long train-like bus that potentially addresses the perennial traffic problem while reducing carbon emissions.

While there is much more to be proud of, I know that we at the MIRDC must continue to evolve our partnership with the M&E industry to be more integrated with their business goals as they make quality products. It is their success that drives economic opportunities and growth.

My being Officer-in-Charge, then later Executive Director of the MIRDC, in the last three years is a brief time compared to the time in leadership of my eminent predecessors. What I have learned about the Center, our operations, our capabilities, and our people gives me much hope for the M&E industry and what we commit to deliver on our strategic plans.

It is my privilege to invite you to turn the pages of MIRDC's history and learn how our work impacts on the everyday life of Filipinos. Thank you for your continued support.

Happy 50th Anniversary to the MIRDC!

Robert O. Dizon
Executive Director
MIRDC

INTRODUCTION

50 years is a golden age. As we retrace our steps on the path we have journeyed, we certainly see glints of gold.

Behind the scenes, on practically every factory floor are products such as metal parts, components, and assemblies made by the metals and engineering sector. The metalworking industry primarily shapes metal into different parts or structures by using various processes—welding, machining, tool and die, heat treatment, metalcasting, electroplating, forging and stamping, and machine building. The products of these processes are crucial in many industries where precision and innovation are essential to their operations.

In the Philippines, the M&E industries stand as a core component of economic development. Without it, the manufacturing and industrial sectors would simply not prosper. One agency endures as a steadfast partner of the country's metals, engineering, and allied industries to improve their manufacturing capabilities and competitiveness—the Metals Industry Research and Development Center.

An institute under the Department of Science and Technology, the MIRDC has partnered with the metals, engineering, and allied industries since 1966, providing services that enhance companies' competitive advantage in agriculture, automotive, housing, food processing, construction, manufacturing, and transportation. The Center supports them with the training of their engineers and technicians, research and development, testing and calibration services, business advisory, and information exchange.

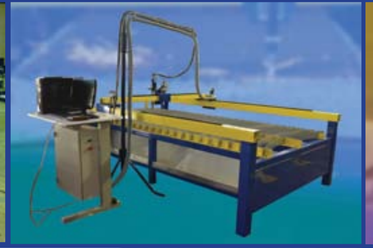
Turning 50 makes us look back—to our years of building the agency from the ground up; seeking out support from the United Nations and industrialized countries like the Federal Republic of Germany (FRG) and Japan for experts to design and head our training workshops; upgrading our facilities and services; instituting the most stringent quality systems to gain our ISO 9001 certification; and expanding our R&D capabilities to world standards. We have had many gilded moments, such as designing the Philippines' first hybrid electric road train now in use at the Clark Expo Zone; building the first automated guideway transit system; and being granted the nation's highest quality honors, the Philippine Quality Award.

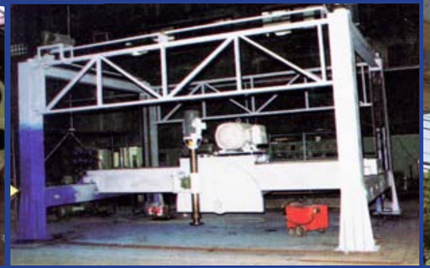
Our strong sense of history has been forged not merely by our successes through the years, but more so by the thousands of researchers, engineers, machinists, tool and die makers and designers, welders, foundrymen and other blue collar workers, laboratory technicians, and entrepreneurs who have walked out the doors of our metalworking workshops, pilot plants, and laboratories with new knowledge, expanded skills, and better-designed products.

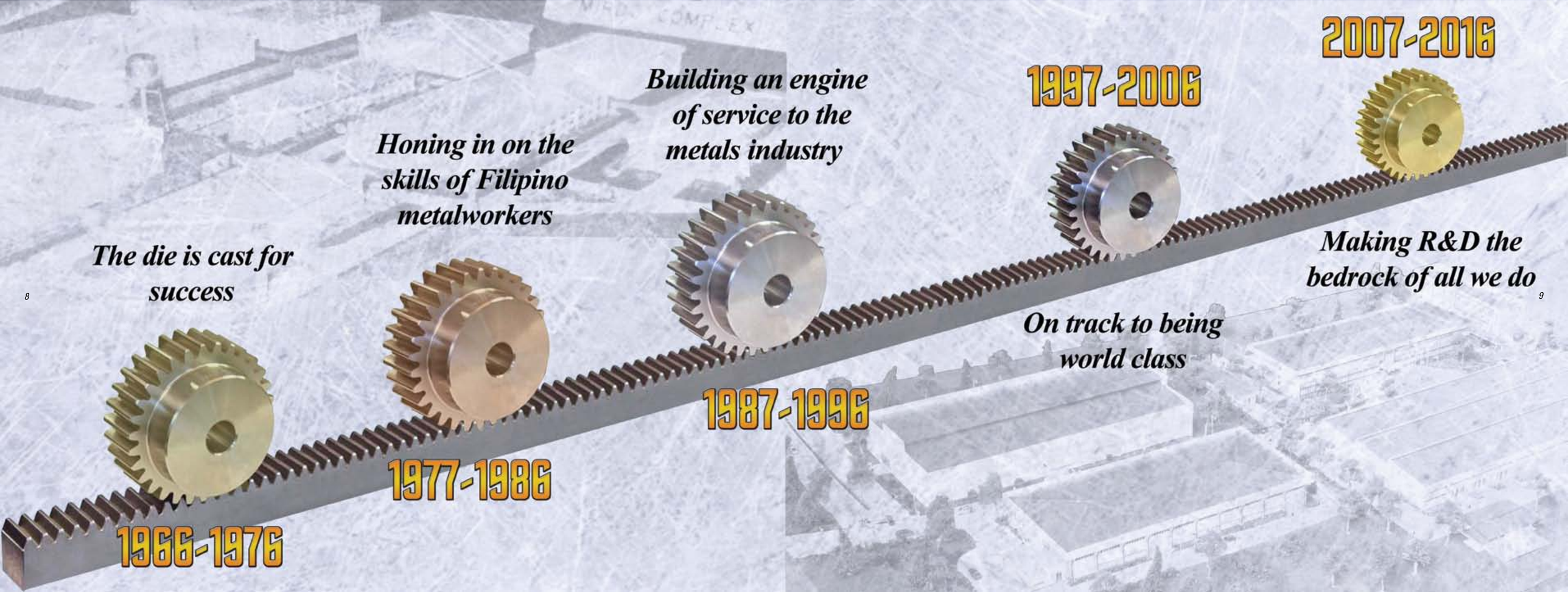
This book is a summary of the MIRDC's performance since its founding 50 years ago. By showcasing our history and accomplishments, we celebrate the alliance we developed with the M&E industry—a partnership that extends far beyond training technicians and engineers in cutting-edge technologies or developing metalworking enterprises to their fullest business potential. It is a roadmap to the future.

At the MIRDC, we believe that our commitment to the metals industry will endure with our unwavering efforts in driving the innovations that matter to the quality of life that all Filipinos deserve.

Just a few of the technologies developed at MIRDC:






1966-1976
The die is cast for success
1977-1986
Honing in on the skills of Filipino metalworkers
1987-1996
Building an engine of service to the metals industry
1997-2006
On track to being world class
2007-2016
Making R&D the bedrock of all we do

1ST DECADE

1966-1976 The die is cast for success

We walk before we can run. This is how the first decade of the MIRDC transpired, as it took its first small steps building its organization from the ground up.

Created originally as a research and technological institution in 1966 under the name, Metals Industry Development Center (MIDC), it was primarily tasked to foster the link between the government and the industry to advance the metals engineering and allied industries in the country. It would take more than 25 years before the Center became a regular government agency attached to the DOST.

REPUBLIC ACT NO. 4724

REPUBLIC ACT NO. 4724 - AN ACT TO DEVELOP THE METALS INDUSTRY OF THE PHILIPPINES BY ESTABLISHING THE METALS INDUSTRY DEVELOPMENT CENTER, PROVIDING FUNDS THEREFOR, AND FOR OTHER PURPOSES

Section 1. Declaration of Policy. — It is hereby declared a national policy to develop and expand the metals industry of the country by maintaining close coordination with the private sector in putting up a non-profit research organization to provide both the government and the private sector with professional management and technical expertise on such vital activities for the development of the industry as training of engineers and technicians, information exchange, trade accreditation service, quality control and testing of metal products, research and business economics advisory services.

Sec. 2. Definition of Terms. — As used in this Act, the following shall be understood to mean:

(a) The term "metals industry" shall refer to the manufacture from ore materials of products of all precious, base and rare metals and their alloys, including all processes from smelting in direct or indirect reduction furnaces to the final finished product state; either separately or part of an integrated process, namely: the production of bullion, pig ingots, billets, pellets, blooms, skelps, slabs or bars, and rolling and/or processing into basic forms such as sheets, plates, strips, tubes, conduits, pipes, rails, rods, tie-plates and the like, and the rough castings, forgings, and extrusions, and the final processing, manufacture, fabrication, and/or assembly into finished metal products such as power generating machinery, agricultural machinery and implements, office machinery, and machine parts and accessories; electric machinery, apparatus other industrial machinery, and machine parts and accessories; electric machinery, and all and appliances such as generators, transformer; motors and the like; and their metal parts and accessories; transport equipment such as railway locomotives and cars, passenger road motor vehicles, motorcycles, trucks, lorries, bicycles and other cycles, aircraft, ships and boats and their metal parts and accessories; and various metal manufactures such as railway construction accessories, wires, tubes and pipes, safes, hand tools and implements, tools, dies and bolts, and similar articles, needles and pins, safety and fittings, firearms, wires netting and the like; molds, household utensils, forks and spoons and cutlery, hardwares and metals, metal containers for transport and storage, and other miscellaneous manufactured articles of base, precious and rare metals and their alloys.

(b) "Allied industries" shall refer to such industries as the coal and coke and the refractory industries, the principal manufactured products of which are consumed by the metals industries in the processing of metallic raw materials into finished or semi-finished products.

Sec. 3. Fund to carry out provisions of this Act. — Pursuant to the national policy enunciated in Section one of this Act, there is hereby established a special fund, to be known as the Metals Industry Development Fund, consisting of government contribution in the amount of seven million five hundred thousand pesos, the private sector contribution in the amount provided in section 7 hereof, and the reasonable fees and charges that may be collected for services rendered by the Metals Industry Development Center. For this purpose, the sum of one million five hundred thousand pesos is hereby authorized to be appropriated upon the approval of this Act out of the funds of the national treasury not otherwise appropriated and one million pesos annually thereafter for a period of six years as the government contribution to the said fund: provided, that any unexpended balance thereof shall not revert to the general fund.

Approved: June 18, 1966

Republic Act No. 4724, dated June 18, 1966, established the Metals Industry Development Center (MIDC) which was tasked to develop and expand the metals industry of the Philippines.

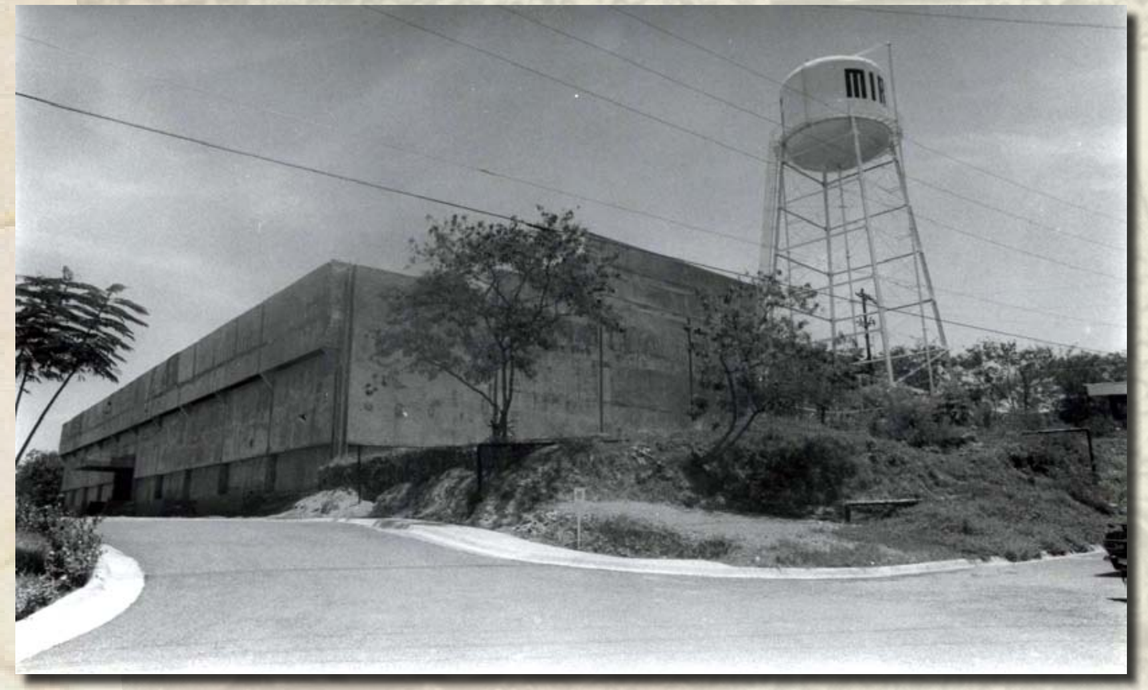
THE DOCUMENT TRAIL		
YEAR	**LEGAL BASIS**	**PURPOSE**
1966	RA No. 4724	Established the Metals Industry Development Center
1972	RA No. 6428	Renamed the Metals Industry Research and Development Center and gave it corporate existence
1980	EO No. 602	Transferred the MIRDC from the National Science Development Board to the Ministry of Trade and Industry
1981	PD No. 1765	Re-oriented its thrust from research and development to direct assistance to the metals industry
1987	EO No. 128	Transferred the Center to the Department of Science and Technology from the Department of Trade and Industry
1991	EO No. 494	Transformed the Center to a regular government agency

Signing of R.A. 6428 by President Ferdinand E. Marcos, May 31, 1972

The foundation of an industrialized country is its metals and engineering industry. Providing our manufacturing industries with the needed machinery, equipment, and technicians was an overwhelming task for a new agency such as the MIRDC. The Center however, was undaunted, and carved its own path to follow. It armed itself with strategic foresight and established its own pool of experts in metals and engineering, ample production and testing laboratories, and a catalogue of technological services.

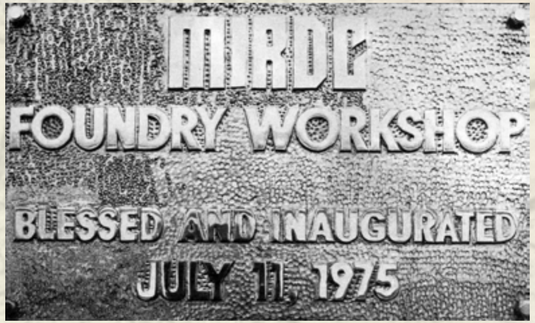
Original office and staff at the ortigas building, Pasig, Rizal

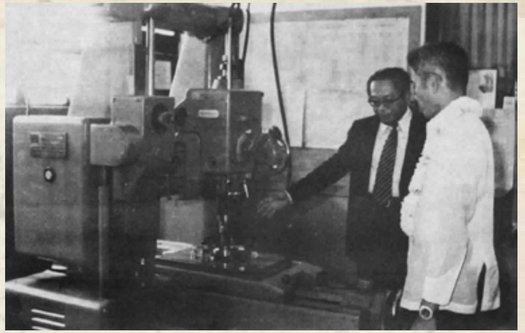
Pilot Plant I (Mechanical Shop I)



Foundry Building

Inauguration of MIRDC Foundry Workshop | 1975





Administration and Laboratory Building

Pilot Plant III (Mechanical Workshop II)

Contract signing between MIRDC and Q.K. Calderon Construction Co. for the construction of MIRDC's Pilot Plant III | 1976

Much hand-holding was needed by the fledgling agency, and it was provided initially by the combined assistance of the United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), and the International Labor Organization (ILO) with Mr. Fernand Dugal as Project Manager in 1971.

In the same year, a proposal for assistance in the establishment of a training center for engineers and technicians was submitted to the Federal Republic of Germany (FRG) considering the provision of the General Agreement for Technical Cooperation between the Philippines and FRG. The project started in 1975 with formation of a German Advisory Group headed initially by Dr. Karlheinz Zinnecker.

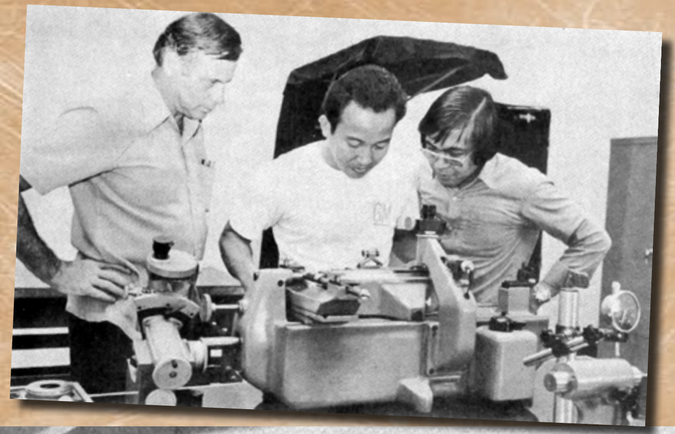
Before the close of its initial decade, the MIRDC inaugurated its first tool and die workshop as well as the foundry workshop, and began construction of its laboratory and third pilot plant. Our organizational and infrastructure development continued through to the following decade, serving as the essential cogs in the wheels that move the country in constant forward motion towards industrialization.

The MIRDC constantly consults the private sector in its activities by holding the annual Private Sector & MIRDC Workshop and Seminar which commenced in 1971.

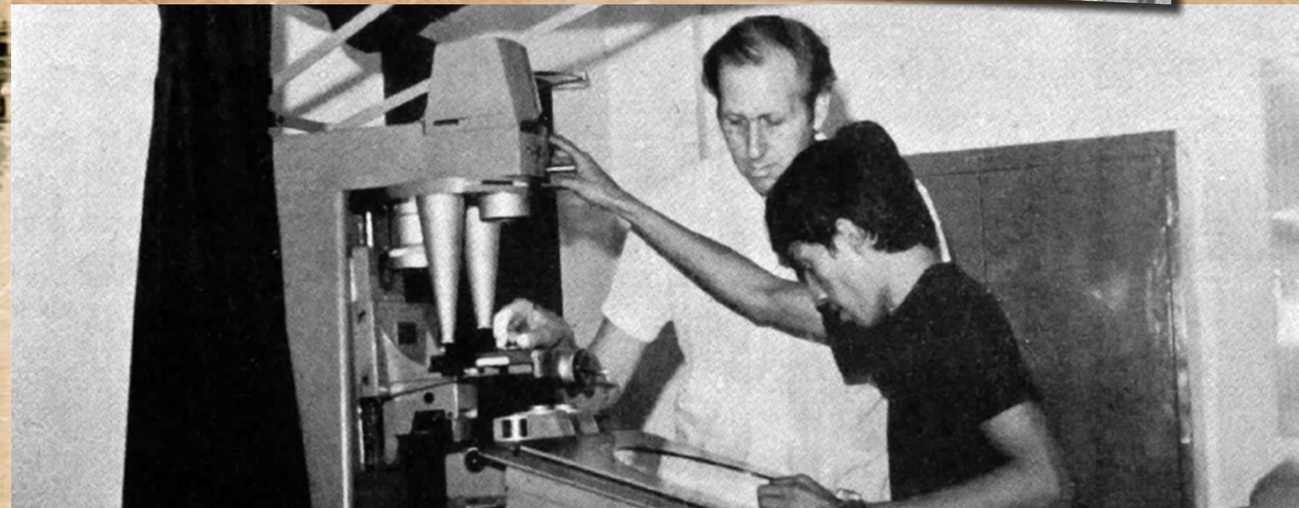
The metalcasting industry was given a boost with the arrival of Richard Charles Tibbetts, UNIDO foundry engineer expert | 1976

Trainings & Services Offered by MIRDC

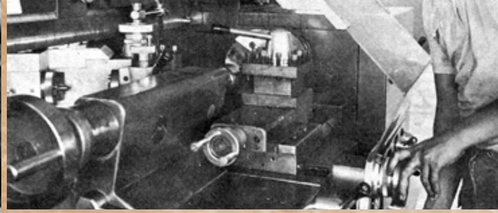
- Metrology Laboratory and Inspection System
- Heat Treatment
- Tool & Die Making

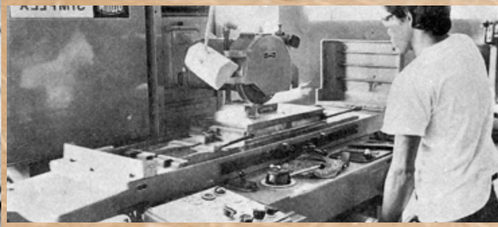


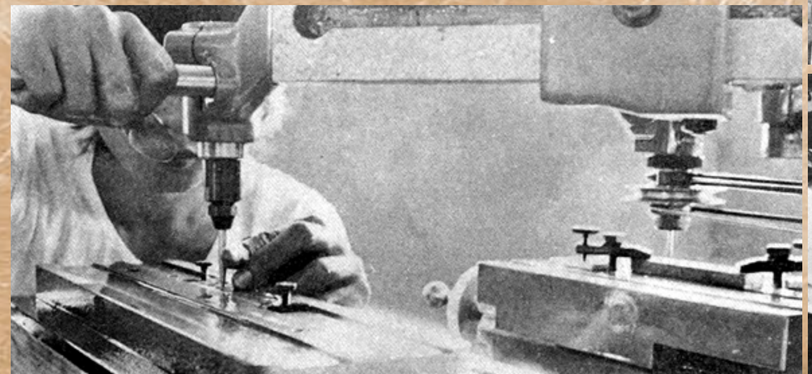
Metrology Laboratory and Inspection System



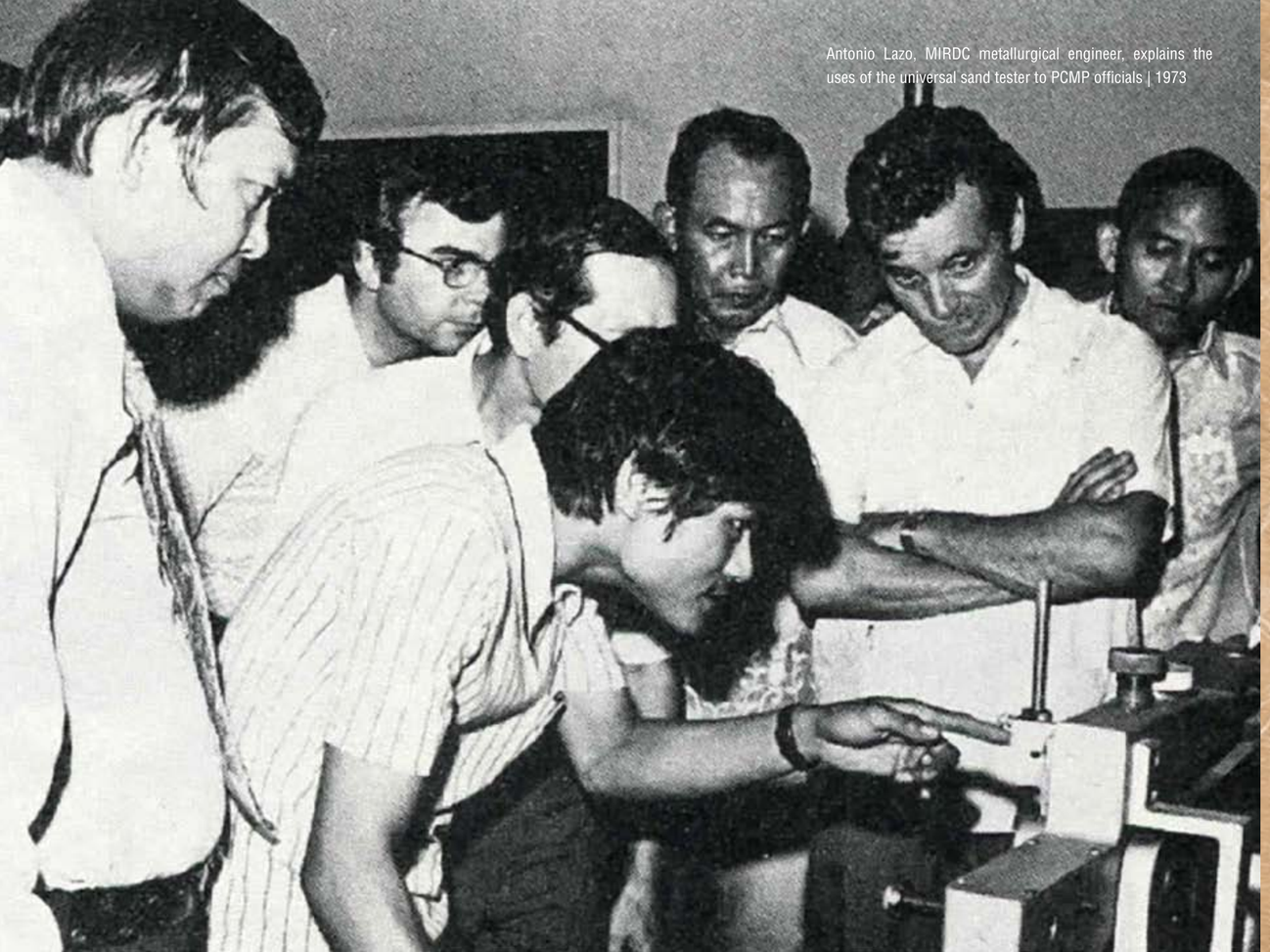
Heat treatment







Tool & Die Making



Antonio Lazo, MIRDC metallurgical engineer, explains the uses of the universal sand tester to PCMP officials | 1973

Engr. San Miguel explains to some participants the use and operation of the Leitz Miniload Micro hardness tester | 1973

Engr. Moreno demonstrates the use of a universal sand strength tester | 1973

Engr. Rolando T. Viloria, head of the Technical Workshop & Training Department, orients participants touring the MIRDC Tool and Die Workshop | 1976

Demonstration on the operation of carbon and sulfur analyzer | 1973

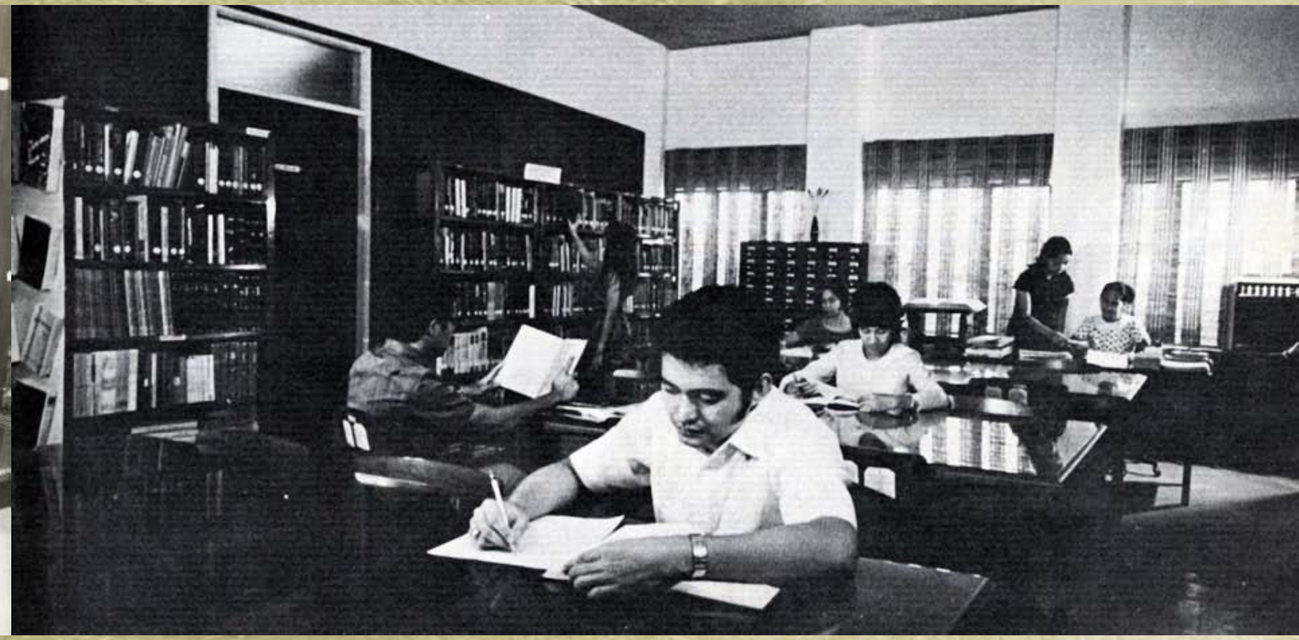
Information and Training Facilities

- **Information Exchange and General Statistics**
- **Training Room**
- **Industry Studies**
- **MIRDC Library**

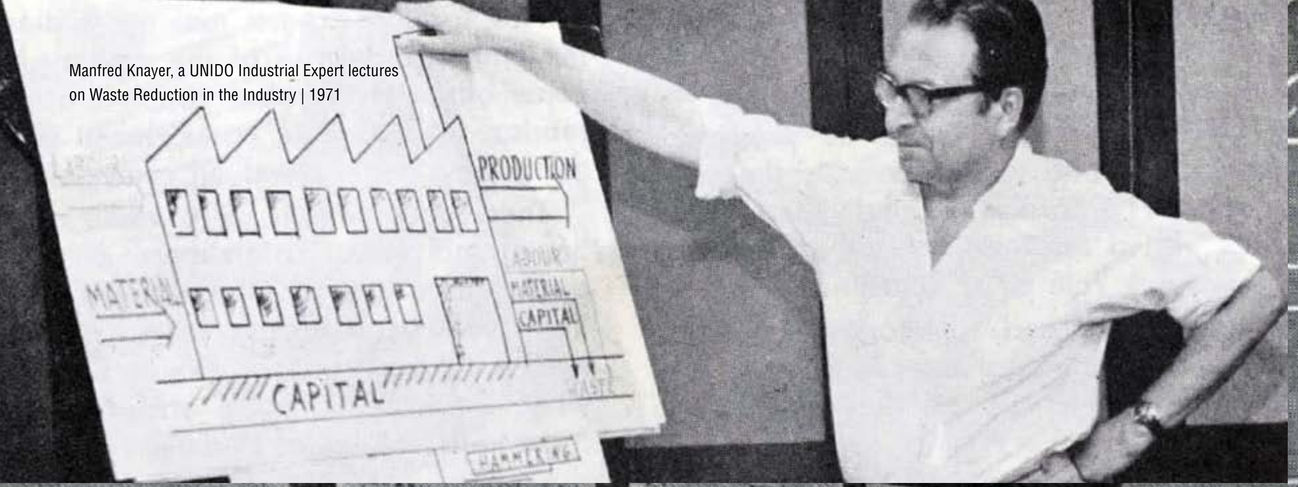
Ms. Beatriz D. Orinion with staff and consultant

MIRDC Resource Speaker conducting on-site training

MIRDC staff conducting on-site interview for industry studies

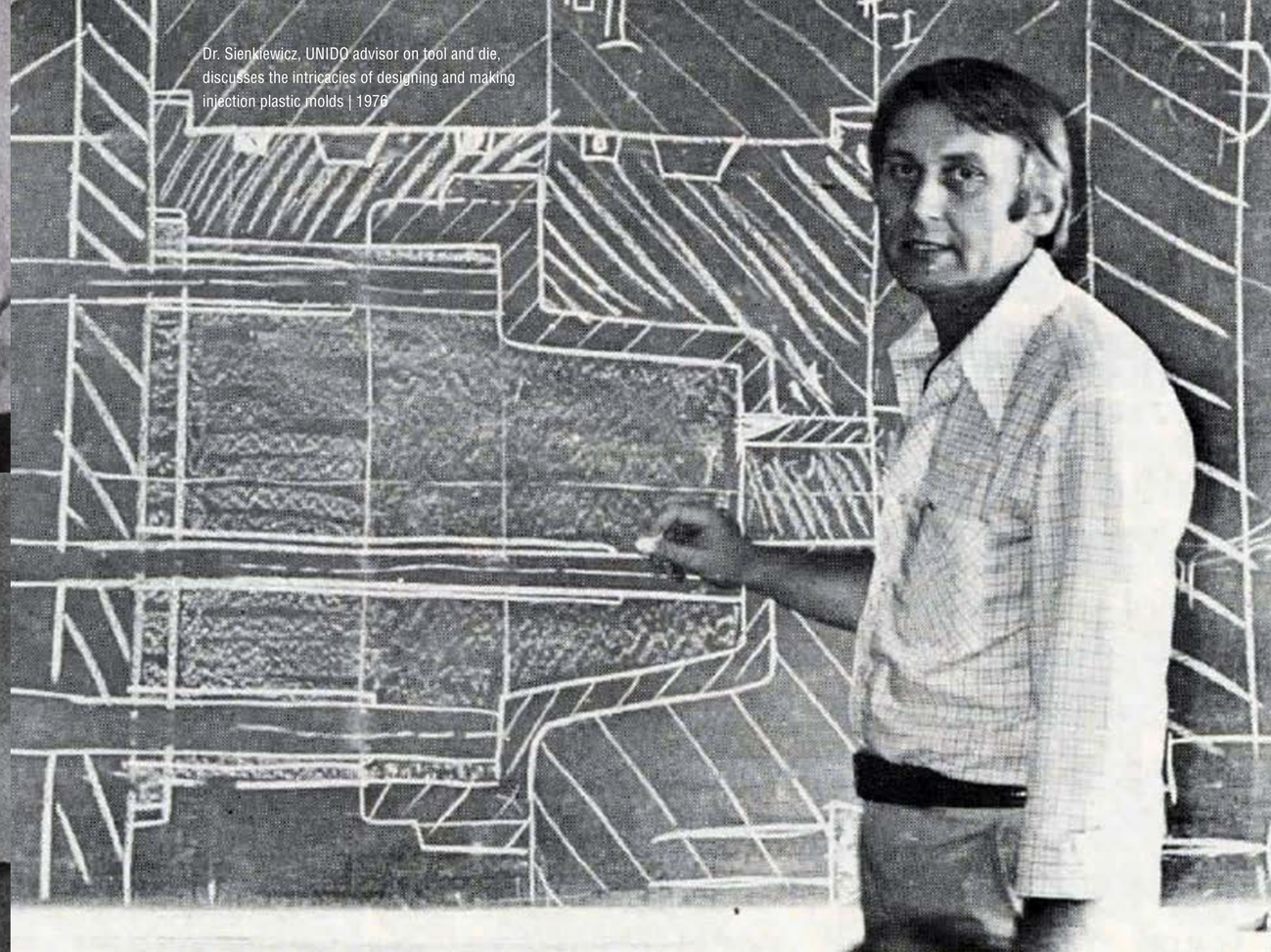


MIRDC Library in the 1970s



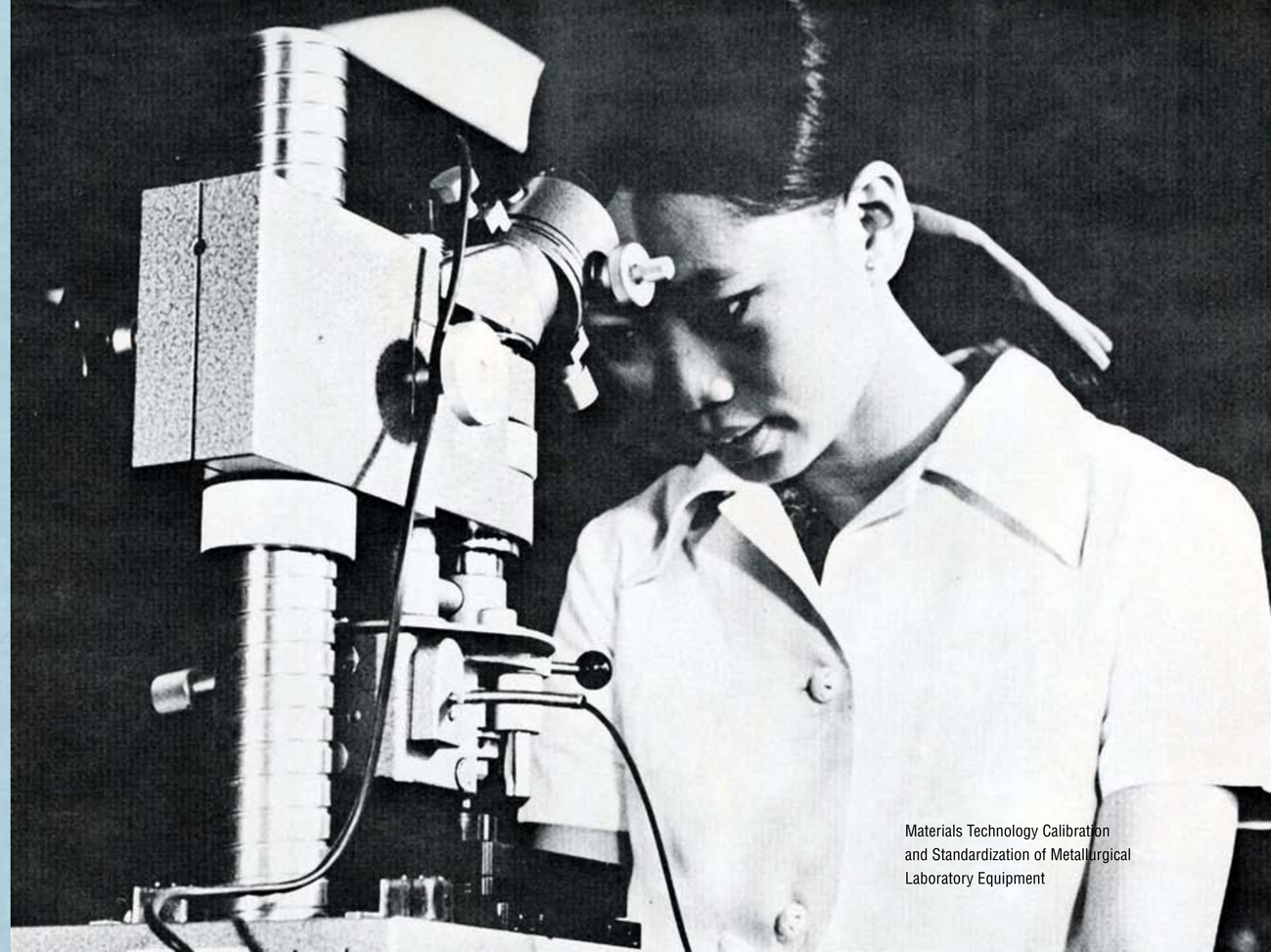
Manfred Knayer, a UNIDO Industrial Expert lectures on Waste Reduction in the Industry | 1971

Estefano Gacad,chief of MIRDC's Development Control and Standards Division, is shown briefing the PATMAP members on the MIRDC set-up | 1973



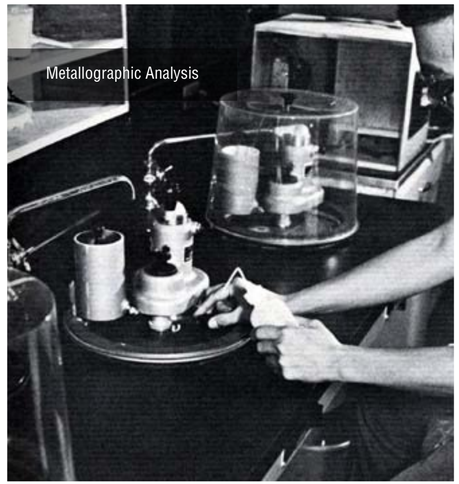
Dr. Sienkiewicz, UNIDO advisor on tool and die, discusses the intricacies of designing and making injection plastic molds | 1976

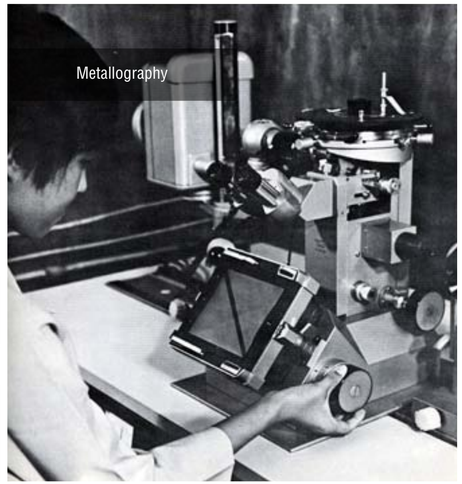
Materials Technology Facilities & Services

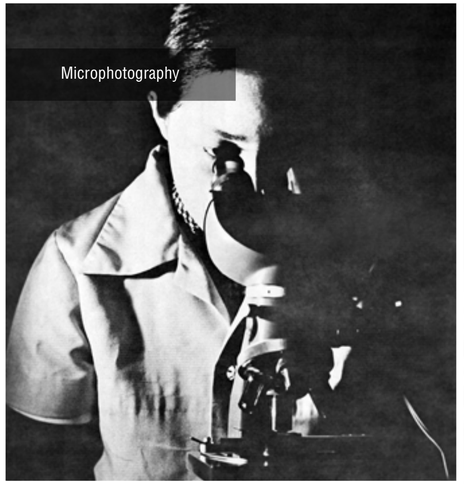


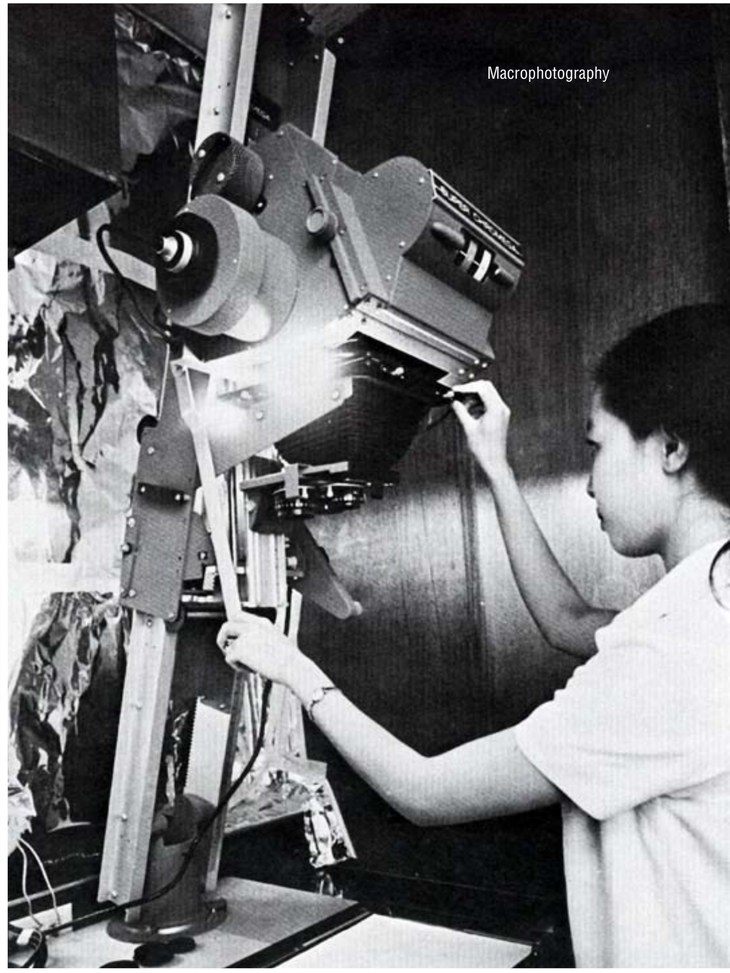
Materials Technology Calibration and Standardization of Metallurgical Laboratory Equipment

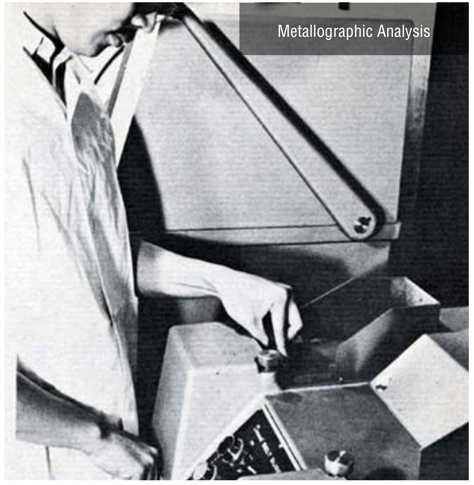

Metallographic Analysis

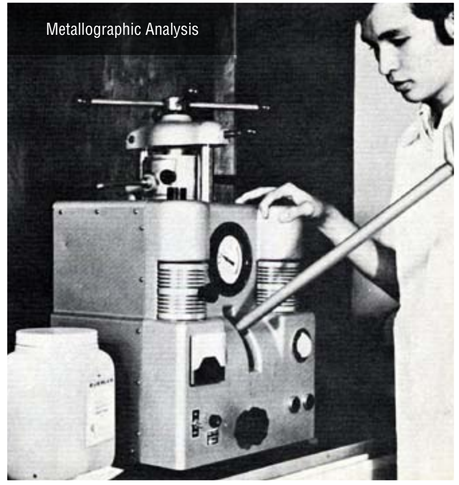

Metallographic Analysis

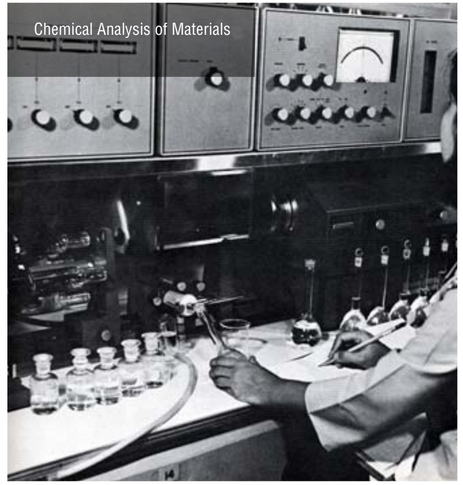

Metallography

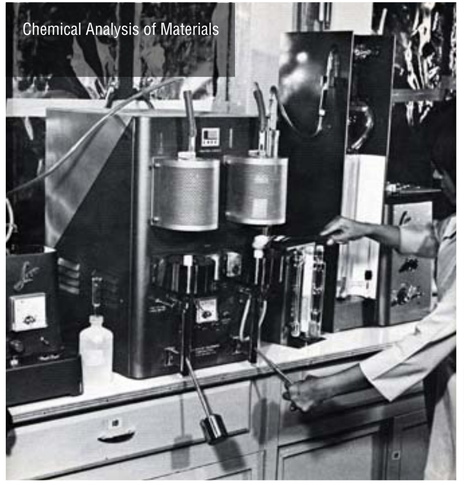

Microphotography

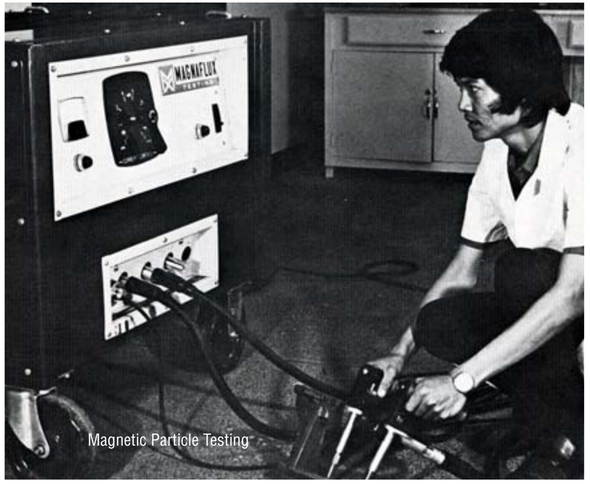

Macrophotography


Metallographic Analysis

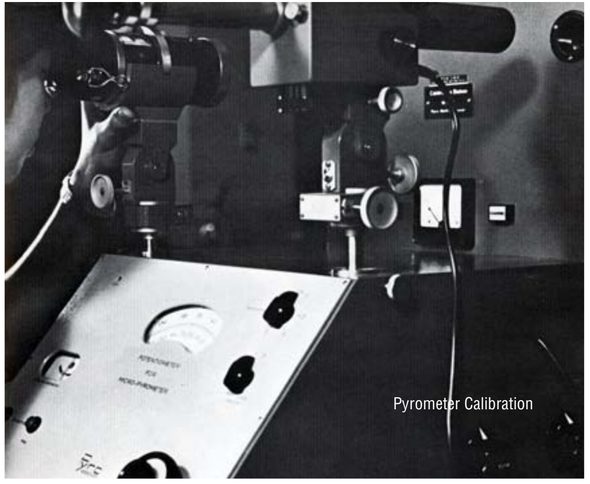

Metallographic Analysis

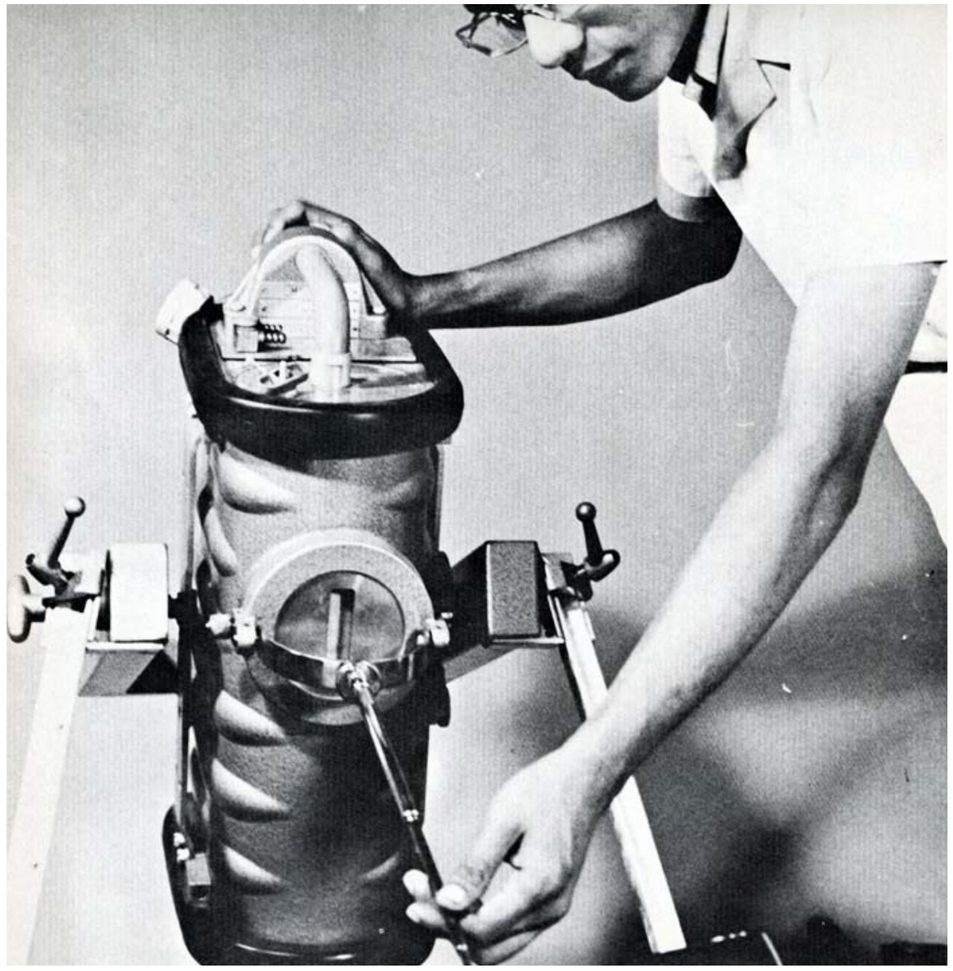

Chemical Analysis of Materials


Chemical Analysis of Materials

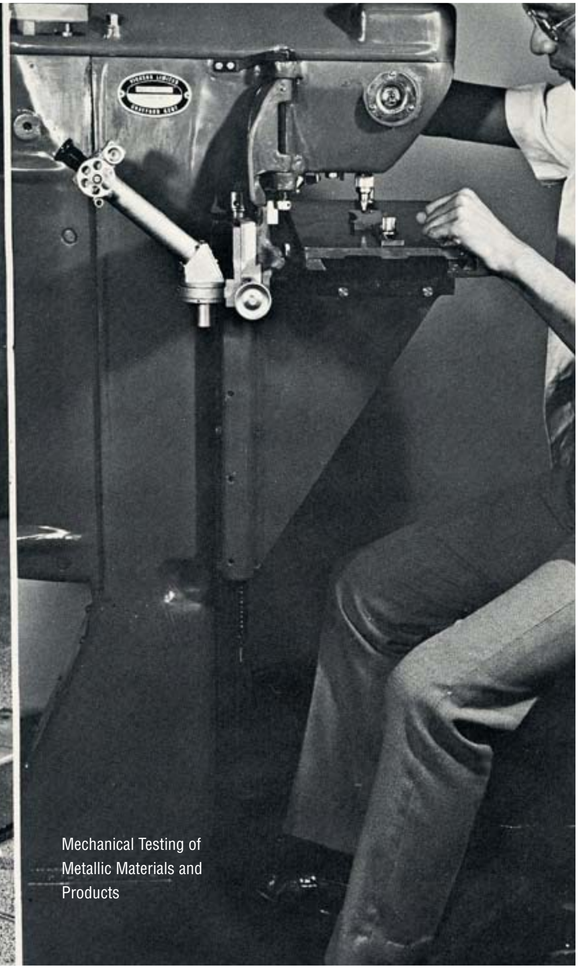


Magnetic Particle Testing


Pyrometer Calibration




Tinius Olsen "Change-O-Matic"
Impact Tester


Mechanical Testing of
Metallic Materials and
Products

Participants and Lecturers of the Seminar on Quality Control Methods and Applications in the Metals Industry | 1971

Discussants at the Second Private Sector & Metals Industry Research & Development Center | 1973

Harold Hoffman of Chysler Philippines and Domingo S. Guevara, Jr. of DMG, Inc. witnessing a demo of milling machine in operation | 1973

Marcelo B. Villanueva operates the microprobe analyzer, a sophisticated apparatus in electron microscopy | 1973

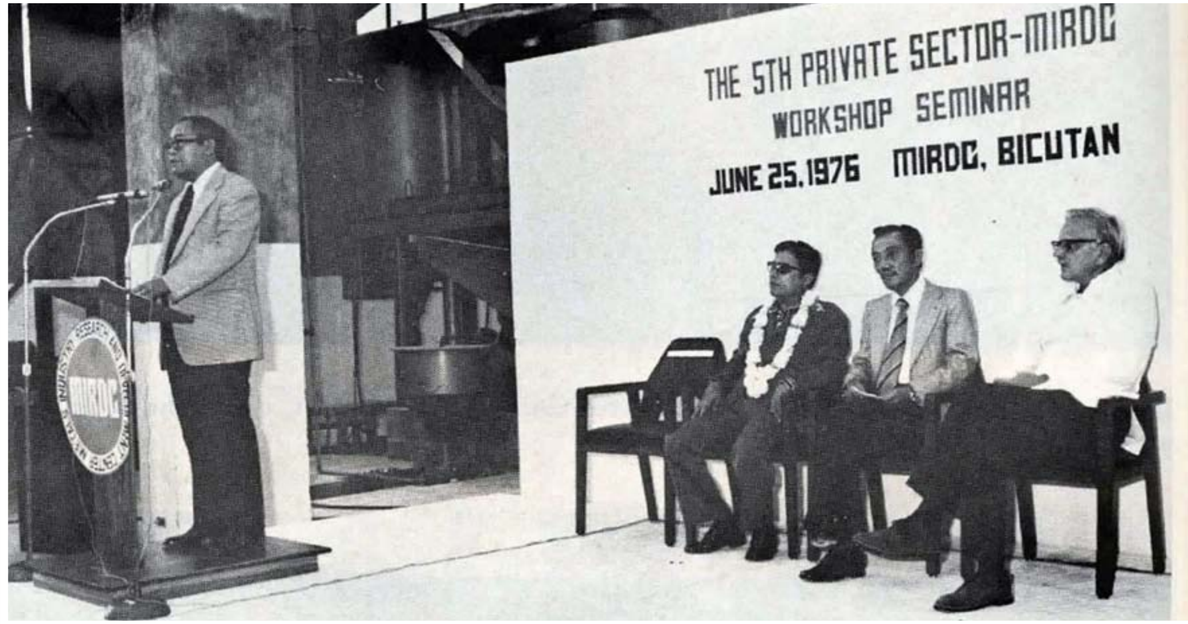
Progressive Car Manufacturers Program (PCMP) members listen to MIRDC Executive Director Dr. Antonio V. Arizabal as he outlines MIRDC operations | 1973

Engr. Egon Becherer hands over a certificate to participant Engr. Mariano B. Robles, Jr. during the seminar on Product Improvement | 1976

Engr. Ruben Pinaroc gives a demonstration during the seminar on Heat Treatment of Industrial Iron and Steel | 1976

Handing the certificate after the seminar on Fundamentals of Engineering Metrology and Inspection | 1976

Industry Secretary Vicente T. Paterno flanked by the members of the SEAISI Board of Directors | 1976



Dr. Antonio V. Arizabal delivers the opening remarks at a workshop seminar | 1976

MIRDC Management Services Manager congratulates a graduate of the Production Management Seminar | 1976

Participants of the Seminar on Progressive Dies and Die Casting Molds | 1976

Participants from various parts of Southeast Asia at the 5th SEAISI AGM and Seminar | 1976

2ND DECADE

1977-1986 Honing in on the skills of Filipino metalworkers

Keeping up with the rest of the world called for the world coming over to the MIRDC.

The Center's second decade was marked by a boost in knowledge exchange and skills expansion in the form of technical cooperation. This was also the time when MIRDC entered the computer age and its foundry workshop underwent reconstruction.

In response to local companies' increasing concern for product quality and the growing demand for skilled workers in the metals industry, the MIRDC invited metals specialists from the Federal Republic of Germany, France, Austria, and Japan to serve as advisers and trainers in the fields of metallurgical research, foundry engineering, tool design, die and mold-making, instrumentation, and steel standardization.

Blue collar workers were welcomed to the MIRDC facilities to be trained in a wide range of skills development such as metal processing, manufacturing, and laboratory work. This was to be the foundation of MIRDC's legacy—the preparation of a professional workforce for the country's metals industry.

Blue collar workers training with equipment.

Blue collar workers training with equipment.

An integral part of the modern metals industry is the introduction of industrial-scale investment casting, a technology which makes intricate forms, near-net shapes and smooth surfaces possible. With the assistance of the Japan International Cooperation Agency (JICA), the Center's foundry facilities were immensely upgraded through the establishment of a Metal Casting Technology Center (MCTC) involving shell and no-bake molding, die casting and investment casting.

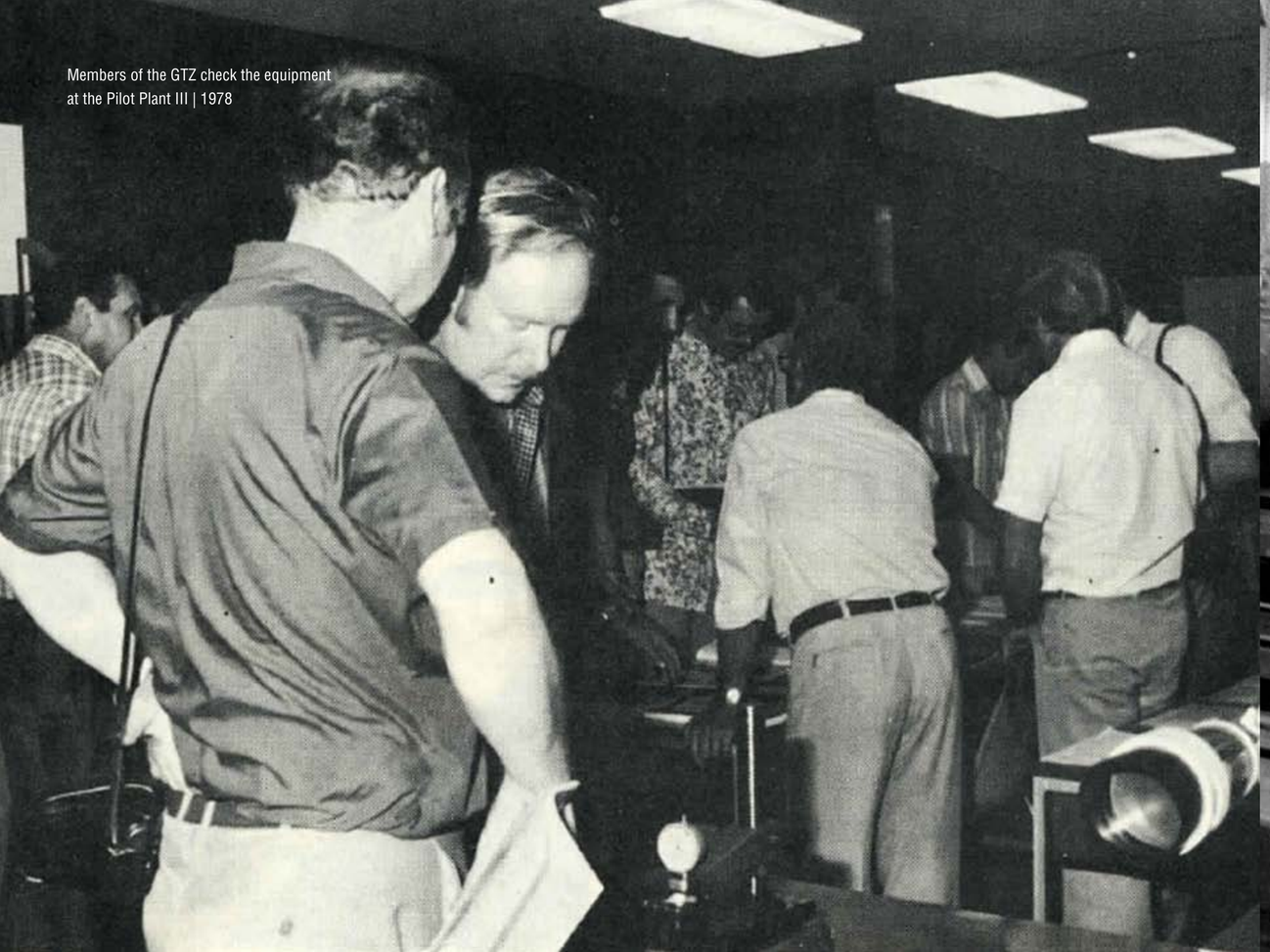
The MIRDC produced materials handling equipment under the Philippine-German Project for Promotion of Small and Medium-Scale Industries (SIPRO). Products vital to the operations of small and medium-scale enterprises such as the mechanical skid truck, caster wheels, hydraulic shop crane and hydraulic pipe bender were made available and less costly, eventually becoming part of MIRDC's initial portfolio of patents.

To help bring the Center's testing and consultancy services outside of Manila, Germany donated a Mobile Testing Unit to the Center through the auspices of the United Nations Development Programme (UNDP). The big van was to be used as a mobile testing laboratory for chemical analysis, non-destructive testing, metallographic analysis, and other materials technology tests.

Mobile Testing and Training Unit.

Members of the German Mission Arrive | 1977

UN Executives visit MIRDC | 1977

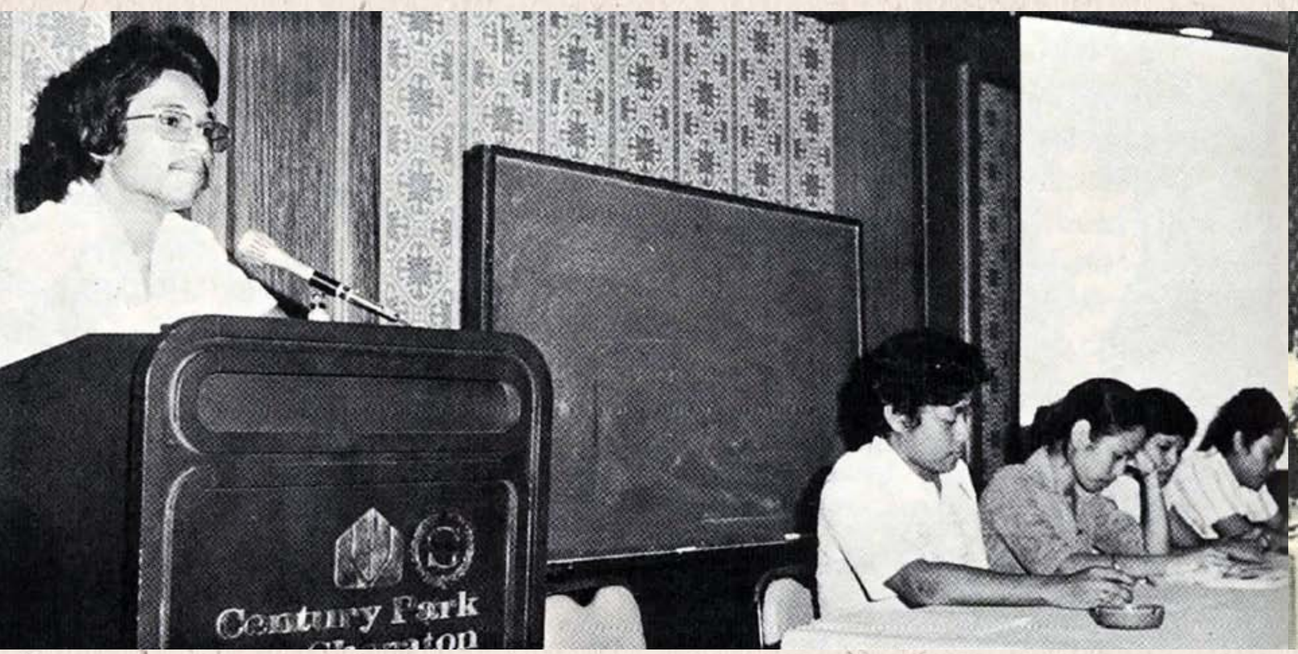


Members of the GTZ check the equipment
at the Pilot Plant III | 1978

Director Jose Miguel G. Paez with foreign guests

Delegates to the first meeting of the ASEAN Committee on Science and Technology participated in by Beatriz D. Orinion, Officer-in-Charge, Management Services Department, Ellen Aguilar and Celine Ledesma | 1978

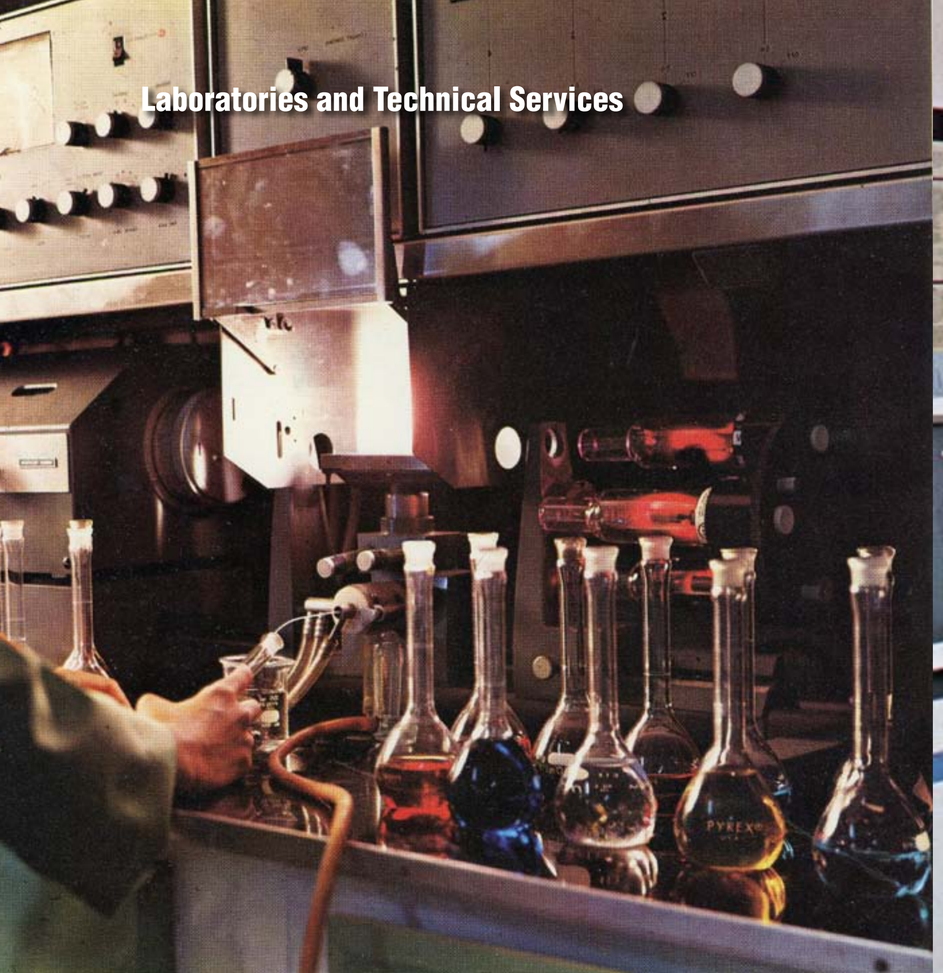
Dr. Antonio V. Arizabal heads the oath-taking of MIRDC trainee graduates | 1978

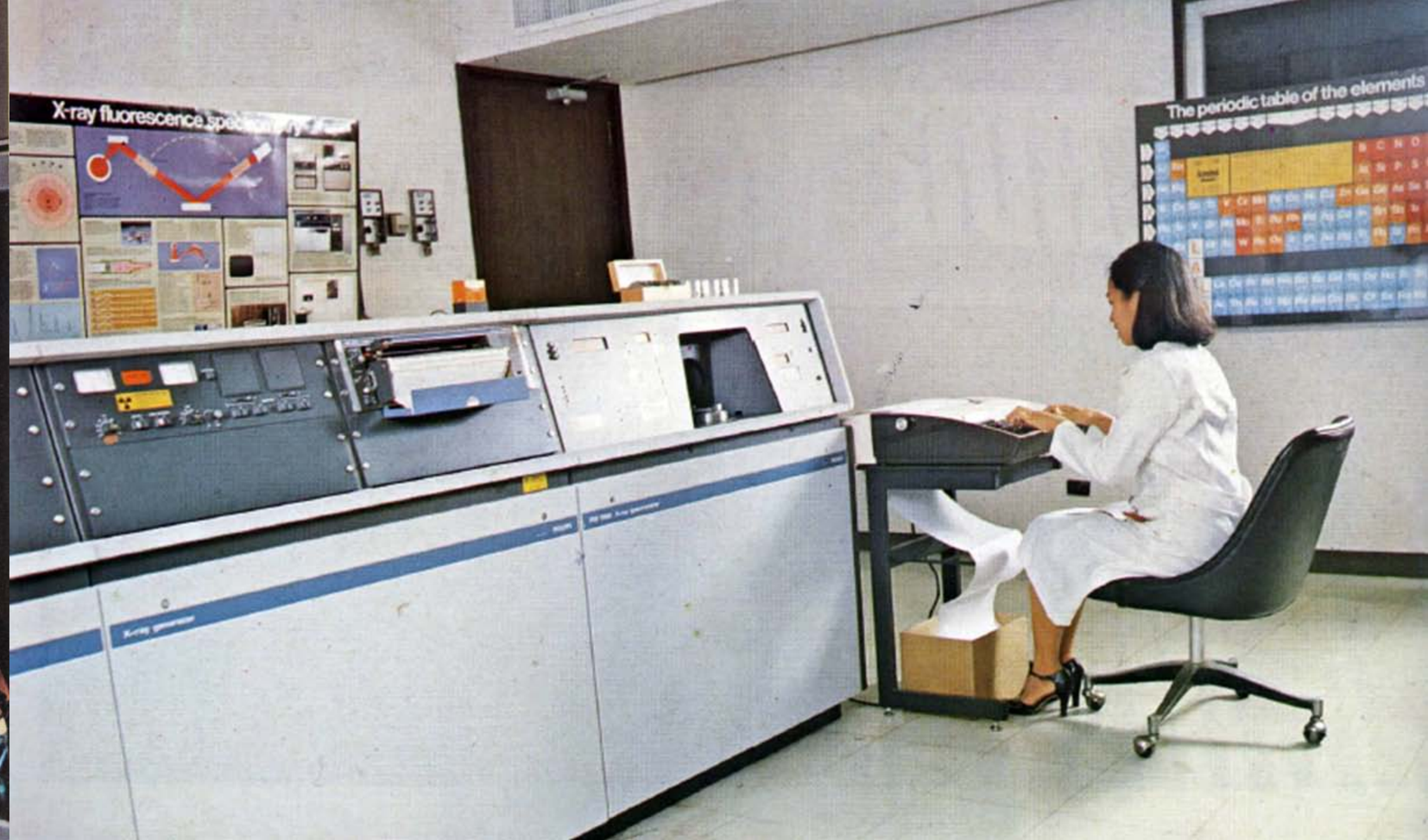


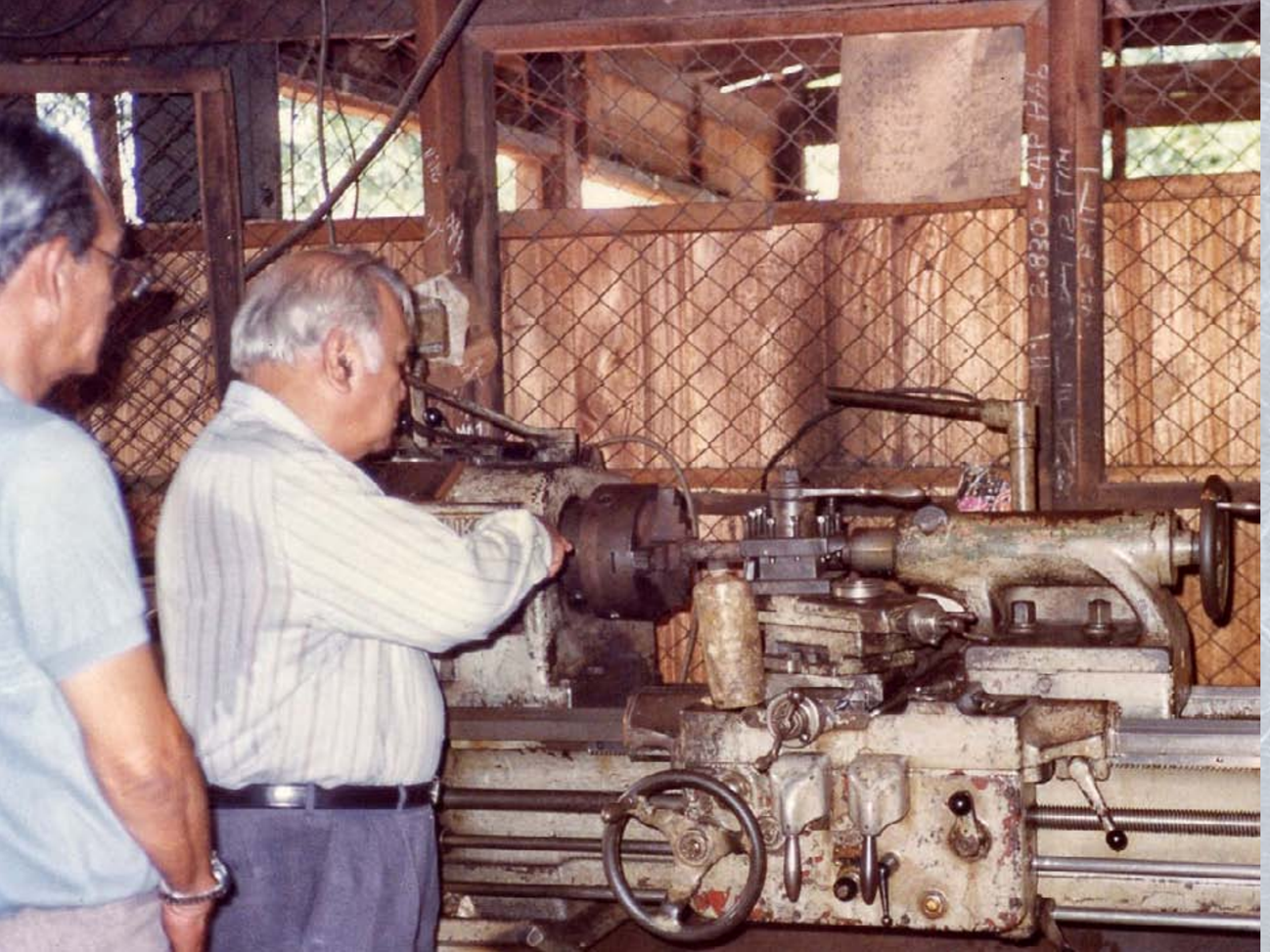
Seminar on Why Metals Fail | 1977

A convention of the Philippine Foundry Society | 1977

Laboratories and Technical Services







3RD DECADE

1987-1996 Building an engine of service to the metals industry

From developing a legacy of manpower training to building its list of services—this is how MIRDC's third decade marched on.

The Center's range of services for industrial undertakings was beefed up by new acquisitions of precision testing and measuring equipment for its materials testing laboratories courtesy of the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ) Technical Assistance Project.

Deadweight Tester used in industrial calibration

Induction Coupled Plasma (ICP) Analyzer traces minor and major components of metal alloys

A Mitutoyo Coordinate Measuring Machine, one of the GTZ-acquired precision equipment for the MIRDC Metrology Laboratory

Region I
Pangasinan State University
Urdaneta, Pangasinan

Region III
DOST III Building
Capitol Compound, Sto. Niño
San Fernando, Pampanga

Region IV-A
Hi-Toys Building
People's Technology Complex
Carmona, Cavite

Region VI
MIRDC c/o DOST
Regional Office No. 6
Magsaysay Village
La Paz, Iloilo City

Region VI
MIRDC c/o RU Foundry &
Machine Shop
Sitio Aning, Bgy. Pahagonoy
Bacolod City

National Capital Region
PMPI Building
Quezon City Polytechnic Compound
673 Quirino Highway, San Bartolome
Novaliches, Quezon City

Region VII
DOST VII and RMESC Buildings
Sudlon, Lahug, Cebu City

Region X
DOST Regional Office No. 10
J.R. Borja Memorial Hospital Cpd.
Carmen, Cagayan de Oro City

Region XI
DOST Regional Office No. 11
Cor. Dumanlas & Friendship Roads
Davao Medical Center Compound
Bajada, Davao City

By the time the MIRDC marked its 25th year in 1991, it had reached far and wide in the metals and engineering industry. GTZ training programs and facilities upgrading were ongoing; developing local capabilities for machineries and parts manufacture became one of the Center's priorities through the MPM Project; and metalworking technology was being dispersed to the countryside by the Center's Regional Extension Offices and Regional Metals Testing Centers (RMTC) in Region I (Pangasinan), Region III (Pampanga), Region IV (Cavite), Region VI (Bacolod and Iloilo City), Region VII (Cebu City), Region X (Cagayan de Oro City), Region XI (Davao City) and NCR (Valenzuela, Metro Manila). A Regional Metals and Engineering Service Center was also put up in Cebu City making advanced CNC machining technologies available to small and medium enterprises.

In 1993, the MIRDC became a regular government agency under the DOST. With this transformation, the Center went full steam ahead with its regional training programs, particularly those intended for the poorest provinces. Linkages with industry and professional associations and the academe were also strengthened to determine and address critical areas of the labor market.

A JICA expert supervises the quality of a casting with MIRDC staff during a consultancy visit in Bacolod

The Center's regional assistance program reached out to the Tugaya craftsmen in Lanao del Sur, improving on their traditional practices with the lost-wax process for brass casting (investment casting)

The MIRDC spearheaded the Department of Trade and Industry (DTI) project with the USAID on the Metals and Engineering Industries Assistance Program (MEIAP) involving skills training, consultancy, local study missions, and feasibility studies for common service facilities in select regions of the country.

The results of the USAID program formed part of the Metals and Engineering Action Plan 1990-2000 which became the blueprint for MIRDC's operations in that decade.


BLACKSMITH

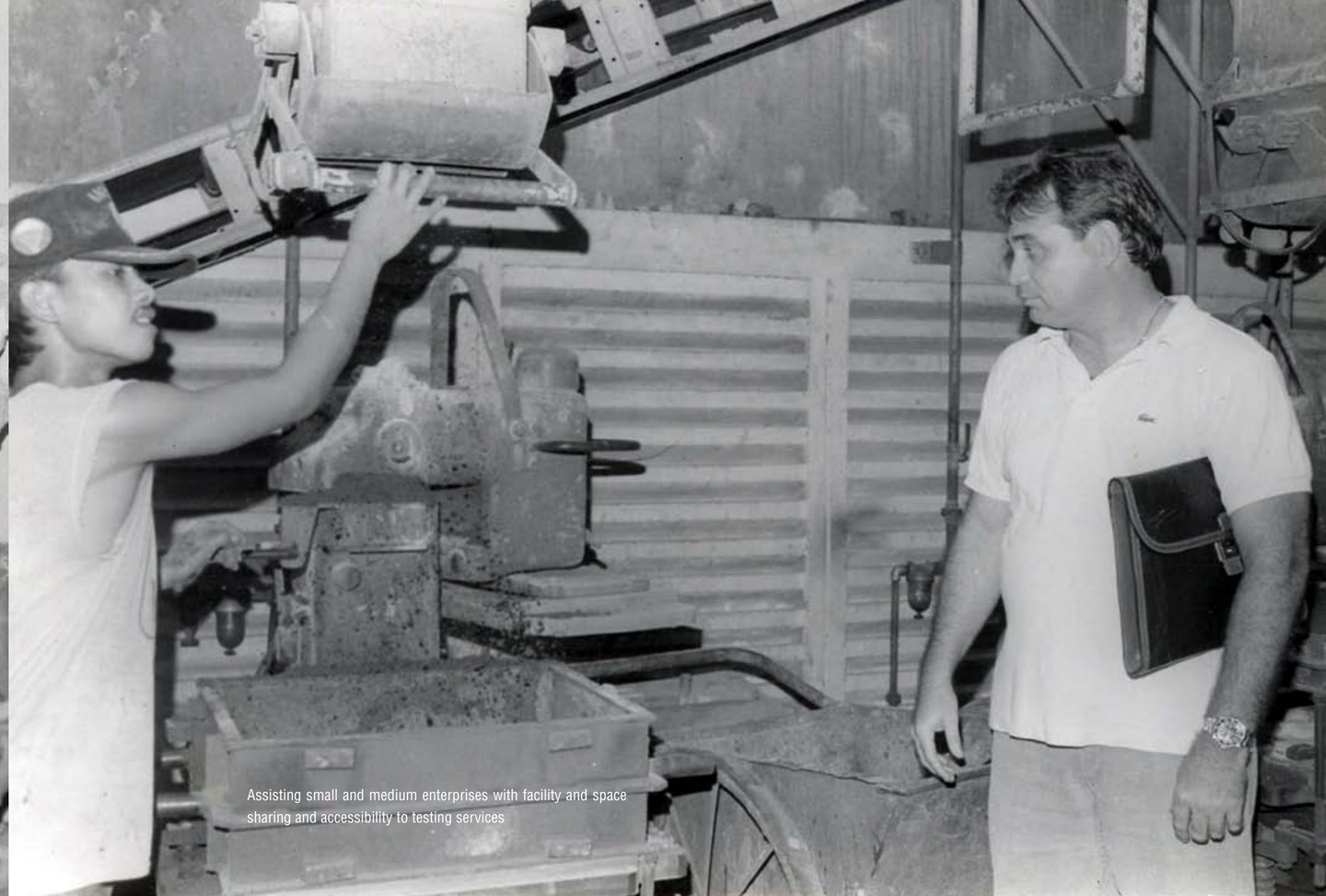

89 10

The 90s also saw the DOST launch its Comprehensive Technology Transfer and Commercialization Program. Under the CTCP, the MIRDC implemented the Technology Business Incubator Program (TBI).

Semiconductor toolings, dies and molds

The TBI ascertained the viability and sustainability of the MIRDC's technical programs. Not only were incubators given access to the Center's technical facilities, they were also provided assistance in the marketing, technical, and financial management aspects of their businesses. Sixteen firms participated at the program's onset, with the clientele growing to 37 companies in only a few years.

Nurturing small businesses with TBI



Assisting small and medium enterprises with facility and space sharing and accessibility to testing services

MIRDC TBI BENEFICIARIES

Airmek, Inc.
Altair Tools International Corp.
Altius Mainteneering Corp.
Ameriza International, Inc.
Atlantic Pacific Group Asia, Inc.
Carbide Toolings, Inc.
Choryo Toolings System, Inc.
Cooperative Tool and Die Asia, Inc.
Defense Contracts Corporation of the Philippines
Delta Pacific
Design and Engineering Center Foundation, Inc.
Dragon Lady Industries, Inc.
Eagle High Venture
EJ Metals and Allied Products, Inc.
Energy and Aviation Support Systems
Euromerica Trade Philippines, Inc.
First Serve Technologies, Inc.
Flo-line Hydraulics, Inc.
Great Tooling Systems, Inc.
Hilma Industries, Inc.
Interalloy, Inc.
Intertool Precision Group, Inc.
JB Integrated Component Mfg.
Jett Dynamics Corp.
KAZ Machineries
KED Marketing
LMP Tooling Component System
Lumilight Electric Products, Inc.
Metro Arms Corporation
Moulding Technologies, Inc.
Regal Metallurgy Casting, Inc.
Reza Pacific International Corporation
RU Marketing
Seagull Services International, Inc.
Shooters Arms Manufacturing, Inc.
Taguchi Philippines, Inc.
Techno Molds, Inc.

GTZ Programs

Technical cooperation with the GTZ continued with seminar workshops on welding, metals testing, and quality control

Precision testing and measuring equipment donated by Germany through the GTZ | 1990

MIRDC turns 25

DOST Secretary Ceferino L. Follosco addresses MIRDC employees and guests | 1991

DOST Secretary Ricardo Gloria welcomes Indonesian State Minister of Research and Technology Bacharuddin Jusut Habibie to the MIRDC | 1994

4TH DECADE

1997-2006 On track to being world-class

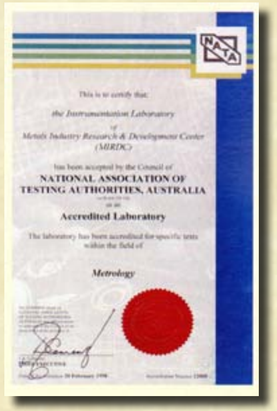
Quality took the front seat in the MIRDC's drive for continued success in its fourth decade.

The Center's pursuit of maintaining its high standards throughout its operations was instituted with its conformity to Total Quality Management (TQM). MIRDC was among the first testing and calibration laboratories in the country to be accredited in accordance with ISO/IEC Guide 25 from BPSLAS, Philippines and NATA, Australia. It shifted to high gear as it acquired its ISO 14001 Environment Management System (EMS) Certification and ISO 9001:2000 Quality Management Systems for its training services in the following two years.

In time for its 39th founding anniversary in 2005, the MIRDC gained its highest recognition for the excellence of all its operations with the ISO 9001:2000 from TÜV Product Services Asia. The certification validates the Center's steadfast commitment to its clients in delivering superior quality services and products and fulfills its mandate to bring the metals industry to world-class standards.

MIRDC QUALITY AND TESTING ACCREDITATIONS

Type of Certification	Year	Department
Bureau of Product Standards Laboratory Accreditation Scheme (BPSLAS), Philippines	1996	Analysis, Testing and Inspection Division (ATID)
National Association of Testing Authorities (NATA) - Australia	1998	Instrumentation Laboratory – international accreditation
ISO 14001 Environment Management System (EMS)	2001	MIRDC (center-wide)
ISO 9002:1994	2002	Investment Casting Unit, Metal Casting Technology Division (MCTD)
ISO 9001:2000 Quality Management Systems	2001	Industrial Training and Staff Development Section (ITSDS)
PNS ISO/IEC 17025:2000 Reaccreditation	2004	Analysis and Testing Division (ATD)
ISO 9001:2000	2005	MIRDC (center-wide)


This is to certify that:
the Instrumentation Laboratory
of
Metals Industry Research & Development Center
(MIRDC)
has been accepted by the Council of
NATIONAL ASSOCIATION OF TESTING AUTHORITIES, AUSTRALIA
as an
Accredited Laboratory
The laboratory has been accredited for specific tests within the field of
Metrology


CERTIFICATE
TÜV
The Certification Body of TÜV Management Service GmbH
certifies that
METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER
has established and applies a Quality System for
Industrial Training and Staff Development
ISO 9001 :1994


CERTIFICATE
TÜV
The Certification Body of TÜV Management Service GmbH
certifies that
Metals Industry Research & Development Center
has established and applies an Environmental Management System for
ISO 14001 :1996


ENVIRONMENTAL POLICY

The MIRDC prides itself with the certification of its Investment Casting Unit under its Precision Casting Section to ISO 9002, the first of its kind to be certified in the country. MIRDC Exec. Director Rolando T. Viloria above receives the certification of compliance from Ms. Jocelyn delos Reyes, General Manager of TÜV-Product Services Asia. Also shown are DOST Secretary Filemon A. Uriarte, Jr. and Engr. Arturo L. Corral, MIRDC's Metalcasting Technology Division Chief

Science & Technology News & Issues In . . .

MANILA BULLETIN
THE NATION'S LEADING NEWSPAPER

Page 25 Date JAN 21 2000

DOST laboratory now world-class — Aussie group

The Instrumentation Laboratory of DOST's (Department of Science and Technology) Metal Industry Research and Development Center (MIRDC) is now an internationally accredited world-class laboratory. The accreditation was given by the National Association of Testing Authorities (NATA) of Australia.

With laboratory accreditation fast becoming the global means of identifying technically-competent laboratories worldwide, the nod from the world's oldest laboratory accreditation and testing body is vital in order for test data generated from the MIRDC lab to be accepted internationally.

The accreditation, which recognizes and elevates MIRDC's ISO-accredited testing and calibration to globally-accepted standards, will benefit thousands of small and medium enterprises that avail themselves of the laboratory's services.

A big chunk of the Center's clientele comes from the metals and engineering sector. Other clients are from electrical, electronics, semiconductor, construction and trading centers.

The international accreditation insures customers that MIRDC laboratory test results generated for their products will be accepted in countries where the NATA has mutual recognition agreements.

The certificates, signed by NATA Chief Executive J. A. Guilmor, authorizes the Center to issue and endorse test results, attesting to its accuracy and correctness based on strict quality procedures being maintained by the MIRDC laboratory.

The accreditation of the laboratory in the field of metrology (forms and Mass) is also seen to boost the Center's pending accreditation application of length metrology, electrical testing, and heat and temperature measurement. (Carayo Cacile)

METALS INDUSTRY RESEARCH & DEVELOPMENT CENTER
RECEIVED
JAN 31 2000
By: J:47 PM
CENTRAL RECORDS OFFICE

Route to MST Staff
pls. take note of Sec. Uriarte's congratulatory note
* POST a copy to bulletin board
MIRDC
Dir Betty V.
Congratulations! Good work!

RMTCs contribute to the increase in productivity and skills upgrading of technicians and engineers from different regions

Seminar workshop on Shielded Metal Arc Welding
Beneficiary: Bigay Bahay Multipurpose Cooperative

Gemstone Seminar
Polytechnic State College of Antique (PSCA)

Technology transfer by RMTC

Davao Beta Spring, Inc. (Electroplating Shop)

Among the highlights of the 1997-2006 period is the tool and die technical cooperation project with the Japan International Cooperation Agency (JICA). It consisted of the upgrading of the Plastic Molding Tool Technology and the establishment of the Precision Tool and Die Center at the MIRDC which was envisioned to be the premier training ground for the tool and die industry in the country. This project took all of five years to complete, and included provisions for state-of-the-art equipment, training facility upgrade, dispatch of experts, and training packages.

JICA

PRECISION TOOL AND DIE CENTER

This project symbolizes the commitment of the Metals Industry Research and Development Center (MIRDC) and the Japan International Cooperation Agency (JICA) for the Upgrading Project for Plastic Molding Tool Technology in the Republic of the Philippines.

Inaugurated this 24th day of November, nineteen hundred and ninety eight by Dr. William G. Padolina and Mr. Hiroshi Goto.

Blessed by Rev. Fr. Ramon O. Garcia Jr., SDB.

PROJECT MANAGEMENT TEAM

Dr. ESTRELLA F. ALABASTRO	Dr. YASUHIKO KONDO
Engr. ROLANDO T. VILORIA	Mr. KAZUKI ISHIDA
Engr. EDUARDO R. LACBAY	Mr. KANAME KOJIMA
Engr. ERIC P. DUQUEZ	Mr. SHUSUKE DOI
Engr. FRED P. LIZA	Mr. MASAKI IDE

DOST Secretary Felimon D. Uriarte, Jr. visits the Center.

JICA Experts at the MIRDC

The decade would bring about a flood of innovative technologies and products of particular benefit to the agricultural and industrial sectors.

Its years of dedication to quality with TQM and constant preparation for upgrades of accreditation of its laboratories and testing centers are going to pay off for the MIRDC as it approaches its fifth decade.

Cupola 1 | 1991

Cupola 2 | 1994

Cupola 3 | 2013

5TH DECADE

2007-2016 Making R&D the bedrock of all we do

Throughout its forty years, the MIRDC had gone from strength to strength—from creating a legacy of superior manpower training to reaching the highest quality standards.

Entering its fifth decade, the Center goes back to its roots—research and development.

Industry Clustering Logo

R&D would form the underpinnings of MIRDC programs, beginning with the Equipment Manufacturing Cluster (EMC) Project whose primary aim is to enhance the capability of equipment manufacturing in the countryside to global standards. In the local government of Sanchez Mira in Cagayan for example, MIRDC-developed technologies for the coconut industry are already in use. Coco coir machinery such as the coco husk micro-decorticator, fiber twining machine, and hydraulic peat press will benefit coconut growers and their dependent families.

Decorticating Machines

In 2008 alone, the Center completed 26 R&D projects that included 12 contract researches.

Non-Cyanide Electroplating Technology

Recognizing that the mobility of people is vital in any economy and for quality of life, the MIRDC made advanced transport its flagship R&D program starting in 2010. In cooperation with the Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)-DOST, the Center embarked on the development of a prototype Automated Guideway Transit System (AGT) in 2011. Combining monorail technology with Filipino ingenuity and engineering talents, the AGT provides a low cost mass transit alternative that is environment-friendly. The project awaits commercialization after a series of successful test runs at the UP Diliman campus in 2013 and in Bicutan, Taguig City in 2015.

MakiBayan

Part of the Center's R&D efforts also hinged on its active involvement in DOST's MakiBayan or Makinarya at Teknolohiya Para sa Bayan Initiatives that further strengthens Public-Private Partnership. Together with the Philippine Die and Mold Association (PDMA), the Metalworking Industries Association of the Philippines (MIAP), the Electronics Industries Association of the Philippines, Incorporated (EIAPI), and the Engineering Research and Development for Technology (ERDT) of UP Diliman College of Engineering, the MIRDC lined up metals and engineering projects that impact on the country's economy.

In the following years, the MakiBayan partnership was extended to other industry associations which included: the Philippine Metalcasting Association, Inc. (PMAI), Philippine Welding Society (PWS), Mechatronics and Robotics Society of the Philippines (MRSP), Aerospace Industries Association of the Philippines (AIAP), Motorcycle Development Program Participants Association (MDPPA), Motor Vehicle Parts Manufacturers Association of the Philippines (MVPMAP), and Original Equipment Manufacturers Association of the Philippines (OEMAP).

Under the MakiBayan initiative, the MIRDC developed a centrally-powered Hybrid Electric Road Train capable of carrying 260 passengers at one time. The diesel-electric hybrid five-coach road train is the Center's answer to the worsening traffic condition and carbon emissions in Metro Manila and other highly urbanized cities. After a year of performance testing, the first set of coaches is already shuttling personnel around the Clark Freeport Zone in Pampanga.

The Hybrid Electric Road Train,developed under the MakiBayan initiative, is now in use at the Clark Freeport Zone showcases the MIRDC's strengthened R&D capabilities.

Part of the MakiBayan initiative is the Machine Building Program. Collaboration of the MIRDC and the private sector led to the development of equipment for high precision machining of acrylics and metals.

CNC Router Machine

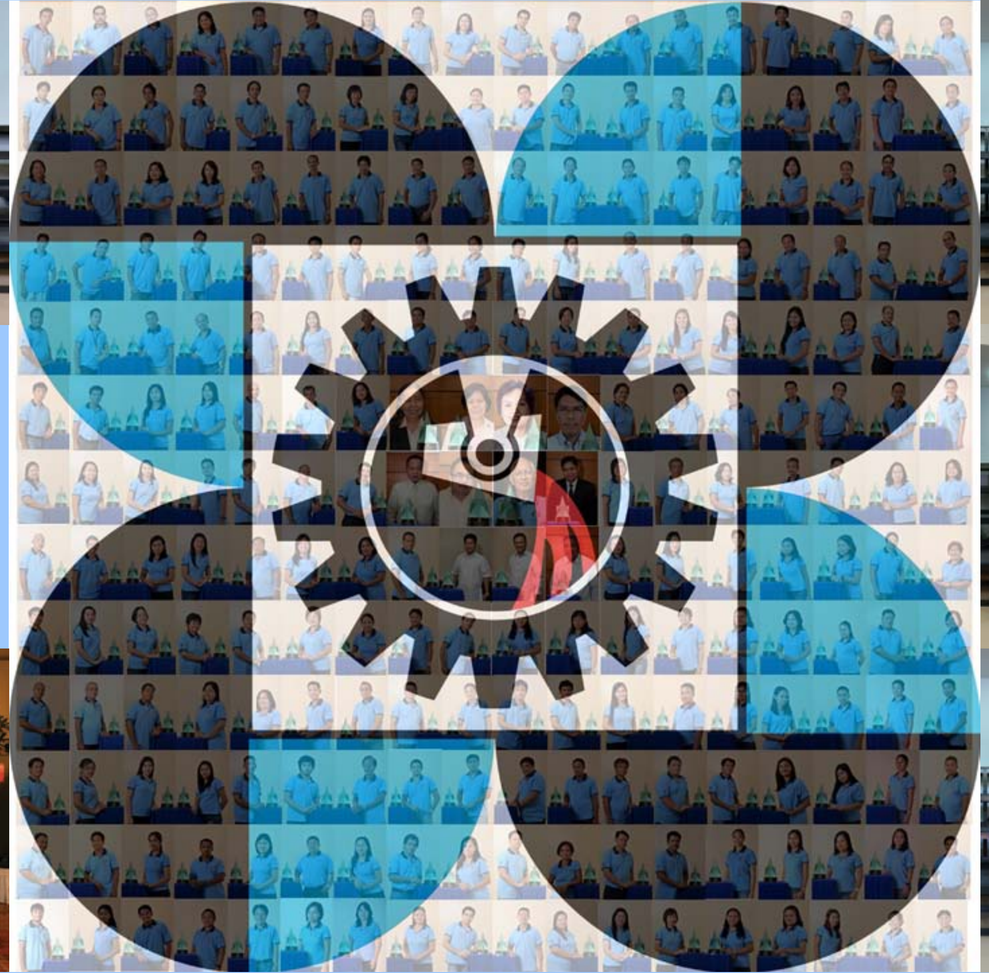
CNC Plasma Cutter Machine

R&D was making it a landmark decade for the MIRDC. Cutting-edge researches, new technologies, and breakthrough products were pushing the Center closer to its vision of becoming an internationally recognized center of excellence in science, technology and innovation.

In 2012, the Center would reach the ultimate distinction by receiving the Philippine Quality Award. Presented by Philippine President Benigno S. Aquino III to DOST Secretary Mario G. Montejo and MIRDC Executive Director, Engr. Arthur Lucas D. Cruz, the PQA is the highest level of national recognition for quality and performance excellence. It is equivalent to the prestigious Malcolm Baldrige National Quality Award in the US which has been given to manufacturing giants such as Boeing Aerospace Support, IBM Rochester, and Texas Instruments.

The Philippine Quality Award is a template for competitiveness based on the principle of Total Quality Management

PHILIPPINE QUALITY AWARD
QUEST FOR EXCELLENCE



MIRDC LEADERSHIP

The MIRDC was steered into the 21st century and the information era by seven Executive Directors, all highly trained and technically competent engineers. Their innovative thinking, understanding of the complex challenges and opportunities in the metals and allied industries, and desire to enhance the metalworking industry as an integral part of the nation's progress have shaped the way the Center has adapted with the times.

Meet our leaders:

Dr. Antonio V. Arizabal, Jr.

1966-1981

"Between goals and achievement lies a lot of hard work, tempered by dedication and placed within easy reach by cooperative efforts."

Early on in his career as a metallurgical engineer, Dr. Antonio A. Arizabal was already considered a government expert on iron and steel, and as such became one of the principal government negotiators in multimillion peso projects. Acknowledged as the founder and first Executive Director of the MIRDC, Dr. Arizabal served for more than two decades in public service, culminating in his appointment as DOST Secretary. He carried on his steadfast commitment to the field of metals and engineering by heading the National Steel Corporation and serving as consultant to different institutions in the industry.

Engr. Jose Miguel G. Paez

1981-1986

"Convert analysis and study to manual work."

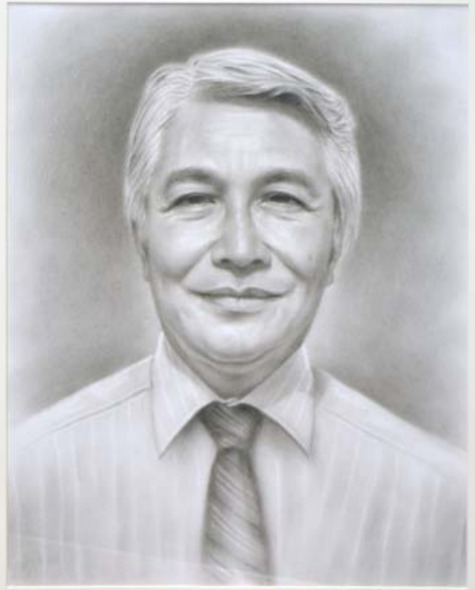
Here was a driven engineer whose academic background and career were a cut above the rest. Armed with a BA and a BS in Chemical Engineering, Engr. Jose Paez pursued a Master in Metallurgical Engineering at America's oldest technical research institute, the Rensselaer, which earned for him a place in the national honorary research society, Sigma Xi. Upon his return to the Philippines, he blazed the trail in metal fabrication and die casting. He introduced the first industrialized induction heating equipment and set up die casting facilities. Not content with studying and observing die casting processes in the US and Europe, Engr. Paez shed his engineer's clothes to work in the die casting foundry as a blue collar worker. It was the consummate example of his passion, dedication, and hard work.

Engr. Constante V. Ventura

1986-1989

"There should be a continuing dialogue between the government and the private sector."

After earning B.S. degrees in Mechanical Engineering and Meteorology in the US, Engr. Constante V. Ventura got training in oil refinery design in the Netherlands. After a short stint in Caltex Philippines and completion of an MBA, he found his true calling in commercial and industrial appliance manufacturing. He rose to become the top manufacturing executive in two of the country's biggest appliance manufacturing companies, and then became president of Koppel, Inc., well-known for its central air conditioning systems. Engr. Ventura believes that new industries often encounter insufficient technology and training, and the best ways to address these are to learn from both experience and failure and to seek the assistance of specialists.



Dr. Leopoldo V. Abis

1989-1992

"Sustaining the achievements of the Center are culturally ingrained values such as discipline, integrity and diligence."

Dr. Abis is a product of the University of the Philippines, graduating with BS degrees in Mechanical Engineering and Electrical Engineering. He took his Master of Science in Mechanical Engineering at Kansas State University and was a recipient of a Ford Foundation Fellowship for his doctorate in the same institution. Prior to his appointment as MIRDC head, Dr. Abis was a professor and Associate Dean of the UP College of Engineering and Executive Director of the National Engineering Center.

Engr. Rolando T. Viloria

1993-2009

"The great thing in life is not so much where we stand as in what direction we are moving."

Upgrading the skills and training of skilled workers has long been Engr. Viloria's purpose in life. He believes that training is essential for people who desire to get ahead. A licensed mechanical engineer from the University of Sto. Tomas, Engr. Viloria underwent advanced training in tool and die making in West Germany and tool engineering and production in Japan and Korea. As head of the technical and training operations of the MIRDC for many years, he maintained the high standards of the Center's training courses in tool and die making, machine shop practice, heat treatment, and metrology and inspection among others. His rise to the top position in the MIRDC rests on his experience and dedication to teach and motivate individuals for success.

Engr. Arthur Lucas D. Cruz

2009-2012

"There is no such thing as a big job or small job. When done with dedication and concern, all work is important and helps in creating a more lasting and significant impact to the industry that it is mandated to serve."

One can say that Engr. Cruz knows the MIRDC from inside and out as he had been with the Center for more than 3 decades, steadily rising from the ranks as Methods Engineer to Division Chief and Deputy Executive Director for Research and Operations. His many years of experience in MIRDC operations, coupled with many local and international trainings, gave him the best perspective in meeting the challenges in delivering services to the metals industry at the right time. It was during his term as Executive Director that the MIRDC was recognized by the Philippine Quality Awards, the country's counterpart to the prestigious Baldrige Award in the US.

Engr. Robert O. Dizon

2013-present

"A research output becomes more meaningful when it is utilized so that its purpose and functionality is translated to tangible things."

Solving engineering and manufacturing problems has been Engr. Bob Dizon's job since starting his career at the DOST's Advanced Science and Technology Institute as a research specialist. His forays into the private sector as R&D manager and electrical engineering consultant turned huge rewards with his contributions in many successful design and installation projects. His vision of developing and promoting Filipino engineering designs led him to re-join the government as DOST Assistant Secretary. Here he supervised the Information Technology Division and Project Management and Engineering Design Services Office. His youthful energy and dynamic leadership serve him well in pursuing the course that he has set for the MIRDC beyond its 50th year.

A replica of the cup sculpted by National Artist for Sculpture and the Arts Napoleon Abueva in 1975 on the inauguration of the MIRDC's foundry workshop.

The embossed design of workers pouring molten metal from a ladle depicts the very essence of the foundry, one of the major facilities of the Center. In creating this replica, different technologies were used such as investment casting with brass patina and the environment-friendly non-cyanide gold electroplating solution.

Honoring the Men and Women in Metals and Engineering

As part of the celebration of M&E Week, the MIRDC pays tribute to Filipino individuals who push the boundaries of technology and lead people with their passion for science. They are the game changers for the metals and engineering industries.

The Legacy Cup is the highest honor that the MIRDC confers to a chosen few whose outstanding success and achievements in their business or profession impact on present and future generations of metals engineers. From entrepreneurs to college lecturers, engineers to government leaders, the awardees have shown an extraordinary commitment to research and development in the metalworking industry and to the country's efforts towards modernization.

THE LEGACY TROPHY AWARDEES

Dr. Estrella F. Alabastro

Dr. Estrella F. Alabastro made history as the first woman to be appointed Secretary of the Department of Science and Technology, a role she fulfilled for almost a decade. There she advocated networking to move up research and development in science and technology and human resource competence to world standards. Before her stint as DOST Secretary, Dr. Alabastro had served at the Department for ten years, serving as Officer-in-Charge of the Philippine Council for Advanced Science and Technology Research and as Executive Director of the Philippine Council for Industry and Energy Research and Development. Her academic background is stellar—she obtained her BS in Chemical Engineering with honors from the University of the Philippines and is a registered chemical engineer. She holds Masters and Doctorate degrees in the same course from Rice University in Houston, Texas. At UP, she was Dean of the College of Home Economics and Chairman of the Department of Food Science and Nutrition, and is currently Professorial Lecturer at the College of Home Economics and the Technology Management Center.

Dr. Antonio V. Arizabal, Jr.

An academic pedigree that included a masters and doctorate in metallurgical engineering from the Carnegie Institute of Technology fully prepared Dr. Arizabal for his various stints as research metallurgical engineer, government expert on iron and steel, professor, and author. He drafted the bill creating the Metals Industry Development Center, forerunner of the MIRDC, and spearheaded its passage in Philippine Congress. He became the institute's first Executive Director. Dr. Arizabal went on to serve as the first Executive Director of the Philippine Council for Industry and Energy Research and Development (PCIERD) and then Secretary of the Department of Science and Technology. His significant contributions to iron and steel engineering and to the metals industry earned him a place in DOST's "50 Great Men and Women of Science" in 2008.

Dr. Ceferino L. Follosco

The passion to be nothing but the best was honed by an impressive educational background. With three engineering degrees, a master of management, and two doctorates, Dr. Ceferino L. Follosco or CLF as he is fondly called, was poised for success. What started out as a machinery and engineering business bloomed into a multifarious agricultural, manufacturing, trading, construction, and financial conglomerate. He received an ASEAN Engineering Award and was soon regarded as the one of the best agricultural mechanization experts in Asia. Such talents did not go unnoticed by the government for long. He was given an Undersecretary position in the Department of Trade and later, Secretary of the Department of Science and Technology. His Science and Technology Master Plan aimed to modernize the country's production sector through S&T parks, upgrading of R&D activities, and technology business incubators.

Raul M. Consunji

Mr. Consunji may have well added master's degrees in hard work and persistence to his BS in Electrical Engineering and MBA. His impressive accomplishments as a manager or consultant across different metals and engineering firms and allied industries in the United States and in the country were only an impetus for him to join the academe. He was a lecturer in engineering subjects and a professor in undergraduate and graduate programs in business administration in the De La Salle University; a professional lecturer in the Production Management graduate program of the MBA at the University of the Philippines; and later, Dean of the College of Engineering at the Pamantasan ng Lungsod ng Maynila. Among the metals and engineering associations he helped found or chaired were the American Society of Tool and Manufacturing Engineers, the Philippine Foundry Society, and Metalworking Industries Association of the Philippines.

John Hermes D. Bautista

A first place finish in the Professional Electrical Engineers Board Exam was the springboard for Hermes Bautista's fruitful career as a foundry engineer. At around the same time that he passed his board exam, Hermes introduced the centrifugal casting method of producing soil pipes in his company. As a young professional, he was already being touted as the "best foundryman in the Philippines." Hermes knew early on that there were always new skills to learn and techniques for him to adopt. He enrolled in special courses and observed foundry trends in the U.S., Japan, Australia, and Switzerland. Through his initiative, the shell molding process was introduced in the country. In another company, he helped introduce the sodium silicate process of core and mold-making. He dedicated most of his life in improving the metalcasting industry--through the academe where he helped establish the Graduate School of Engineering at the Pamantasan ng Lungsod ng Maynila and with his role in the organization of the Philippine Foundrymen's Society, now known as the Philippine Metalcasting Association, Inc.

Engr. Rolando A. Jaurigue

If there were a Filipino man of steel, it would be Engr. Rolando A. Jaurige. Trained as a chemical engineer, he sought post-graduate degrees in economics, business administration, and management. His almost two decades in Armco USA not only gave him the technical knowledge in steel making and manufacturing, but also instilled in him the passion for improving the management of the iron and steel industry and the role it plays in nation-building. As president of the Philippine Iron and Steel Institute, he became a member of the Presidential Advisory Committee on the iron and steel industry. He helped in the crafting of the Iron and Steel Act which incentivized the development of the country's steel industry. Engr. Jaurige was president of the Philippine Steelmakers Association at one time, a lifetime member of the Philippine Metalcasting Association, Inc., a founding officer of the Forging Industry Association of the Philippines, Inc., past chair of the Metals and Engineering Industry Board, and a member of the MIRDC's Governing Council for 12 years. He ably represented the local steel manufacturing sector in the South East Asia Iron and Steel Institute which he chaired for two years and was also Vice President of the ASEAN Iron and Steel Federation.

Sec. Mario G. Montejo

Engr. Mario G. Montejo's pursuit of science is rooted in innovation and invention. He is credited with the design of the first GSM-based sensor that measures rainfall to detect depth of floods; the first Filipino-made equipment for making gabion which is used to protect slopes; the first robotic carpark; and locally-fabricated equipment for making water well screens. The Filipino Inventors Society's Gold Medal for Creative Research, UP Alumni Association Distinguished Alumni in Science and Technology, and 100 Outstanding Alumni Engineers of the Century are just a few of his many recognitions. A successful technopreneur, Engr. Montejo put to good use his years of experience in the private sector when he assumed the position of Secretary of the Department of Science and Technology. He believed in Filipino ingenuity and the use of science and technology as a sound business model. "Local technology works" became the rallying cry of the DOST as it focused its programs on the development of appropriate technologies for countryside growth, improvement of industry competitiveness, and enhancing capacity in emerging technologies. As science secretary, Engr. Montejo spearheaded the Automated Guideway Transit (AGT) project—an electric, driverless, fully automated elevated train system designed by Filipino scientists; and the effectively cascaded Nationwide Operational Assessment of Hazards, or Project Noah; and the mosquito ovicidal/larvicidal trap for the government's anti-dengue campaign.

ROADMAP TO EXCELLENCE

At MIRDC, we believe in the power that metals and engineering have to drive economic prosperity and improve the quality of life. That's why we work hard to keep in step with the trends and changes in the world's metals industries and to be a capable partner to our local M&E industry.

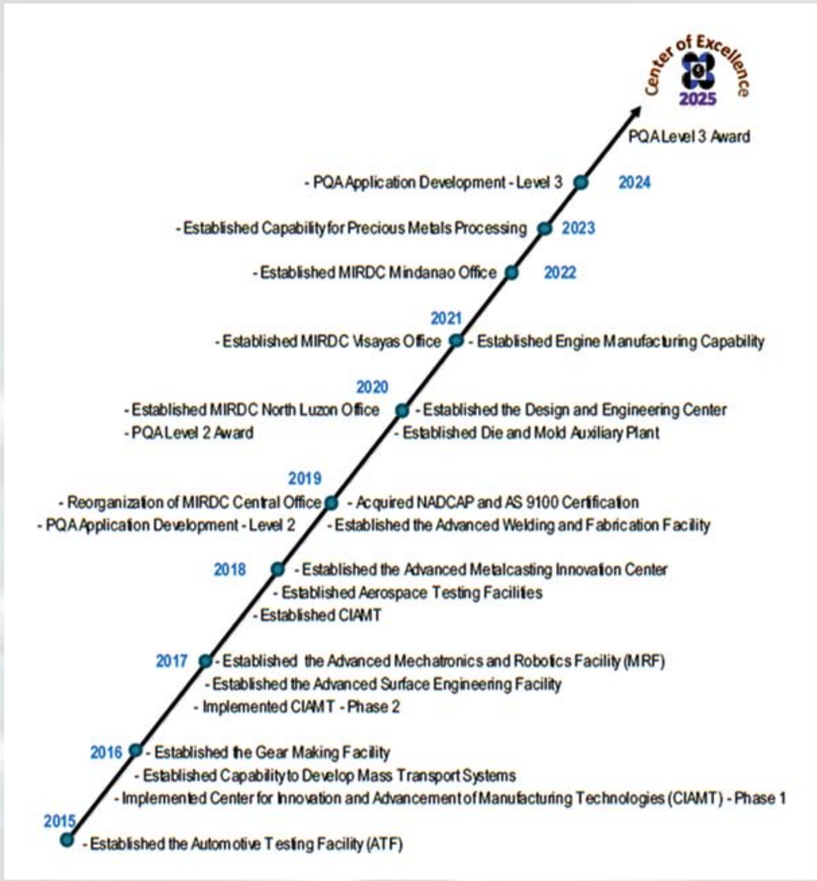
In FY 2014, the Center's senior executives came together with the Planning and Management Division to revisit our processes, our capabilities, and our culture. These strategic planning sessions aimed to plot the course of MIRDC's future—and the result is the MIRDC Strategic Plan for 2015-2025.

Based on the insights gathered in our assessment and strategic planning, the MIRDC currently sets it sights on five strategic objectives or guideposts we call FIRST:

1. Focus on Customers
2. Industry Competitiveness
3. Responsive to National Priorities
4. Service Improvement
5. Technological Self-Reliance

Following FIRST drives the MIRDC to its final destination—To be a Center of excellence in science, technology and innovation for a globally-competitive metals, engineering and allied industries by 2025.

To make our vision actionable, we determined not only what work we have to do, but also how to do it. The core values that reflect our work philosophy and our culture are embodied in our PRIDE—five principles that each individual in the MIRDC organization pursues to stay on the right path.



VISION

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

MISSION

We are committed 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 and technicians; information exchange; quality control and testing; research and development; technology transfer; and business economics and advisory services.

COREVALUES

Professionalism
- We adhere to the highest ethical standards of performance.
- We value our work and are committed to perform to the best of our ability.

Responsiveness
- We spearhead implementation of projects that address the needs of the metals and engineering industry.
- We find solutions to real-life problems through science, technology and innovation.

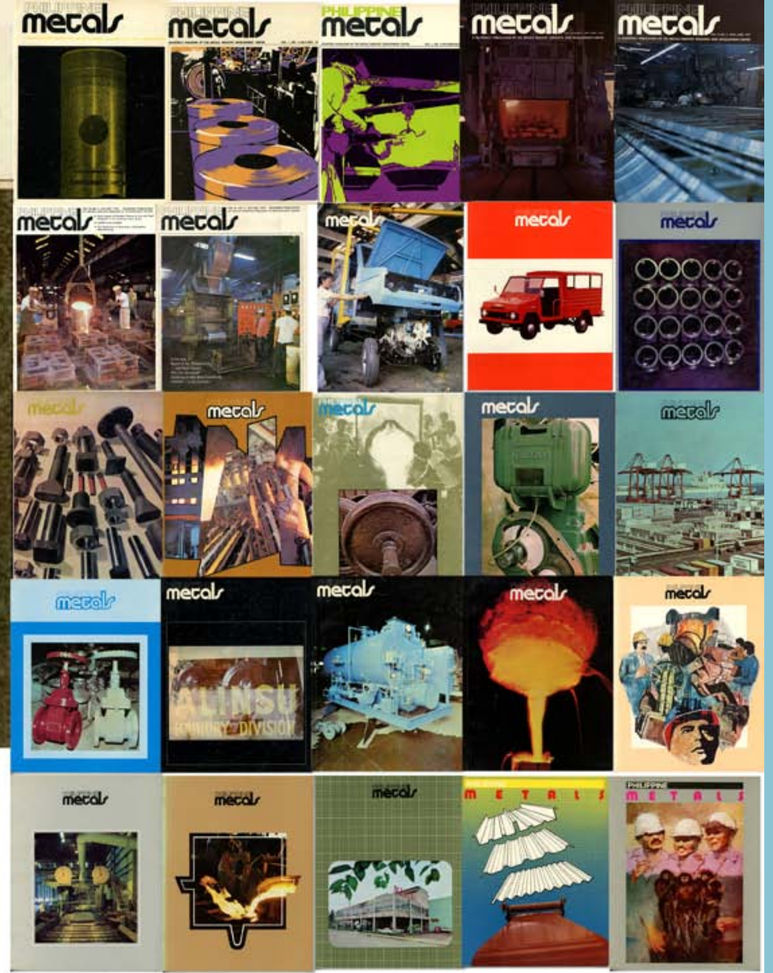
Integrity
- We act responsibly, work honestly, and encourage transparency.

Dynamism
- We perform our jobs with vigor and enthusiasm.
- We welcome change as an opportunity for growth and continual improvement.

Excellence
- We adhere to world-class performance and continuous improvement in all we do.
- We always do our best in every task/endeavour.

With the newly envisioned capabilities of the Center, a reorganization and creation of extension offices are in the offing. The push toward the future has definitely begun.

Publication of Philippine Metals
January 1971 - 1982



Revival Publication in 2014

Romeo Bermudez

Anniversary shirts convey the employees' pride in the Center's milestone achievements.

Different designs commemorate MIRDC's years of service to its industry partners.

Governing Council

Mario G. Montejo
Secretary, DOST

Robert O. Dizon
Executive Director, MIRDC

Jimmy T. Chan
Metals Industry Sector

Alberto M. Albano
Engineering Industry Sector

Gerardo P. Maglalang
(For Ann Claire C. Cabochan)
Bureau of Product Standard

Teodoro S. Solsoloy
Department of Agriculture

Marcelo B. Villanueva
Allied Industry Sector

Brenda R. Mendoza
National Economic & Development Authority

Corazon H. Dichosa
Board of Investment

Juancho Pablo S. Calvez
(For Leo L. Jasareno)
Department of Environment and Natural Resources

Management Staff

Agustin M. Fudolig
Deputy Executive Director
for Technical Services

Robert O. Dizon
Executive Director, MIRDC

Jonathan Q. Puerto
Deputy Executive Director
Research & Development

Rio S. Pagtalunan
Chief, Analysis & Testing Division

Rodnel O. Tamayo
Chief, Materials & Process Research Division

Danilo N. Pilar
Chief, Technology Diffusion Division

Fred P. Liza
Chief, Prototyping Division

Trixie Hazel C. Veluz
Attorney IV

Aurea T. Motas
Chief, Finance and Administrative Division

Mercedita G. Abutal
Chief, Planning & Management Division

FORGING A GOLDEN REPUTATION

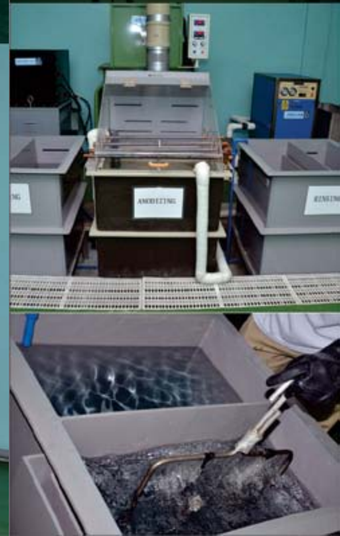
Five decades is a not a substantial history for a government agency given the huge task of buttressing a pillar of the country's modernization efforts. Five decades is not even a drop in the ocean when it comes to training generations of engineers and technicians. But in five decades, the MIRDC did a herculean job in boosting the activities in the metals and engineering industry. The Center established a tradition of reputable technical manpower training; built a roster of unparalleled quality control and testing services; and provided R&D and innovative technologies to the equipment manufacturing, metalworking, agro-industrial, food processing, transportation, and community livelihood sectors.

It is a golden reputation that we forged as a partner of the metals industry in expanding the skills of its blue collar workers, testing its products under the most stringent quality standards, and sharing our state-of-the-art facilities and technical know how through our business incubation programs. To this day, we undergo continuous numerous quality audits and surveillances of operations so that the technical services we provide reflect on the quality of products that our clients manufacture. We were an ISO 9001 certified agency since 2005. In recognition of this and other achievements, we garnered the nation's highest quality honors, the Philippine Quality Award. Yet we aspire for beyond the highest of the highs—PQA Levels 2 and 3. This ultimately cements our place as a Center of Excellence in science, technology, and innovation.

Developing the country's scientific and technological capabilities is the enormous challenge confronting the MIRDC. The Center meets this head on. Armed with the 2015-2025 Strategic Plan incorporating an engineering roadmap and programs blueprint, the MIRDC is braced to deliver on its mission—to provide both the government and the private sector with professional and technical expertise in vital metalworking activities.


Die & Mold Solution Center
RHINO
LCV 850


Surface Engineering Facilities



OUR CONTINUED COMMITMENT

Professionalism and responsiveness have always been an important part of the culture at the MIRDC. And with the Center-wide focus on our PRIDE system of core values that includes integrity, dedication, and excellence, the foundation is firmly set for the right environment to nurture ideas and innovations.

The hundreds of men and women who have worked in our laboratories, testing centers, casting facilities, and offices through the years have contributed to the legacy of excellence that we continue to create. All of them have played a role in this, our golden age—an era of achievements that we have notched from decade to decade covering training, quality control and testing services, technology transfer, and business advisory services.

As we collectively turn the page on another year, all of us at the Metals Industry Research and Development Center thank you for sharing this journey with us and look forward to exploring more opportunities to add to the conveniences of daily living through the metals and engineering industry.

ACKNOWLEDGMENT

Just like the 50 years of the Metals Industry Research and Development Center and its partnership with the metals, engineering and allied industries, the Coffee Table Book (CTB) went through a rich, sentiment-filled path. Its making was a colorful journey in itself.

To the officials and employees who were involved in some stages of the making of the CTB – whether during the early conceptualization, or the research stage and material gathering, or the final stage of assembly – the MIRDC Management is thankful to you.

The Center's utmost gratitude goes especially to the people who readily devoted time, poured in effort, and worked beyond office hours for this very special project. They were there from beginning to end. They are the team of determined and hardworking individuals who, amid office pressure and chaos, had the cool and composure to remain tougher than tough.

Dr. Agustin M. Fudolig, Adviser of the Editorial Staff, Technical Editor, and Chair of the 2016 M&E Week/Anniversary Committee;

Dr. Danilo N. Pilar, Editor-in-Chief;

Ms. Lina B. Afable, Managing Editor, Advertising Manager and Chair of the Publications Committee;

Mr. Ronald L. Agustin, Art and Graphics Director, creative consultant;

Ms. Ma. Rodessa Grace A. Mercado, researcher, Arts and Graphics Assistant Director, creative consultant;

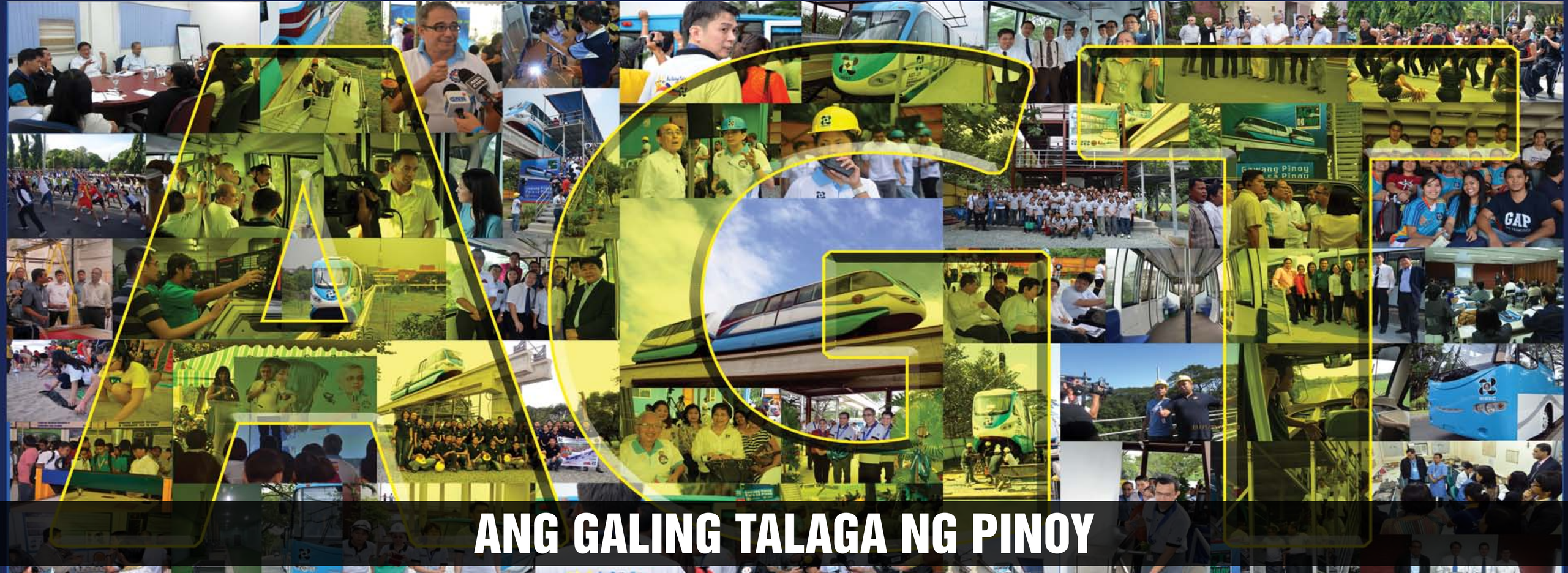
Mr. Reynaldo M. Loreto, logistic support; and

Ms. Carolyn A. Ramos, external consultant and writer.

Kudos to all who helped make the CTB a success. We are proud of the Coffee Table Book, but we are even more proud to have the best and most dependable people. You are remarkable. The MIRDC is truly grateful to all of you.

Cheers!


MIRDC Family '09


ANG GALING TALAGA NG PINOY


DOST

Editorial Team

Editor-in-Chief	Danilo N. Pilar
Technical Editor	Agustin M. Fudolig
Managing Editor	Lina B. Afable
Associate Editor	Zalda R. Gayahan
Editorial Assistants	Marlyn U. Ramones
	Ma. Rodessa Grace A. Mercado
	Vilma A. Sia
	Teresita C. Villoso
	Reynaldo M. Loreto, Jr.
Art Director/Graphics	Ronaldo L. Agustin
Editorial Consultant	Carolyn A. Ramos

Published by Metals Industry Research and Development Center

All papers used by Dolmar Press, Inc. are natural, recyclable products made from wood grown in well-managed forests. The manufacturing processes conform to the environmental regulations of the Philippines.

First Philippine Edition 2016

Printed by Dolmar Press, Inc.