

MIRDC: Philippine Quality Award Recipient



MIRDC'S SHINING MOMENT Executive Director Engr. Arthur Lucas D. Cruz (center) holds the PQA trophy as MIRDC receives the Recognition for Commitment to Quality Management conferred by President Benigno S. Aquino III and representatives from the DTI, DAP, PSQ, and the PQA Foundation, Inc. MIRDC Top Management, members of the BEST Team, and the PQA Project staff who joined the occasion with DOST Secretary Mario G. Montejo are: (standing at the back, from left) Dr. Rio S. Pagtalunan, Engr. Francisco C. Dime, Dr. Agustin M. Fudolig, Engr. Florante A. Catalan, Engr. Fred P. Liza, Ms. Linda G. Rivera, Ms. Rosario D. Sancon, Ms. Aurea T. Motas, Ms. Maria Gracia M. Peralta, Ms. Jelly N. Ortiz, Ms. Carmen G. Quiambao, Ms. Marian C. Gelera, Ms. Daisy B. Gavina, Engr. Jonathan Q. Puerto, and Mr. Jonas Richmond C. Jabson. (Standing in front, from the right) Dr. Danilo N. Pilar, Ms. Madenn S. Segarra and Ms. Mercedita G. Abutal. (Extreme left, front row) Engr. Florentino J. Lafuente.

The Metals Industry Research and Development Center (MIRDC), an attached agency of the Department of Science and Technology (DOST), takes pride in the newest addition to its accomplishments. The MIRDC, represented by the Top Management led by Executive Director Arthur Lucas D. Cruz together with the MIRDC Business Excellence and Service Transformation (BEST) Team headed by PQA Project Leader Engr. Fred P. Liza, was invited to the Malacañan Palace for the 14th Philippine Quality Award (PQA) Conferment Ceremonies. The event was held at the Rizal Hall, with the presentation of trophies led by no less than His Excellency President Benigno S. Aquino III.

As the only government agency directed to give support and assistance to the metals and engineering industry, the MIRDC does not only remain faithful to its mandate, but also pursues organizational excellence to better serve the M&E industries and the

whole country as well. This pursuit led the Center to become one of the implementing agencies of the project entitled "Organizational Transformation of DOST Agencies

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Arthur Lucas D. Cruz, CESO IV
Executive Director



The coming of a new year brings in renewed hopes and more positive outlooks for the country. This holds true for us at the Metals Industry Research and Development Center as we herald in the year 2012 with anticipation and excitement.

The Center began 2012 with the whole MIRDC family beaming with pride. The Center's efforts and hard work have paid off for we successfully garnered the Philippine Quality Award Level 1- Commitment to Quality Management. Being the highest level of national recognition for exemplary organizational performance, the President of the Philippines himself is the patron of the PQA. In line with Pres. Aquino's goal of a progressive nation, we will take into heart the meaning of this newest accomplishment: to be able to provide public service that will enhance the global competitiveness of the M&E industries and to foster a business environment that is viable for everyone. This recognition will serve as a motivation for us to better our craft, level up performance from best to excellent, and be an instrument to open more room for growth and opportunities that will lead to a lasting and significant impact to the industry that the Center is mandated to serve.

The MIRDC is in solid support of the programs of the Department of Science and Technology with the DOST Secretary Mario G. Montejo's vision of making use of local science and technology in addressing the country's pressing problems. With the recent launching of the DOST's "MakiBayan: Makinarya at Teknolohiya Para Sa Bayan Program" and the signing of the Memorandum of Understanding with three major industry associations, the MIRDC continues to strengthen partnership with the private sector and remains committed in pushing for progress while giving appropriate responses to national concerns. Major significant projects are lined-up under the MakiBayan Program, all of which are designed to improve the Filipino people's socio-economic conditions.

With the advent of these new developments for the DOST and the MIRDC, the Center continues to engage

in various activities that have started to create significant impact to the local M&E industries. The development of the Equipment Manufacturing Cluster in Region 2 is an on-going undertaking. The CREAMM Program was likewise introduced to the local M&E industries of the CAR in order to prioritize their capability requirements. The establishment of the first industry cluster in CAR, the Cordillera Aerospace and Manufacturing Technology Corporation (CAIMTEC), came with the vision of providing PEZA locators their industrial, aerospace, and other high technology requirements. Another cluster that will specialize on the fabrication of equipment for agricultural products processing is being planned for the CAR. The Center's clustering initiatives, including the conduct of training programs and consultancy services, are meant to create linkage among shops involved in manufacturing so that they are able to reach success in an optimum business environment. In doing so, the Center is able to promote development in the countryside. The MIRDC-Technology Business Incubation (TBI) Program continues to be instrumental in uplifting the MSMEs. The TBI beneficiaries are nurtured and assisted by the Center until they reach stability to make it in on their own. Through the TBI, the success of individual firms will ultimately lead to a more vibrant M&E industries that will give a bigger contribution to nation-building.

As we prepare for bigger challenges ahead, the MIRDC remains focused on the reason for its being: quality public service. We started 2012 right; we began with promising activities. We will continue to be of great contribution to the country as it gears up for global competition. We will be with our industry partners and stakeholders every step of the way.

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Toward Performance Excellence.” The project aims to expand the adoption of quality management systems and provide mechanisms for the alignment and integration of various approaches and systems that are already in place at the DOST agencies by following the framework of the Philippine Quality Award.

The PQA, equivalent to the very prestigious Malcolm Baldrige National Quality Award in the US, is a template for competitiveness based on the principle of Total Quality Management. It is an award for a quality management system which depends on continuous improvement

in the delivery of products and/or services. Companies and institutions, both in the public or private sector, aspire for the PQA since it is the highest level of national recognition for exemplary organizational performance.

After successfully going through the PQA application and having been recognized as an institution committed to Quality Management, the Center now pursues its mandate with renewed commitment and a stronger desire to serve.

The DOST-Region IX was likewise given Recognition for Commitment to Quality Management. Assisting the President during the

ceremonies were Department of Trade and Industry (DTI) Secretary Gregory L. Domingo; DTI-Industry Development and Trade Policy Group Usec. Adrian S. Cristobal Jr.; Development Academy of the Philippines (DAP) President, and PQA Award Administrator for the Public Sector, Mr. Antonio D. Kalaw Jr.; Phil. Society for Quality, Inc. President, and PQA Award Administrator for the Private Sector, Ms. France Marie G. Padiz; PQA Board of Judges Chair, Ms. Corazon Alma De Leon; and PQA Foundation, Inc. President, Mr. Angelito M. Sarmiento.

DOST's MakiBayan Program Further Strengthens Public-Private Partnership

The Department of Science and Technology (DOST), under the stewardship of Secretary Mario G. Montejo, has recently launched a program entitled “MakiBayan: Makinarya at Teknolohiya Para Sa Bayan.” In line with this, the DOST forged a Memorandum of Understanding with three major associations in the metals and engineering industries: the Philippine Die and Mold Association, Inc. (PDMA), the Metalworking Industries Association of the Philippines, Inc. (MIAP), and the Electronics Industries Association of the Philippines, Inc. (EIAPI). Also giving support to this understanding is the Engineering Research and Development for Technology (ERDT) of UP Diliman College of Engineering.

Since the agreement is between the DOST and the M&E industry associations, the Metals Industry Research and Development Center will play an important role in this endeavour. Mandated to provide assistance and support to the M&E industries, the MIRDC has lined-up projects involving various sectors that will impact on the country's economy. MIRDC's current and future projects in support of the MakiBayan Program are those designed to address traffic and pollution problems, enhance machine-building capability and promote robotics, perform tasks relevant to disaster mitigation, and



(From left): Mr. Victor B. Gruet, Mr. Virgilio F. Lanzuela, Sec. Mario G. Montejo, Mr. Luis Antonio T. Fuster, and Dr. Aura C. Matias during the signing of the Memorandum of Understanding.

innovative surface engineering processes. The highly-anticipated success of all these projects is hinged on a strong and strategic collaboration between the public and private sectors.

The partnership of the government, through the DOST, with the private sector was made official last 16 April 2012 with the signing of the Memorandum of Understanding between the DOST and Mr. Virgilio F. Lanzuela – National President of the

MIAP, Mr. Luis Antonio T. Fuster - President of the PDMA, and Mr. Victor B. Gruet - Vice President of the EIAPI. The event was held in Bella Ibarra in Quezon Avenue, Quezon City. Prominent individuals and organizations in the M&E industry, representatives from the media, and members of the academe were present during the event.

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MIRDC Conducts Deployment of its Activities

For the past several years, the MIRDC management had been consistently undertaking its initiative to deploy its accomplishments and plans & programs for the Center's officials and employees.

The 2011 MIRDC Accomplishment together with the Plans and Programs for the Year 2012 of each Division was presented by their respective Division heads or representatives last February 10, 2012 at the MIRDC Auditorium. It was attended by officials and employees of the Center. The high number of attendance demonstrates the employees' strong support to the management's call to update employees of the Center's activities.

The program was started by an opening prayer and the singing of National Anthem and MIRDC Hymn. Executive Director Arthur Lucas D. Cruz gave an opening message wherein he acknowledged the

presence of all employees and encouraged everyone to perform better and put more dedication to their work this year 2012. The following is the order of presentation: The two divisions under the Directorate for Technical Services- Analysis & Testing Division (ATD) under Dr. Rio S. Pagtalunan and Technology Diffusion Division (TDD) under Dr. Danilo N. Pilar - presented first. Subsequently, under the Directorate for Research & Development, Engr. Florentino J. Lafuente represented the Materials & Process Research Division (MPRD) followed by Engr. Fred P. Liza of the Prototyping Division (PD). A separate presentation for each Section of the Finance and Administrative Division (FAD) was handled by Ms. Blesilda Cabaña (Financial Management Group), Ms. Lolita A. Mangampat (General Services), and Ms. Jelly N. Ortiz (Administrative Services).

Finally, the Planning and Management Division (PMD) headed by Ms. Mercedita G. Abutal presented its Accomplishments and Target Activities for 2012. The presentation was concluded by a brief message of Dr. Agustin M. Fudolig, Deputy Executive Director for Technical Services.

Another highlight of the program is the opportunity given to all employees by the management to bring out any issue concerning their work and other work-related activities. The concerned management staff committed to give an appropriate action corresponding to the employees' concerns.

The program ended with a closing message from Engr. Jonathan Q. Puerto, Officer-in-Charge of the Directorate for Research and Development.

MIRDC Continuously Improves Equipment Manufacturing Cluster (EMC) Projects in Region II

In the course of several projects and activities, the Center is continuously extending numerous technical assistance and consultancy advice to the metalworking firms. The objective is to help the M & E industries adapt to global economy by optimizing comparative and competitive advantages, gaining broader specialization, establishing strong business partnerships, and focusing on R & D and innovation to improve global competitiveness.

In this pursuit, the Metals Industry Research and Development Center (MIRDC) is committed to develop EMC-II (Equipment Manufacturing Cluster in Region II) projects in Region II. The said projects are in line with the National Science Technology Plan 2002-2020 in developing the M & E industries through clustering. Essential to the successful implementation of the said project are the Center's plans and objectives, namely: 1) to provide at

least one rebuilt equipment; 2) to finalize technology transfer agreement between EMC-II and MIRDC on various coco-coir equipment; and 3) to schedule trainings for the FY 2012. The training programs identified in Echague, Isabela are as follows: Electroplating process (June 5-7, 2012); TIG/MIG-MAG Welding (August 29-31, 2012); and Heat Treatment of Steels (September 19-21, 2012). The cluster also holds a monthly meeting in order to inform members about project developments. In December 2011, the Metalworking Industries Association of the Philippines (MIAP) initiated a meeting with the cluster to discuss the support, assistance, and other benefits that the MIAP is extending to each cluster member. It was participated in by the cluster members and bonafide members of the association. Subsequently, the EMC-II cluster conducted the election of officers during the MIAP organized meeting

with the following as the new set of officers: Mr. Epigmio "Amang" Roxas, Jr, owner of Atin Marketing and Metal Craft in Region II was voted as Cluster President; Mr. Rolly Tupas as Vice President; Mr. Noel Alcaraz as Secretary; and Mr. Eduardo R. Genez as Treasurer.

To further strengthen the cluster, the MIRDC is considering to transfer some fabrication equipment from Region III. MIRDC plans to restore the equipment from the said region as well as upgrade the skills of both MIRDC and EMC-II personnel. The equipment, which will be appraised and assessed to determine the total cost of rebuilding, will eventually be revitalized after undergoing machine rebuilding. Moreover, several machine tools will be identified for transfer to EMC-II as soon as negotiation, agreement, and necessary evaluation of the transfer have been conducted.

New Products and Processes

New alternative to chrome plating

Cosmichrome is an amazing decorative alternative to expensive and environmentally hazardous chrome plating. Exclusive formulation can be sprayed on like paint. Unlike traditional electrolytic plating finishes, it can be applied on wood, plastic, metal, stone, glass, vinyl, paint, plaster-virtually any properly prepared surface. Available in gold, silver, bronze, chrome, and many hues and

patinas. Offers the decorative luster of metal plate at a fraction of the cost. Gold Touch is the spray chrome supplier to the legendary Izod IndyCar series race team Andretti Autosport. It also meets RoHS requirements.

Source: Commercial News USA, November/December 2011, p.20



Production of clean energy from steel mill gases

Heavy industries worldwide face an increasingly stringent regulatory climate. In a strategic alliance, Harsco and clean energy technology company, LanzaTech, have joined forces to promote the capture and reuse of steel mill flue gases as an environmentally significant and beneficial source of reliable energy. The two companies will jointly develop plans to present the LanzaTech biotechnology to Harsco's

major steel mill customers and explore potential business relationships for installing and operating commercial facilities at selected sites throughout the world.

Founded in New Zealand in 2005, LanzaTech has successfully demonstrated production of fuel-grade ethanol from steel mill gases. Its proprietary biotechnologies convert the waste gases emitted by blast furnace, coke oven and BOF operations into low cost, zero carbon ethanol, thereby significantly reducing

greenhouse gas emissions while also providing a commercially scalable alternative to traditional ethanol production and its heavy reliance on agricultural food crops. The agreement with Harsco will now accelerate the introduction of this technology to steelmaking customers throughout the Americas, Europe and selected emerging markets.

Source: MPT International, December 2011, p.60

MIRDC Update Continued...

MIRDC Launches Wellness Program

The employees are very delighted as MIRDC recently launched its wellness program. The wellness program is the Center's response to one of the employees' needs identified through its Resource Management (For Capability Development and Upgrading) which aimed to increase workforce engagement and satisfaction, improve personnel competence and enhance rewards and incentives program.

During the launching, Exec. Dir. Arthur Lucas D. Lucas emphasized the importance of being healthy, while Ms. Jelly N. Ortiz, Chief of the Administrative Services Section discussed to the employees the guidelines and use of the Wellness Room. The MIRDC Wellness Room is open from Monday to Friday, 7:20 a.m. to 4:00 p.m. except holidays.

The Wellness facilities include bench press, home gym, gym ball, AB rocket, stepper and stationary bike and is located besides the Admin Multi-purpose Room, Basement, Laboratories Building.



The launching and blessing of the wellness facility of MIRDC held on 23 March 2012.



The provision of wellness facilities is an opportunity to boost health consciousness among employees as they do not need to spend for a fitness program.

This initiative will go a long way in achieving a sound mind and body for each and every member of the MIRDC family.

New Products and Processes

Ferrous fragment 'sweeper' from Eriez

It can be costly business for scrap firms when metal fragments damage the tyres of vehicles operating in the yard.

To this end, Eriez Magnetics Europe has developed a Magnetic Sweeper which, once attached to a vehicle tow bar, uses its high-strength magnetic field to pick up and hold nails, wire, welding rod ends, bolts, ferrous chips and all kinds of potentially damaging pieces of metal- all in one sweep.

Eriez supplies both Permanent Magnetic and Electromagnetic Sweepers: both types offers a high speed and powerful solution to

troublesome tramp metal, with the electromagnetic version enabling users to unload the accumulated debris simply by turning off the magnet. For its part, the lightweight permanent magnetic option has the benefit of attracting metal without the requirement of a power source.

When cleaning the permanent magnet, the non-magnetic housing serves as a stripper pan for the magnetic; moving a lever raises the magnet inside the housing and allows the tramps iron to drop to the ground.

The sweepers can either be supplied to suspend from a fork-lift truck or can be offered as a trailing model with puncture-

proof tyres and a tow bar for quick attachment to the towing vehicle.

Source: [Recycling International](#), January/February 2012, p.15



Small- footprint roll compactors

A new generation of mobile roll compactors for paper and plastic has been introduced by German multi-disciplinary manufacturer Welger Recycling Engineering.

The RC650 and RC655 work with many different, cleanly-sorted packaging materials: for example, re-expanding waste can be reduced down to around 10% of its original volume.

The patented operating principle of the roller compactor has been further refined, says the company; in

particular, the drive module and the base frame have been completely revised and strengthened. Product enhancements enable both compactors to compress cardboard and similar materials to a high level.

Both versions are designed to customers with limited storage space in that they require an area of just 1.5 square meters. Various reinforced specialty belts keep pressing the material during the entire compression process to prevent it from re-expanding in the rolling chamber while it is switched to sleep module.

Source: [Recycling International](#), January/February 2012, p.15



Reverse vending of light bulbs

Describe as a world first, a reverse vending machine for light bulbs has been developed as a result of a joint cooperation for Revend Recycling of the UK and Repant of Norway.

According to the manufacturers, the reverse vending recycling machine can be delivers with an optional add-on unit for the collection and recycling of batteries.

This new development is based on the innovative technology of the Repant cosmos reverse vending recycling machine for cans and bottles. Repant will manufacture the machines while Revend Recycling will sell and market them worldwide under its trademark brand name reVend. Among

other features, the stand-alone machine brings automated safe collection and recycling of domestic light bulbs including: incandescent bulbs; CFL light bulbs (which contain mercury); and LED light bulbs. An automated soft-drop system safely collects and lowers light bulbs into a special collection container, thereby minimizing breakages.

An internal mercury fume extractor and mercury fume filter absorbs/removes any escaped mercury fumes. Furthermore, there is no need for staff to touch the potentially harmful recycled light bulbs when removing them from the recycling bin. Yet more technology facilitates the compiling of auditable statistics on bulb types by manufacturer and volumes recycled; this automatically

sends texts or emails when the secure light bulb storage container is nearly full and needs emptying.

Source: [Recycling International](#), January/February 2012, p.15



MIRDC Conducts Profiling of the Metalworking Industry

The Metals Industry Research and Development Center (MIRDC) through its Technology Information and Promotion Section (TIPS) has been conducting a survey of the Philippine Metalworking Industry since 2010 to update the profile of the industry which includes the machining, tool and die, metal casting, welding, electroplating, heat treatment and forging sectors. The number of companies profiled has reached 680. The objective of the survey is to determine the industry's production and technical profiles, among others. Moreover, the activity aims to provide our policy-makers, policy-implementers and the members of the industry with relevant information for policy study and recommendation in terms of facilities upgrading, personnel development and investment incentives.

The conduct of the industry profiling comes with the assurance that all information provided by the respondent companies would be treated with utmost confidentiality.

The data from the filled-out survey questionnaires are consolidated and analyzed. The reports are then submitted for further validation through focus group discussions. The completed study would then be published after a series of reviews.

The profiling initiatives of the MIRDC offers the following benefits to the metalworking industry:

1. Effective reporting of the status of the metalworking industry will result to accurate planning strategies by the government in the legislative and cabinet level to identify and implement interventions.
2. The studies made using the information gathered from profiling of the industries are used also to formulate projects at the agency level to address the problems of the metals industry.
3. The technology and the training requirements of the industry are processed by the administration to develop Roadmaps that include Human Resource Development plans of the industry in cooperation with the various agencies of the DOST.
4. Public information especially to the academe.
5. Respondent-companies are given priority to receive benefits from the programs of the government which includes free training and seminar workshops, technical consultancy and financial assistance.

MIAP Fetes New Trustees & Officers

The Metalworking Industries Association of the Philippines, Inc. (MIAP National) recently announced and welcomed its new Board of Trustees and Officers who will serve the Association for the calendar year 2012-2013. Below were elected for the following seats:

President	- VIRGILIO F. LANZUELA MIAP-Metro Manila
Executive Vice President	- DOMINADOR Y. LANOY MIAP-Davao Chapter
Vice President -Luzon	- FRENZEL O. YAPYAPAN MIAP-Cordillera Chapter
Vice President -Visayas	- INESITAS L. PALERMO MIAP-Iloilo Chapter
Vice President -Mindanao	- RAYMUND M. PARAS MIAP-Cagayan De Oro Chapter
Secretary	- JOSEPH ALAN T. ABRENICA MIAP-Metro Manila Chapter

Treasurer	- HECTOR D. MALONZO MIAP-Metro Manila Chapter
Auditor	- EDSON Y. MATEO MIAP-Cebu Chapter
Trustees	- FRANCIS CELIS MIAP-Cagayan De Oro Chapter
	NELSON G. LOPEZ MIAP-Iloilo Chapter
	NELSON MAGLANA MIAP-Davao Chapter

The election was held during the 25th MIAP National Convention last April 20-22, 2012 at the Grand Caprice Restaurant, Limketkai Mall, Cagayan de Oro City. The event was hosted by the MIAP Cagayan de Oro Chapter led by its president and newly elected vice president-Mindanao, Mr. Raymund M. Paras.

The incumbents are challenged to spearhead the Association's lined-up activities during their term of post.

Manufacturing to Flourish in 2012

The manufacturing sector is expected to flourish this year following the huge investments in various industries that were approved in the past two years, said Trade and Industry undersecretary Cristino L. Panlilio.

"The prospect for manufacturing is very good because of the projects that we registered in 2010-2011," Panlilio said.

According to Panlilio, the investments registered by the Board of Investments and the Philippine Economic Zone Authority in 2010-2011 period alone already reached P800 billion.

In 2011, he said, the combined BoI and PEZA approved investments hit P400 billion and another P500 billion this year.

These investments do not include the investments generated by other investment promotion agencies of the government like Clark and Subic freeports.

In 2011, investment projects approved for the manufacturing sector amounted P104.758B, a significant increase of 122% from last year's P47.178 billion. Investment projects include those in petroleum products, basic metals, motor vehicles, non-metallic mineral products, and food products.

"The manufacturing sector is a proven catalyst in employment

generation. We will maximize this sector's opportunities with a comprehensive roadmap and milestones to market their progress and development, along with other key sectors of the IPP," DTI Undersecretary Adrian S. Cristobal, Jr. said earlier.

Those approved in 2010 must have started commercial operations in 2011 while some of the projects approved in 2011 may commence operations starting this year.

"These are creating jobs, adding purchasing power that would lead to increased demand for basic goods and services. So what will follow next is the manufacture of goods," Panlilio noted.

Panlilio added that imports have been factored in already in the growth of the domestic economy.

"Exports and imports combined are economic contributors. Both create jobs," he added.

Earlier, Panlilio said that the country's exports of intermediate products or semi-finished products would be reduced to 75 percent by 2016 from the 2011 level of 87 percent as the share of finished products in the overall export basket improves.

Panlilio said this as the government sticks to its target of \$120 billion in total exports by 2016, comprising of \$95 billion in merchandise exports and \$25 billion in service exports. Exports

would represent 40 percent of gross domestic product in the next five years. Total exports in 2011 are expected to hit \$60 billion or 27 percent of GDP.

"We are staying put to our goal to double up, rev up to double up," Panlilio said.

According to Panlilio, the Philippines will continue to be an intermediate goods exporter in 2016 but such share would be reduced to 75 percent from the current 87 percent of total as the share of finished goods climbs up the overall export mix.

"We are going to beat the curve," he said.

Panlilio said the country's goal for higher exports of finished products would be supported by the government's competitive strategies that aim to promote more finished products in selected industries.

These industries are electronics and shipbuilding, motor vehicle industry, mineral products, garments, food, homestyle, coconut and new export winners.

Source: The Manila Bulletin Newspaper Online (<http://www.mb.com.ph>)

Country's Metal Production Climbs 9%

The value of the Philippines' output of precious and base metals climbed nine percent (9%) to a record \$2.9 billion last year, with nickel leading the increase as miners ramped up production to take advantage of higher prices, showed government data.

But the volume of gold output fell 24 percent for the year, the only metal that posted a decline, with the Philippine Central Bank's gold purchases from small-scale miners dropping 38 percent on suspected smuggling, the Mines and Geosciences Bureau (MGB) said in a statement.

The agency said it expects mining output to further rise this year once the government clears lingering issues that hinder the sector's growth.

The presidential palace is currently reviewing a draft executive order that aims to harmonize provincial and national rules on mining and sets out the growth agenda for the sector.

The government said it would hold additional discussions on the draft with the industry before it is finalized and signed by President Benigno S. Aquino III.

The volume of nickel concentrate

was up 16 percent at a record 38,798 dry metric tons (DMT) last year, while nickel direct shipping ore jumped 46 percent to a record 20.1 million DMT, the data showed.

Leo Jasareno, director of MGB, said in the statement that new nickel mines boosted last year's output.

Copper concentrate output rose seven percent (7%) to 253,975 DMT.

Silver was up 11 percent at 45,530 kg, while metallurgical chromite increased 72 percent to 25,483 DMT.

But gold output last year fell to 31,120 kg, valued at P63.1 billion,

against 40,847 kgs worth P70.5 billion in 2010.

Gold accounted for 52 percent of the 2011 production in value terms, followed by nickel with 29 percent.

Jasareno said a multi-agency probe on the decline in the central bank's purchases of gold from small-scale miners was continuing.

The Central Bank is mandated by law to buy the output of small-scale goldminers.

MGB data showed the Central Bank bought a total of 914.52 kg in the

fourth quarter, down 88 percent from a year earlier and steeper than the 76 percent annual drop in the September quarter.

Manila has linked the Central Bank's shrinking gold purchases to smuggling of the precious metal, as small-scale miners could have turned to unauthorized buyers to avoid paying taxes.

The Bureau of Internal Revenue started collecting a two percent (2%) excise tax and 10 percent creditable withholding tax from small-scale

miners last year, based on a March 2008 revenue regulation.

The Philippines is believed to be sitting on metallic mineral deposits estimated at \$1 trillion. While mining is a potential growth sector for the Southeast Asian country, policy inconsistency and corruption are a major concern for investors.

Source: mb.com.ph, March 2, 2012

DTI Crafting New Industry Roadmaps

The crafting of long-term industry roadmaps, which aims to build the global competitiveness of local industries, will not be a repeat of the basic industries development roadmaps created during the Marcos era that actually took off but were never sustained.

Trade and Industry undersecretary Adrian S. Cristobal Jr. said at the 2012 Strategic Industry Development Forum: Partnerships for Inclusive Growth, the first in a series of consultations with the private sector for the crafting of new industry roadmaps, that this initiative would be different from the industry roadmaps that were implemented during the Marcos era.

"The main difference is that this one is led by the industries themselves and the DTI will champion these roadmaps. Before it was the government that crafted the industry policies, it was too centralized," Cristobal said.

During the Marcos time, at least 10 basic industries were pursued including steel, paper, mining, but

most of them have been not really fulfilled the objective of leading the country's industrialization.

A total of 32 industry associations attended Monday's kick-off discussions on the industry roadmaps. Industry players are given the responsibility to craft their own roadmaps as they know their industries better than the government.

While the DTI is still testing the interest of the local industries in coming up with their own roadmaps, Cristobal said they will focus first on the 13 priority sectors identified under the Investment Priorities Plan of the Board of Investments. These industries include agriculture/agribusiness (bamboo, coconut planting and coconut end products), BPO/IT-enabled services, electronics, mining and mineral products, shipbuilding/ship repair/metal/steel fabrication, tourism, renewable energy, logistics, garments and textile, jewelry/fashion accessories, auto parts and components, and mass housing.

Under the Philippine Development Plan 2011-2016, the government is mandated to formulate a comprehensive national industrial policy that shall spell out opportunities, coordinate and promote the growth of forward and backward linkages in priority areas and high-potential growth sectors, and prepare other industries to attract investments and generate jobs.

The competitiveness roadmap is proposed to include the sector's vision, goals and targets until 2030 to allow long-term planning for the sector that would permit the industry to roll out changes in phases and in more manageable segments.

The roadmap is likewise proposed to be broken into short (2012-2016), medium (2017-2022) and long (2023-2030) term goals and strategies with identified milestones to coincide with the terms of the PDP of the government.

Source: mb.com.ph, January 31, 2012

DOST's MakiBayan Program...from p3

Strengthening bonds and broadening networks are strategies that will reap benefits for both the M&E industries and its end users – the general public. With the MakiBayan Program, the nation can now look forward to more developments and opportunities that will be created in the electronics, metalworking, and die and mold industries. According to Dr. Au Matias, Dean of the UP College of

Engineering and also the Program Leader of the ERDT, "We need engineers with advanced degrees to make S&T work for Filipinos."

Based on a recent Asian Development Bank (ADB) study, productivity growth is what drives a country's economy. Thus, all DOST programs are aligned with increasing productivity as their end view. "The industry is important because we (the

DOST) can align our efforts, our S&Ts to the needs of the industry. Because whatever we do, we want an output that can be measured. Para meron kaming masabi na because of what we did, or what we are doing, our output can be measured in the productivity game. Para may saysay naman whatever effort that we do," shared DOST Sec. Mario G. Montejo.

MIRDC Fabricates a Sweet Sorghum Juicer



Sweet Sorghum Juicer

Sweet sorghum [*Sorghum bicolor* (L.) Moench] is similar to grain sorghum with sugar-rich stalks. Being a water-efficient crop, sweet sorghum has the potential to be a good alternative feedstock for ethanol production.

Sweet sorghum production is an investment that will potentially generate employment. As such, the field visit to some farms in Northern Philippines spearheaded by the Department of Agriculture-Bureau of Agriculture Research identified the village-based mill located in Brgy. Bungon, Batac, Ilocos Norte as one promising intervention in the Ilocos Region. A commissioning was held on the Barangay-based sweet sorghum cane mill. Products include ethanol, vinegar, jaggery, syrup, cookies, and popgrain. These would later be tapped for seed production. The LGUs also extended their support to the project.

Ethanol from Sweet Sorghum

- Soaring prices of fossil-fuel and environmental pollution associated with its use have resulted in increased worldwide interest in the production and use of bio-fuels. Both developed and

developing countries have a common concern, which has triggered public and private investments in bio-fuel crop research and development, and in bio-fuel production.

- Many developing countries including India have made it mandatory to blend petrol with ethanol. Large quantities of ethanol are needed to meet current and future blending requirements.

Comparative economics of sweet sorghum-based ethanol production show that the cost of producing one liter ethanol from sweet sorghum is lower than that from sugarcane molasses (the most commonly used feedstock for ethanol production in India and other countries).

- In addition to sweet-stalk cane yield, sweet sorghum provides a grain yield of 2 to 6 t/ha (tons per hectare).
- The stillage from sweet sorghum after extraction of juice has higher forage value (rich in micronutrients and

minerals). Thus, food/fodder requirements of small-holder farmers will not be compromised if sweet sorghum is used for ethanol production.

- Ethanol production process from sweet sorghum is less polluting than sugarcane and the resulting ethanol has clean burning quality with high octane rating.

The MIRDC-developed machine for extracting juice of sorghum stalk consists of three rollers with their axes parallel to each others' frame forming a triangular pattern. The top roller nests on the two flanged bottom rollers, thus maintaining the axial alignment. The end of each roller has a gear meshing with the other gears so that when the top roller rotates, the bottom rollers also rotate, but in the opposite direction. The top roller is coupled to a speed reducer which is in turn connected to a three-horsepower motor through belts and pulleys. Below the rollers is a pan that collects the sorghum juice during crushing.

TECHNO MOLDS, INC.: No Where to Go But Up



Mr. Ching Bing Yong

“We are committed to the business not solely for profit.” This is a clearly defined perspective of Mr. Ching Bing Yong of Techno Molds, Inc. (TMI). As a businessman engaged in the tool, die and mold making industry, Mr. Ching Bing Yong was forced to transform TMI to be one of the best equipped mold, tool and die fabrication companies.

Established in 1975, the now 36 year-old mold, tool and die fabricator actually started out as a small machine shop in Binondo, Manila. However, its production is occasionally hampered by its limited space and equipment. To solve its problem, TMI availed of MIRDC's Technology Business Incubation Program in 1991 that allowed locating its business to a bigger space within the MIRDC compound. Occupying an area of some 150 sq.m., TMI enjoyed minimal rental fees as well as time-sharing of MIRDC equipment and machines.

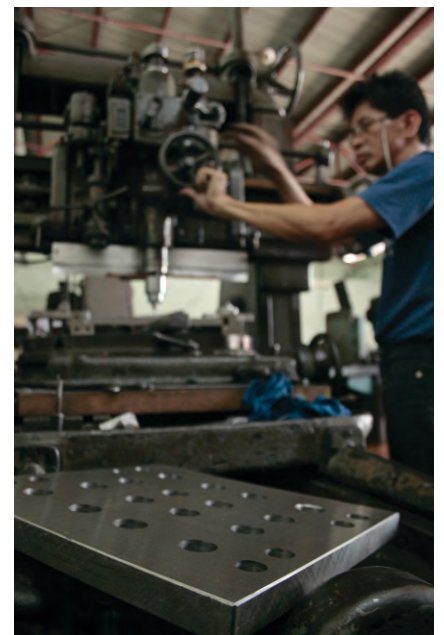
After graduating from the TBI Program, the establishment relocated to Sucat, Parañaque City. The new site covers an area of more than 2,500 sq.m. and employs more than 22 workforce. Stemmed from an excellent workmanship generated by long-term exposure to MIRDC's advanced technology in tool and mold making, TMI's clients that include some of the biggest names in the



Sample of plastic mold products

manufacturing and service industries in the country consistently vouched for the company's superior product quality.

TMI was able to invest in some of the finest machine tools and skilled personnel adopting the most modern techniques and processes in the country. The company has two divisions, the TMI Semiconductor Tools and Dies Division, which specializes in the fabrication of punches, dies, strippers, lead cut form punch guides, lead length cutters, inserts, pins, die guide blocks, and tie bar cut punch guides; and the TMI Plastic Molds Division which serves the cosmetics, chemical and pharmaceutical companies with products such as plastic injection molds for caps, closures, jars, compacts and lipstick cases, plastic blow molds for bottles and mold parts and accessories. In addition, TMI has the capability to fabricate the most intricate parts in molds as well as to rehabilitate damaged or defective molds made abroad. On several occasions, molds manufactured from Germany, Singapore and Malaysia that have unexpectedly broken down were referred to be repaired and revived by TMI. Presently, TMI is able to fabricate molds that incorporate core cooking to enable faster cycles and better efficiency. Moreover, the



Machining and its finished product



company has a heat treatment facility—a hardening and tempering furnace with digital temperature control that

Success Story

hardens parts like cavities, cores, strippers, cutters, pins and other metal parts to the desired hardness. The company also utilizes a Mitutoyo profile projector to measure the minutest detail of a component and Mitutoyo height masters to measure up to 1 micron.

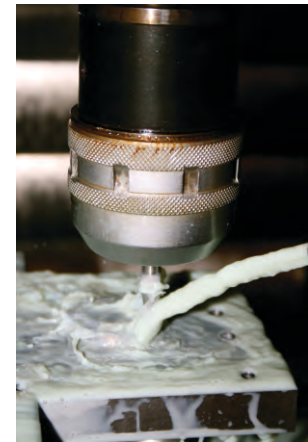
The increased demand for die and mold has resulted in fast-paced development which is reflected by the successes enjoyed by TMI. TMI was able to expand its business and put up Polytechnique Mfg., Inc. engaged in

the manufacture of high quality, rigid plastic packaging catering mostly to the cosmetic, pharmaceutical and chemical industries. Polytechnique is into manufacturing of injection molded plastic container and blow mold plastic containers. The combined capacities of both plants make them two of the major players in the injection and blow mold industry.

TMI sticks to its commitment to upgrade the quality of packaging, preserve foreign exchange, compete in the global market, and satisfy all

customers. It is also committed to provide every employee the opportunity to grow with the company armed with the company's resources, quality management, competent manpower and expertise.

With his long list of clients and rising reputation, Mr. Ching Bing Yong does not fail to be thankful to MIRDC in helping his company from being an incubator into a self-reliant enterprise.



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