

## MIRDC Intensifies Regional Assistance

In support to the agro-industrialization of the countryside and in line with the programs of the Philippine Metals and Engineering Industries National Action Plan, the MIRDC responded to the technical needs of the regions through assessments, consultancies and training programs.

### Region I

Recently, the MIRDC sent a technical team who conducted an evaluation on which equipment are needed for the cutlery industry in response to the request of DTI-Ifugao. Also undertaken were capability assessment of a local shop to supply

requirements of jewelry shops in Baguio City, technical consultancies on heat treatment for cutlery products and jewelry processing, and setting up of smithery facility.

A four-day technical advisory assistance to blacksmith shops manufacturing bolos, knives and scythes was extended by MIRDC in Region I. MIRDC assisted the shops in terms of manpower upgrading, improvement of production process and product quality as well. MIRDC experts conducted actual demonstration of metal identification thru spark test, and explained proper procedures on



Technical advisory assistance on blacksmith conducted in Bangar, La Union (Region I)

grinding, sanding, polishing, flame hardening and tempering of cutlery hand tools. Identified problems are high cost and limited source of raw materials (medium and high carbon steels). The said activity benefited the Gen. Prime Blacksmith Association in Bangar, La Union.

*Continuation on p5...*

## PGMA Declares “Metals and Engineering Week”

President Gloria Macapagal-Arroyo issued Proclamation No. 1806 declaring the period from June 15-19, 2009 as “Metals and Engineering Week.” The metals and engineering industries play a vital and significant role in the country’s economic growth and development being an indispensable part in almost all manufacturing activities. Realizing the significance of the event, Secretary Estrella F. Alabastro of the Department of Science and Technology (DOST) and officials of the Metal Engineering Industry Foundation, Inc. (MEIFI) endorsed the proclamation.

The proclamation was signed by the President on June 15, 2009 under the auspices of the Metals Industry Research and Development Center (MIRDC) and the DOST. Since its creation as a government corporation

under Republic Act No. 4724 as amended by Republic Act No. 6428, the MIRDC is engaged in providing the public and private sectors with professional management and technical expertise on such vital activities as training of engineers and technicians, information exchange, quality control and testing of metal products, research and business

economics advisory. The Metals and Engineering (M&E) Week coincides with the MIRDC’s founding anniversary (June 18).

The Center will play a major role in coordinating efforts for the yearly observance of metals and engineering (M&E) week. Aimed at engaging the

*Continuation on p6...*

### In this issue

- » MIRDC-Mitutoyo Metrology Training Laboratory Benefits Industry and Academe
- » Analysis of Steel Consumption by Products in ASEAN Member Countries
- » MIRDC Launches Provident Fund, Inducts Officers
- » PGMA Approves 2009 IPP



*Arthur Lucas D. Cruz*  
**Arthur Lucas D. Cruz, CEO IV**  
Officer-in-Charge

**G**reetings to the subscribers of this quarterly publication.

The third quarter of this year reflects again the Center's commitment in assisting the science department and its resolve in providing the highest standards of quality service. The MIRDC also embarked on the extensive upgrading of its facilities and the implementation of new and innovative programs that are directed towards the realization of a vibrant metals and engineering industry.

The MIRDC has indeed, paralleled the successful scheme of foreign organizations by obtaining ISO accreditations and certifications, practicing the principles of good governance which are considered vital in ensuring consistency of products/services and strategically important in positioning the DOST agencies at the forefront of advancing the country's global competitiveness. Apart from the 109 MIRDC customers that availed of S & T services particularly consultancy, much needed technical support under the Small Enterprise Technology Upgrading Program (SETUP) were also provided, prominent of which are the eight micro, small and medium enterprises (MSMEs) nationwide that benefited from the training, consultancy and technical

assistance of MIRDC focused on the upgrading of their facilities and improving their technical operations to significantly enhance their productivity and competitiveness.

Also, the Center specifically inked partnership with DOST 2 for the project Equipment Manufacturing Cluster for Region 2 (EMC-2). Its primary goal is to transfer developed agricultural/industrial equipment, spareparts and other commodities, and provide feasibility studies, training, consultancy and technology information dissemination to promote the development of the industry in the region. Recently, MIRDC promoted its technologies through various S & T fairs - the NSTW Bicutan Science Community and Regional S & T Fairs in Tacloban, Bacolod, Butuan and Davao. You may visit our booth in future exhibitions, explore our new technologies and exchange ideas with us for more quality local products and also access our website <http://www.mirdc.dost.gov.ph>.

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## MIRDC-Mitutoyo Metrology Training Laboratory Benefits Industry and Academe

The Metals Industry Research and Development Center (MIRDC)-Mitutoyo Metrology Laboratory since its establishment in 2004 has been benefiting students, industry personnel, and private individuals as well.

Located at the Mechanical Workshop II Bldg. of the MIRDC, the metrology laboratory, established through a tie-up with the Mitutoyo Asia Pacific Pte., Ltd. (MAP), aimed

to meet the quality assurance needs of local engineering and manufacturing industries.

The laboratory houses various metrology equipment such as: small measuring tools, digimatic profile projector, toolmaker microscope, roundness testing machine, coordinate measuring machine (CMM), micro indicator, surface plate, sodium light source and check master.

The metrology facility is being used by the Center in conducting its metrology courses and as a venue for plant visit of students and industry. Since 2005, a total of 62 programs have been conducted in the facility benefiting a total of 632 persons trained from the industry. The details are as follows:

Year	Title of Program	No. of Programs Conducted	No. of Persons Trained
2005	Dimensional Metrology I: Basic Measurement	10	132
	Dimensional Metrology 2: Basic Length Calibration	3	37
	Dimensional Metrology 3: Limits & Fits & Inspection of Geometrical Tolerances	1	5
	Uncertainty of Measurement	2	34
	Basic CMM Operations	1	3
	<b>TOTAL</b>	<b>17</b>	<b>211</b>
2006	Dimensional Metrology I: Basic Measurement	8	129
	Dimensional Metrology 2: Basic Length Calibration	5	63
	Dimensional Metrology 3: Limits & Fits & Inspection of Geometrical Tolerances	2	17
	Uncertainty of Measurement	2	25
	<b>TOTAL</b>	<b>17</b>	<b>234</b>
2007	Dimensional Metrology I: Basic Measurement	6	100
	Dimensional Metrology 2: Basic Length Calibration	3	34
	Dimensional Metrology 3: Limits & Fits & Inspection of Geometrical Tolerances	1	7
	Uncertainty of Measurement	2	10
	<b>TOTAL</b>	<b>12</b>	<b>151</b>
2008	Dimensional Metrology I: Basic Measurement	6	105
	Dimensional Metrology 2: Basic Length Calibration	4	47
	Uncertainty of Measurement	3	28
	<b>TOTAL</b>	<b>13</b>	<b>180</b>
2009*	Dimensional Metrology I: Basic Measurement	2	27
	Dimensional Metrology with Uncertainty of Measurement	1	5
	<b>TOTAL</b>	<b>3</b>	<b>32</b>
<b>GRAND TOTAL</b>		<b>62</b>	<b>632</b>

\* January - June 2009

The impact assessment conducted by the Center, which is administered to participants six (6) months after attendance to training, showed that the training programs were very useful. The laboratory personnel became

more knowledgeable and skilled. Self-confidence on accuracy of measurement increased and job performance became more efficient and effective. Tools were calibrated in-house reducing dependence on

external calibration services. It was noted that cost savings by firms reached up to 90%. Further, the metrology courses availed of by industries satisfied the training requirements as part of the ISO 9001

certification of their quality management systems. Likewise, students who visited the metrology facility got familiarized with various equipment including those commonly used by industry and gained insights in the field of metrology.

In 2006, the MIRDC-Mitutoyo Metrology Laboratory served as venue of the 4<sup>th</sup> Metrology competition sponsored by MAP. MIRDC supported the competition through the metrology laboratory facility and provided training support during equipment familiarization prior to the competition proper. Consisted of two batches, the competition was participated in by 32 students from 18 colleges/universities nationwide, namely:

1. Adamson University
2. Bataan Heroes Memorial College

3. Bulacan State University
4. De la Salle University
5. Don Bosco College - Canlubang
6. San Sebastian College Recoletos de Cavite
7. Technological University of the Philippines – Manila
8. University of Rizal System – Morong, Rizal
9. Cebu Institute of Technology
10. Don Bosco College – Cebu City
11. FEATI University
12. MSU – Iligan Institute of Technology
13. MERALCO Foundation Institute
14. Mindanao Polytechnic State College – Cagayan de Oro City
15. Polytechnic University of the Philippines – Manila

16. Samson College of Science and Technology – Muntinlupa City
17. Technological Institute of the Philippines - Manila
18. University of Southern Mindanao – Kidapawan City

Gearing towards globally-competitive metrology environment, the MIRDC is preparing for its upcoming metrology courses, among which are Dimensional Metrology 1 - Basic Measurement, Dimensional Metrology 2 - Basic Length Calibration, Dimensional Metrology 3 - Limits & Fits & Inspection of Geometrical Tolerances, and Uncertainty of Measurement - Length Calibration Application.

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## MIRDC Participates in Regional Cluster S&T Fairs

Organized by the Department of Science and Technology (DOST), the MIRDC successfully participated in the annual regional cluster science and technology fairs along with other agencies of the Science Department. The fairs are part of the 2009 National Science and Technology Week (NSTW) celebration.

The series of S&T fairs were held in Region VIII at the People's Center, Tacloban City on August 3-7; Region VI at SM City-Bacolod on August 17-22; Caraga Region at Dottie Hotel, Butuan City; and Region XI at SM

City-Davao on September 23-27. Subsequently, the Center will join in the next regional cluster fairs in Region 4A at SM-Sta. Rosa, Laguna on November 9-14; and Region V at SM-Naga on November 25-29, 2009. However, S&T fairs in Pangasinan and Baguio City supposedly scheduled in October were postponed to later dates yet to be announced considering the current situation and prevailing circumstances caused by a typhoon causing flooding in Region I.

The Center displayed its newest research on coco-sap still for

bioethanol, a device that separates the ethanol content of a mixture at a higher purity compared to an ordinary distiller. The input material is coco-sap which is processed to yield crude bioethanol. It also features jatropha desheller and coco coir processing equipment such as mini decorticating, twining, slivering, coco husk defibering, and mobile table top coco peat brick press with molding. These technologies attracted viewers and considered appropriate approaches to elevate economic growth and success in the regions as well.



MIRDC booth at regional S&T fairs



Demonstration on the coco coir processing technology in Region II conducted for CSU-Sanchez Mira Campus, Cagayan



Conducted technical consultancy on heat treatment of steels and metal classification at Sauro Engineering, Cebu (Region VII)

## Region II

The MIRDC is actively supporting the Equipment Manufacturing Cluster in Cauayan, Isabela. Specifically, MIRDC's role will be to provide technical support services, training and consultancy to promote the development of the metalworking industry in Region II.

In support to the Women's LGU at Sanchez Mira, Cagayan, the MIRDC conducted training on coco-coir fabrication for LGU beneficiaries. CSU-Sanchez Mira Campus serves as training center and technology generator showcasing the developed technologies of MIRDC, i.e., coco-coir and piña decorticating machine. Other DOST agencies that provided technology interventions are Forest Products Research and Development Institute (FPRDI) for training on handmade paper and Philippine Textile Research Institute (PTRI) for dyeing process of coco products.

Technical advices on mechanization of the process of gamet into sheets and slicing of sarakat leaves were extended for the Municipality of Sta. Praxedes, Cagayan Valley.

Other assistance extended to Region II were on food processing equipment for drying and pulverizing/grinding of shrimps; wrought iron technology; and classification and heat treatment of steels. MIRDC also recommended some suppliers of special steel.

## Region III

Demonstration and testing of gemstone processing equipment were conducted by another team from MIRDC in answer to the request of the Provincial Cooperative and Economic Development in Malolos, Bulacan. Other technical advices on jewelry

making were provided in Bulacan. An assessment on production process on gear making as well as classification of stainless steel and application were also done for Region III.

## Region IV

Thirteen companies in Romblon benefited from the coco-coir and peat production seminar by MIRDC. Also in Romblon, MIRDC conducted techno-demonstration on coco-coir equipment and processing and info dissemination on coco sap still for bioethanol for Anya Coconut Farmers Multipurpose Cooperative. Other assistance extended to Region IV were on metalcasting process, chrome plating process, powder coating process, investment casting process, heat treatment process, surface grinding process, reboring, mercury retort, metals identification, product development for ladies' bags accessories particularly metal parts, RA of silica glass, mechanization of blacksmith facility, production process on gearmaking, and establishment of optimum pouring temperature using portable immersion "Type K" pyrometer. Two project proposals were also evaluated by MIRDC on upgrading of product quality/services and coco-coir facilities.

## Region V

Mr. Alex Alegado of Region V was assisted on scissor/blade making equipment.

## Region VI

MIRDC sent a technical team in Egger Farm in Iloilo City who conducted an evaluation as well as assistance in the formulation of zinc plating solution. The testing was complemented by an evaluation and a

test run of Egger's zinc plating line.

MIRDC also visited Galwood Furniture in Guimaras for pre-qualification assessment under the Manufacturing Productivity Extension Program or MPEX. The program aims to improve the overall productivity of SMEs through consultancy services to help

manufacturing firms in producing products that are more competitive both in price and quality. Sectors covered under MPEX are food processing, furniture, garments, gifts-toys and housewares (GTH), information and communication technology, metals and engineering, ceramics, jewelry and electronics.

An energy audit expert was dispatched to Sagay Sugar Central in Sagay, Iloilo City to conduct a series of energy audits and follow up visits. Technical advisory services covering design of wastewater catchment pond, powder coating process, metal fabrication, electroplating technology, establishment of electroplating shop and zinc plating shop, productivity improvement, facility and equipment upgrading, equipment for muscovado project, and plant layout were provided in Region VI. Skills upgrading on foundry practice and welding were also conducted by MIRDC. MIRDC also discussed with the Association of Negros Producers (ANP) the terms and conditions of a PPC seminar as well as training terms for occupational safety for the Association of Differently Abled Persons (ADPI) in Iloilo City. Also, MIRDC discussed the energy solution of DOST to Climate Change to the members of the Vice Mayors League of Iloilo.

## Region VII & VIII

In Cebu (Region VII), the MIRDC assisted the Workers League of Danao Multi Purpose Cooperative in implementing standard process of making guns/pistols needed to comply with established manufacturing standards and to keep up with the latest trends and demands in the market; and

## Casting without graphite

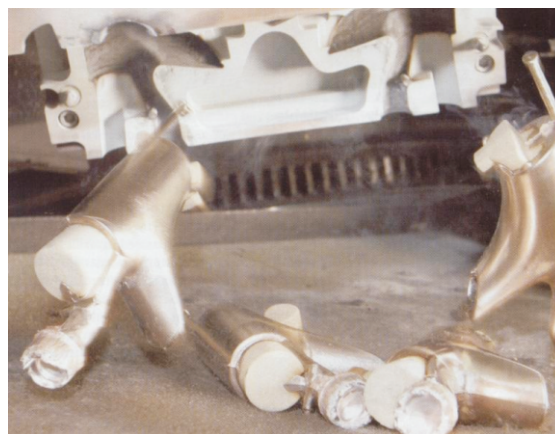
Since December 1, 2008, the foundry of a sanitary fittings and faucetry manufacturer in England has been producing castings without graphite. It uses the semi-permanent reagent Nanocomp MetCast BC as release agent. The reason for changing to this ceramic coating material from Saarbücken (Germany) based ITN Nanovation was mainly the possibility of controlling the solidification process in the die. The selection of the coating material to the blending of the material determines whether the heat transfer at the die interface is heat-conducting or insulating. The coating is stable to temperatures far above 1,000°C and insensitive to the sudden temperature shocks occurring when the die is submerged into the water bath. Build-up of zinc and zinc oxides can be avoided by suitably setting the coating and casting parameters.

The ceramic coating helps to reduce the production of scrap. For example, the occurrence of cracks in brass die castings can be avoided by setting (punctual) insulating conditions. As somewhat rough surface structure improves the flow behaviour of the metal and avoids surface defects.

After a phase of intensive testing, the above mentioned foundry decided to use the ceramic coating for its complete production- a determined step towards clean, dust-free and environmentally- friendly manufacturing. The proportional relationship is highly impressive: just a few kilograms of nano ceramic coating material substitutes several tonnes of graphite, which no longer have to be purchased and disposed of. In addition to savings due to smaller scrap rates and

improved eco friendliness, the cleaner working environment makes the work safer for the operators and protects the equipment.

Source: Casting Plant & Technology, 1/2009, p.45



Two castings produced on the Carat die casting machine: holding device for a steering column (left) and cam carrier (right)

likewise, conducted technical consultancy on heat treatment and metal classification for Sauro Engineering. On the other hand, Region VIII received assistance on gear fabrication, classification of metals and heat treatment of steels particularly stress relieving and hardening and improvement of working condition.

### Region IX

Meanwhile, MIRDC developed a coco-coir equipment for RJ Charcoal in Misamis Oriental. MIRDC recommended financial assistance from DOST for the establishment of a village-type coco-coir processing plant. MIRDC also assisted a client in patenting/licensing of the corn/rice

mill and advised the client to seek financial assistance from the Technology Application and Promotions Institute in commercializing the invention.

### Region X

MIRDC also rendered technical services to Region X on the establishment of electroplating and anodizing shop, material testing and identification, heat treatment process, spincasting process, electroplating process, smithery process, wrought iron technology, metal identification, coco-coir processing technology, gemstone cutting/polishing technology, plant layout, sourcing of local equipment suppliers, polishing of SS

pool of wire, calibration of measuring instruments, ISO quality standards, and productivity improvement.

### Region XI - XIII

Technical advisory assistance on material for shafting and its process was extended by MIRDC to Region XI, heat treatment technology and skills upgrading training to Region XII, and heat treatment procedure for SAE D2 special steel for Region XIII.

Responsive to the needs of the regions, the MIRDC has lined up in the next quarter technical advisory services to several regions.

## PGMA Declares...from cover

wide participation of individuals and institutions, the MIRDC has identified recognition scheme of M&E practitioners under its Support Sectoral Intervention Program. Likewise, the Center envisioned annual skills competition in metalworking processes, i.e., CNC Programming, Patternmaking, Lathe Operations,

among others, including awarding of industry personnel such as Foundryman of the Year, Tool and Die Maker of the Year, Machinist of the Year, etc. Such activity will be held in cooperation with various industry associations.

The President calls upon the metals and engineering industries

including private sectors, associations and entities to participate actively in the proper observance of the Metals and Engineering Week, and to give their full support and recognition to the ever-growing importance of metals and engineering in nation-building.

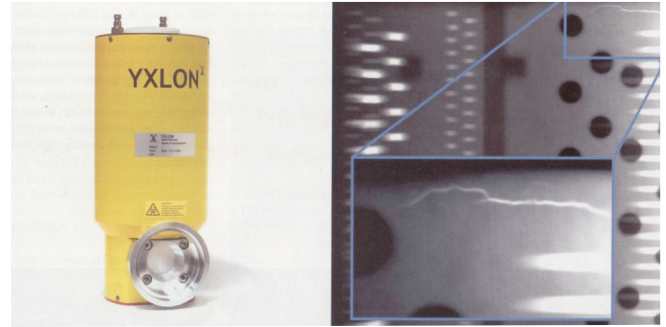
## New x-ray system with variable focal spot

Yxlon International, a leading supplier of industrial X-ray testing systems and computer tomography solutions for industrial, non-contact material testing, has launched a new variable focus X-ray system, Y.XST225-VF. The system excels through its innovative focal spot technology creating a very small, variable-intensity focal spot. It closes the gap between microfocus and conventional X-ray tubes used in digital radiography and computer tomography, especially in X-ray applications in the automotive and aerospace industries. Compared with conventional X-ray tubes, the focal spot of the Y.XST225-VF is more symmetrical and more than 50% smaller. These are two important factors leading to higher spatial resolution and hence, optimal detail visibility. Nevertheless, the new system has the same capacity as high-capacity X-ray tubes, i.e., much higher than any of the currently available commercial microfocus tubes. The focal spot of the variable focus tube

can range between 250  $\mu\text{m}$  and 290 W and 800  $\mu\text{m}$  and 1,600 W.

A high spatial resolution and a low signal/noise distance are key parameters for optimal radiographs generated by means of flat detector technology. Both parameters are influenced by the size of the focal spot. Thanks to the variability of the focal spot, the size of the spot can be optimally adjusted to the required detail visibility and detect unsharpness, which is determined by the material, the shape and the surface conditions of the test piece. Thus, it is possible to achieve optimal detail visibility for virtually any testing task while attaining very high testing rates. The new Yxlon variable focus tube covers the complete range from general view images requiring short inspection times through to high-resolution detail images.

Especially that automotive and aerospace industries benefit from this



Yxlon variable focus tube (Y.TU225-VO) and radiograph of a turbine blade (Photo: Yxlon)

variability. In these industries, X-ray testing systems and Ct solutions from Yxlon are used for non-contact material testing tasks, such as the inspection of welds, turbine blades and critical castings. High-precision testing based on high-contrast and detailed images is a key prerequisite for fulfilling the exacting quality standards demanded in these industries. Another positive effect is that the efficiency of production is improved.

Source: Casting Plant & Technology 2/2009, p.50

## Intelligent regulation system saves energy

Hydro Aluminum, Oslo, Norway, produces more than 3 million t/year of casting alloys. The energy supply for the complete melting process has been optimized by means of a solution developed by the German company, Eurotherm. This regulation system, which integrates an oxyfuel burner from Linde Gas, also contributed to a marked productivity improvement: the capacity increased by 60%, while the rate of waste amounted to only 2%.

Hydro Aluminum was above all looking for a solution capable of increasing the melt down capacity. In addition to this, the system also provides savings on energy consumption. The main challenge was to enable precise control of the combustion process while it guarantee seamless transition from one phase of the process to the next. Another objective was to optimize the melting cycle,

ensuring that the energy input is highest when the thermal efficiency reaches its peak.

In aluminum melting, maximum energy input is required at the beginning of the melting cycle when the share of cold metal is still very high. Once the melting process has started, the energy input can be reduced. The intelligent combustion control system has brought down previous energy consumption by 50%. It is based on a combination of the T2550 control system and a safety PLC, which guarantees compliance with regulations, and an operator station.

The intelligent control and adaptive burner regulation systems provide not only precise temperature regulation and good stoichiometry, but also good temperature stability and low energy

consumption. The scope of supply comprised the design and configuration of the system, manufacture of switchgear cabinets, programming, testing and commissioning. Eurotherm was also responsible for the burner safety and operator training in Norway.

Source: Casting Plant & Technology 2/2009, p.51



## **New series of dual spectral-band thermal imaging cameras**

LumaSense Technologies, a provider of infrared thermography, non-contact temperature and gas sensing solutions, has launched its Mikron M7604F and M7604G thermal imaging cameras. The Mikron M7604 thermal imaging cameras are actually two cameras in one. In addition to low temperature radiometric imaging in the 8 to 14 micron wavelength range, each camera has its own specialized

bandpass filter that enables accurate imaging through flames or of glass surfaces. The cameras are a versatile, fully-radiometric tool with high-temperature functionality. They enable performance of all the normal preventive maintenance infrared inspections and then easily toggle to the unique spectral filter for either through-flame or glass surface imaging.

Source: [Casting Plant & Technology 2/2009, p. 52](#)



Dual spectral-band thermal imaging cameras

## **Development of highly durable zinc shot**

The escalation of metal process in the recent months has impacted the bottom line for many die casters and their customers. A bit of relief has come lately but high costs made companies look for more economic ways to conduct their business. Transmet Corporation, a manufacturer of cast zinc shot materials, reacted to customer concerns about the rising price of zinc due to the cost associated with

raw materials and transportation by improving the durability and performance of their zinc shot blasting media.

After looking at every aspect of the manufacturing process Transmet devised a combination of casting technique and alloy composition that dramatically impacted the durability of the cast zinc shot. Strict process control and an alloy of 96% zinc showed a 50% increase in durability from their previous products and a threefold improvement in durability over zinc cut wire products currently

on the market. Every lot of zinc shot produced at Transmet is tested for durability in their shot lab. Slightly harder than standard zinc shot Transmet's ZA4 shot has not only helped customers reduce the amount of shot used in their production, but in some cases, blast cycle times have been shortened by as much as 30%.

Source: [Casting Plant & Technology 2/2009, p.54](#)

## **Argon gas purifier**

This argon gas purifier supplied by Vijayesh Instruments is used in argon gas purging and moisture removal as well as spectroscopic and similar methods of analysis where an inert atmosphere is required for sample testing. The system uses stainless steel reagent tubes. The molecular sieve-reagent tube is located outside and the Mg-reagent tube inside the furnace at a controlled temperature. The Mg-reagent tube

lasts for several weeks or months depending on the degree of impurities and quantity of gas used. The molecular sieve-reagent tube can be replaced or regenerated for reuse. The unit is laid out for a maximum flow rate of 20 l/min. It is capable of removing oxygen, carbon dioxide, nitrogen and moisture.

Source: [Casting Plant & Technology 2/2009, p.55](#)



Argon gas purifying unit



## MIRDC Launches Provident Fund, Inducts Officers

The MIRDC Provident Fund (MPF) was established in compliance to Executive Order No. 641 institutionalizing Provident Fund as a measure of protecting the income of government employees in relation to Executive Order No. 462.

The Provident Fund is a saving scheme consisting of contributions from both the member-employees (in monetary form) and the employer (in monetary or non-monetary forms) which serves as a loan facility and provides supplementary welfare benefits to its members. It aims to provide the MIRDC officials and employees with benefits and loans for emergency needs to finance their education and that of their children, for their hospitalization and that of their dependents, for minor but immediately needed repair of their houses, and for other similar purposes as may be



MPF Officers taking their oath during induction

determined by its Board of Trustees.

The newly-elected officers and Board of Trustees of the MIRDC Provident Fund are Dr. Agustin M. Fudolig, Engr. Evelyn E. Gallardo,

Mrs. Carmen G. Quiambao, Engr. Fred P. Liza, Dr. Rio S. Pagtalunan, Mr. Sherwyne V. Farnican, and Mr. Rommel N. Adame.

## ANNOUNCEMENT FOR METAL MANUFACTURERS

The local metal manufacturers are encouraged to enlist, free of charge, their company's information on the "2009 Philippine Metal Products Directory." Companies who wish to advertise its products and services can reserve space with corresponding rates. Application/reservation forms are downloadable and can be filled out online through our website [www.mirdc.dost.gov.ph](http://www.mirdc.dost.gov.ph) or call ITPS at tel. nos. 8370764 and 8370431-38 loc. 463.

The publication serves as a promotional leeway to local companies engaged in metal-

working, e.g., machining, casting, electroplating, welding, tool and die, forging, and other metal-related activities. It contains company address, email, website, telephone and facsimile numbers.



## PGMA Approves 2009 IPP

President Gloria Macapagal-Arroyo has signed the 2009 Investment Priorities Plan (IPP), which is primarily intended to provide emergency assistance to industries affected by the global financial crisis.

“My administration has the critical task to preserve the momentum for sustained growth and to ensure that the employment possibilities for the Filipino people are optimized by assisting our industries withstand the crisis,” Arroyo said.

The Board of Investments (BOI), in coordination with other government agencies and the private sector, prepared the 2009 IPP as a measure to save and generate jobs and achieve strong investment performance.

The 2009 IPP is expected to open up opportunities to attract more quality investments into industries and

services that would maintain and improve the country’s competitiveness.

Under the preferred activities, this year’s version of IPP contains a contingency list, which covers existing projects affected by the global economic crisis that will retain investments and maintain current number of workers; retain investments and increase current number of workers; increase investments and maintain current number of workers; or increase investments and increase current number of workers.

Enterprises, including micro, small, and medium enterprises (MSMEs), which are covered in the list, may be entitled to income tax holiday (ITH).

The preferred activities under 2009 IPP:

- Agriculture/agribusiness and fishery
- Infrastructure
- Engineered products
- Tourism
- Business process outsourcing (BPO)
- Creative industries
- Strategic activities
- Research and development (R&D)

*Source: Philippine Business Report, DTI, June 2009*

## Analysis of Steel Consumption by Products in ASEAN Member Countries

### Scrap

Scrap consumption in the ASEAN region dropped by 5% to 15.5 million tonnes in 2008. However, import rose by 13% to 9 million tonnes. Export fell moderately to 2.1 million tonnes. Domestic supply in the region dropped dramatically from 10.6 million tonnes in 2007 to 8.7 million tonnes in 2008 (Fig. 1).

Thailand’s scrap consumption declined slightly by 4% to 5.3 million tonnes and accounted for 3.7% of total scrap consumption in the region.

Malaysia, the second largest consumer of scrap in the region, experienced a sharp decrease in scrap consumption of 19% to 4.1 million tonnes in 2008. Indonesia’s scrap demand registered 2.8 million tonnes, a marginal growth of 3% y-o-y. Vietnam, on the other hand, enjoyed a significant growth in scrap demand, at 20% to 2.4 million tonnes, and increased its share of total scrap demand in the region from 12% in 2007 to 15% in 2008. Meanwhile, the Philippines maintained its share in the region at 5% with a steady volume of 820,000 tonnes (Fig. 2).

ASEAN as a whole remained a net importer of scrap. Only Philippines and Singapore are net exporters of scrap with net export volumes of 704,000 tonnes and 236,000 tonnes, respectively. 33% of total scrap export from Philippines was to ASEAN countries. The Philippines also exported a significant volume of scrap to Taiwan, South Korea and China. Singapore’s scrap export to ASEAN accounted for 62% of its total export volume, most of which was to Malaysia and Indonesia (Fig. 3).

*Continuation on p12...*

Scrap Consumption in ASEAN (million tonnes)

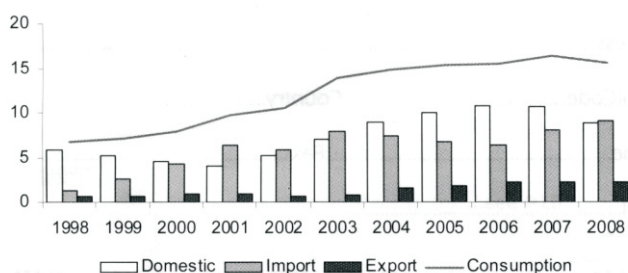


Figure 1

Scrap Consumption in ASEAN in 2007 million tonnes (%share)

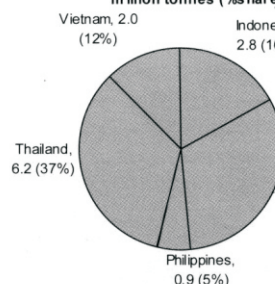
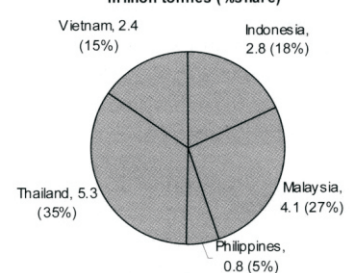


Figure 2

Scrap Consumption in ASEAN in 2008 million tonnes (%share)



# Seven New Management Tools

MIRDC employees are familiar with the seven statistical process control (SPC) tools having participated in the training/seminar conducted by Quality Improvement Teams (QIT) core group. The SPC tools were used by the teams to prepare their quality improvement projects. The tools include: pareto diagram, check sheet, histogram, scatter diagram, control chart, graphs and fishbone diagram. On the other hand, there is an equally important tools that have to be learned. These tools which are useful in planning and solving problems are called by the

Japanese as the Seven New Management Tools (N7), and are as follows: Tree diagram, affinity diagram, relations diagram, arrow diagram, process decision program chart, matrix diagram and matrix analysis.

## TREE DIAGRAM

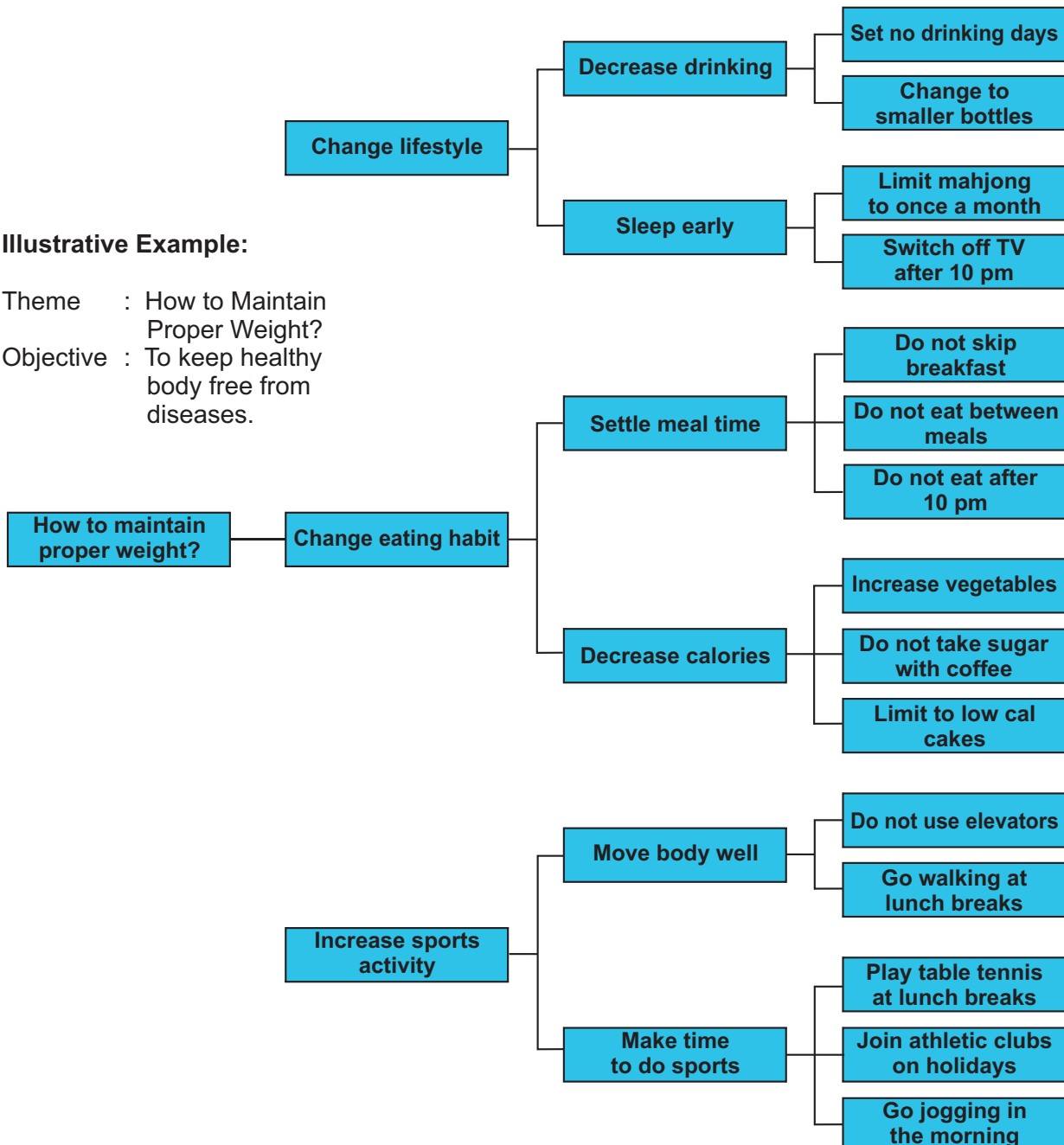
For the purpose of applying these to daily routine, here are the details of the said diagram.

Tree diagram is a systematic diagram or dendogram. This diagram

aids as a technique for searching the measures to solve a problem by arranging the relations among objectives and their measures of a problem and by examining them systematically. It is used in going through Problem Solving Techniques for Quality Improvement. Specifically, this is used in the observation and understanding of the current situation, formulating the countermeasures and documenting the standardization steps.

### Illustrative Example:

Theme : How to Maintain Proper Weight?  
Objective : To keep healthy body free from diseases.



# Special Feature .....



The actual field of application are:

- Deployment of design qualities in new product development
- Deployment of assurance qualities and relating them to Quality Control process chart to make the Quality Assurance activities more concrete.
- Use as cause and effect (fishbone) diagram.
- Deployment of ideas for problem solving in a company.
- Deployment of targets, policies, programs

- Clarification of division functions and searching measures for improvement.

The purpose is to search and find out the most adequate means in a series of target and means.

Features:

1. It makes the logical and systematic deployment of means to a problem possible and is effective in keeping selection of means from omission and insufficiency and allows

- further addition of new ideas.
2. All the deployed means are completely visible by members concerned, and it is useful in persuading the members and to have consensus on the adopted measures.

*Reference: JICA Training Materials on Implementation of Total Quality Management & Standardization Activities II.*

*Continuation on next issue...*

## Analysis of Steel...from p10

All in all, USA remained the largest source of scrap import for the ASEAN region. Total import of scrap from USA registered 2.3 million tonnes in 2008, a decline of 6% y-o-y. Intra ASEAN import, however, doubled in volume to 1.76 million tones in 2008, representing a share of 22% of total import volume, compared to the share of 11% in 2007.

*Source: Extracted from 2009 SEAISI Statistical Year Book, SEAISI Newsletter, July 2009 issue*

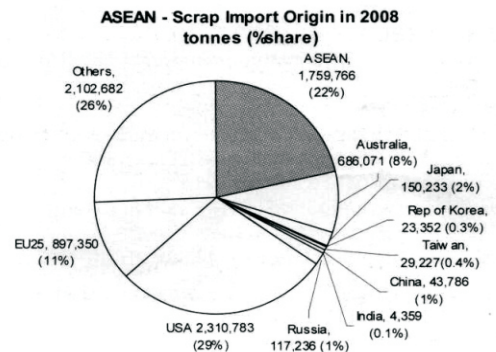
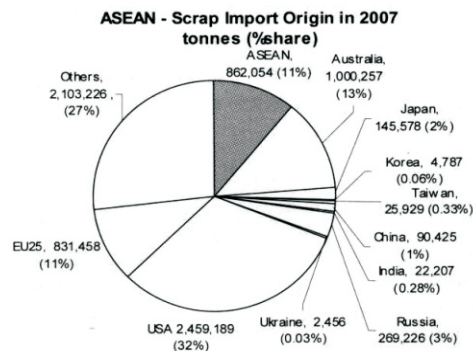


Figure 3

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