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A*STAR SIMTech and Singapore Workforce Development Agency (WDA) Collaborate on Singapore Workforce Skills Qualifications (WSQ) Programmes to Deepen High Value Skills and Productivity of Manufacturing Professionals

-Inaugural SIMTech Best WSQ Industry Partner and Most Inspiring WSQ Trainee Award Conferred

-Nine new training programmes to meet industry needs to be rolled out

Singapore, 11 July 2012: 805 engineers or 2322 SOAs (number of trainee-module) have been successfully trained through the 8 WSQ training programmes, funded by the Singapore Workforce Development Agency (WDA), and developed by the Singapore Institute of Manufacturing Technology (SIMTech), a research institute of the Agency for Science, Technology and Research (A*STAR). This partnership sets a solid foundation to provide technology courses enhanced with case-studies and hands-on lab sessions for manufacturing PMETs from various industry clusters to meet the technology and skills gaps (see Annex A).

2. 268 graduands from 126 organisations for the six PE WSQ training programmes in manufacturing processes, mechatronics, precision measurements, medtech and manufacturing operation management received their diplomas from Mr Wong Hong Kuan, Chief Executive of WDA. An inaugural award for the SIMTech Best WSQ Industry Partner and Most Inspiring WSQ Trainee were also conferred.

Success Stories

3. In recognition of the companies that have given strong support to the WSQ programmes conducted by SIMTech, the Best WSQ Industry Partner Award is presented to First Engineering; Makino Asia and Manufacturing Integration Technology. These companies have sent many of their PMETs for upgrading and applying the technology and skills in their organisations. The 'Most Inspiring WSQ Trainee Award' seeks to recognise trainees who have made significant progress in their careers and have deployed the knowledge learnt to make improvements in their organisations, resulting in benefits such as improvement in

productivity and profitability. The winners of the 'Most Inspiring WSQ Trainee Award' are Mr Leslie Tan, Managing Director of Royal Bussan Singapore; Mr Jeffrey Choo, Senior Sales Engineer of LT Bimetallic Engineering Singapore and Mr Andre Castillo, Principal Engineer of Manufacturing Integration Technology (see Annex B).

4. The 3 winners, like all the other trainees, have benefitted from the WSQ Courses. Mr Leslie Tan moved from being a Business Manager in a hard disk drive manufacturing company to become the Managing Director of Royal Bussan Singapore, a medical device company after he completed the PE WSQ Graduate Diploma in MedTech Manufacturing. The company will be expanding their business by introducing a new type of hearing aid in Singapore. Mr Jeffrey Choo, who completed the PE WSQ Specialist Diploma in Precision Engineering Programme, has been promoted and his job scope has expanded, while Mr Andre Castillo is able to integrate his knowledge in mechanics, electronics, control theory and computer science to design smaller and more reliable machines on completing the PE WSQ Graduate Diploma in Mechatronics Programme.

5. "SIMTech has been WDA's Continuing Education and Training partner since 2007, and our partnership has led to a range of productivity-focused WSQ programmes for PMETs in the PE industry. Through such programmes, trainees are able to acquire specialised skills that are highly valued by employers and the industry. WDA offers its heartiest congratulations to the graduands and award winners, and we look forward to further collaborations with SIMTech to deliver more leading-edge programmes that support the growth of the manufacturing sector," said Mr Wong Hong Kuan, Chief Executive, WDA.

New Training Initiatives

6. Knowledge transfer through the systematic manpower development programme is a strategic drive to improve manufacturing productivity and upgrade workforce skills of PMETs for long-term sustainability and competitiveness. To meet the future needs of the workforce, WDA and SIMTech will be developing nine new training programmes which include Master Classes to meet the emerging needs of companies and PMETs (see Annex C for details).

7. Commented Dr Lim Ser Yong, SIMTech's Executive Director, "SIMTech's training courses are unique as they are enhanced by case studies derived from our extensive experience in applying technologies to solve manufacturing problems for the local industry. The courses are conducted with hands-on practices in our state-of-the-art manufacturing research facilities. We are excited to share our knowledge and experience in the latest manufacturing technologies through these training courses to deepen the technologies expertise and skills

of PMETS and to accelerate the transfer of new technologies and knowledge from research labs to the industry.”

End

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About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A*STAR oversees 14 biomedical sciences and physical sciences and engineering research institutes, and six consortia and centres, located in Biopolis and Fusionopolis as well as their immediate vicinity.

A*STAR supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, and with other local and international partners.

For more information, please visit www.a-star.edu.sg.

About the Singapore Institute of Manufacturing Technology (SIMTech)

The Singapore Institute of Manufacturing Technology (SIMTech) is a research institute of the Science and Engineering Research Council (SERC) of the Agency for Science, Technology and Research (A*STAR). SIMTech develops high value manufacturing technology and human capital to contribute to the competitiveness of the Singapore industry. It collaborates with multinational and local companies in the precision engineering, electronics, semiconductor, medical technology, aerospace, automotive, marine, logistics and other sectors.

For more information, please visit www.SIMTech.a-star.edu.sg

About the Singapore Workforce Development Agency (WDA)

The Singapore Workforce Development Agency (WDA) enhances the competitiveness of our workforce by encouraging workers to learn for life and advance with skills. In today's economy, most jobs require not just knowledge, but also skills. WDA collaborates with employers, industry associations, the Union and training organisations, to develop and strengthen the Continuing Education and Training system that is skills-based, open and accessible, as a mainstream pathway for all workers - young and older, from rank and file to professionals and executives - to upgrade and advance in their careers and lives.

For more information, please visit www.wda.gov.sg

A*STAR SIMTech-WDA WSQ Upgrading Programme

Presently, the WSQ training programmes offered by SIMTech are:

PE WSQ Specialist Diploma in Precision Engineering

This programme equips PE professionals with cutting-edge technologies in precision machining and laser processing; metal and plastic forming; surface coating and engineering and advanced joining.

PE WSQ Graduate Diploma in Manufacturing Operations Management

This programme provides hands-on training to equip PE professionals in the principles in Manufacturing Operations Management which focuses on the effective planning, scheduling, use, and control of a manufacturing organisation through the study of concepts from industrial engineering, management information systems, production management, inventory management, and other functions as they affect the organisation. This programme relates to productivity by providing a total holistic solution for companies to leverage on the strong networks to facilitate sharing of technology, knowledge transfer, business development and manpower upgrading.

PE WSQ Graduate Diploma in Precision Measurements and Characterisation

This programme aims to enhance the capabilities of PE professionals to carry out methods, and techniques of precision measurements and characterisation required for a professional precision engineer. Through this programme, the participants will capture the basic knowledge, methods, techniques, and skills on optics and laser, precision dimensional measurements, metrology, precision instruments, data analysis, material testing and characterisation, and measurement standards. Besides these basic measurement technologies, participants will also acquire advanced knowledge of the latest technology trends in precision measurements. The course is conducted by both local and international scientists from NIST (USA), renowned for its excellent track record in precision measurements.

PE WSQ Graduate Diploma in Mechatronics

This programme is designed to train participants in applying multi-disciplinary and integrated approaches to design. This would help them develop high-end, value-added industrial equipment and products such as precision machining tools, semiconductor equipment, as well as measurement and optical instruments. It provides participants with the unique opportunity to learn and apply the competencies for increasing accuracy, throughput, and functionality in equipment and product design.

PE WSQ Graduate Diploma in Factory Visibility and Control

This programme is designed to provide both the fundamental and practical knowledge in the application of manufacturing execution and control technology for improving shop floor productivity and efficiency. Specifically, trainees will be trained on the application of manufacturing execution systems, supervisory control, real-time track and trace, advanced process monitoring and optimisation technologies with advanced data mining, and predictive machine health monitoring incorporating advanced diagnostic and prognostic techniques.

PE WSQ Graduate Diploma in MedTech Manufacturing

This programme aims to equip existing engineers and technical specialists with the dedicated knowledge and skills related to MedTech and manufacturing technology to regulatory requirements, product design and innovation, manufacturing processes and validation, quality control systems, and manufacturing management systems.

WSQ Graduate Diploma in Process Technology (Sustainable Manufacturing)

This programme aims to provide fundamental training on sustainable manufacturing. The 6-module course encompasses Carbon Footprint Quantification and Reduction; Eco-design for Green Products; Develop and Manage Green Supply Chain; Evaluate Materials for Environmental Sustainability in Manufacturing; Evaluate Energy Efficiency and Use of Alternative Energies in Sustainable Manufacturing; and Recover and Recycle Material Resources in Manufacturing Process.

WSQ Operations MaNagement Innovation (OMNI) Programme

This programme combines cutting-edge knowledge in operations management, technical tools developed by SIMTech on Operations Management Innovation Methodology or OmniMethodology™ and case studies from SIMTech's industrial engagement and implementation. The programme has successfully helped 36 companies that adopted OmniMethodology to achieve a quantum leap in productivity improvements ranging from 10% to 230%.

Success Stories

Two inaugural awards, namely PE WSQ Best Industry Partner Award and Most Inspiring WSQ Trainee Award were conferred at the SIMTech-WDA Precision Engineering WSQ Graduation Ceremony.

Best Industry Partner Award

In recognition of the companies that have given strong support to the WSQ programmes conducted by SIMTech, this award is presented to:

- First Engineering
- Makino Asia
- Manufacturing Integration Technology

These companies have sent many PMETs to upgrade their skillsets to apply technology in their organisations.

Mr Eddy Lim, Vice President, Manufacturing Integrated Technology

We are pleased with the training that our employees have received and the skills that they learnt have been very visible in their work in the company. We are impressed with the dedication of the SIMTech trainers in ensuring that each of the trainees have ample hands-on experience in the latest technology and a sound understanding of the major Mechatronics issues that we face today.

Not just have our employees benefitted from undertaking this course, but the benefits to the company in terms of a better trained workforce have been tremendous. We look forward to sending more employees to such training with SIMTech in the future."

Dr Moh Chong Tau, Managing Director, Makino Asia

"Makino Asia has been associated with the SIMTech PE WSQ training courses since its beginning. We have been regularly sending our employees for various courses conducted by SIMTech such as the WSQ Diploma Courses and the Master Class. In each type of training, we have been pleased to see the direct benefits of the training on our company's productivity and efficiency. Regular training in the precision engineering industry is extremely critical to staying ahead of the competition and the courses conducted at SIMTech are catered to this.

Makino Asia is a proud supporter of the PE WSQ courses conducted at SIMTech and we wish them all the best in identifying more critical areas for training. We will surely continue to send our employees for niche skills upgrading at SIMTech as the benefits to company and employee are obvious!"

Mr KC Tan, General Manager, First Engineering

"The courses and the training provided by SIMTech are in line with our customer needs."

Most Inspiring WSQ Trainee

In addition to the Most Inspiring WSQ Trainee, other graduands who have benefitted from the Precision Engineering Work Skills Qualifications Programme are:

Leslie Tan, Managing Director, Royal Bussan Singapore**Taking the Plunge**

"The PE WSQ Graduate Diploma in Medical Technology Manufacturing was the turnaround in my career. The diploma course showed me what the MedTech industry entails and opened new possibilities. From being a Business Manager in a hard disk drive company, I am now the managing director of Royal Bussan Singapore, a medical device company. As

its major shareholder, I am steering the direction of the company and growing its business. I am now bringing a new type of hearing aid into Singapore to benefit the medical community.”

Jeffrey Choo, Senior Sales Engineer, LT Bimetallic Engineering Singapore

Growing Opportunity

“The PE WSQ Specialist Diploma in Precision Engineering programme broadened my knowledge on engineering concepts, processes and exposed me to areas I have not worked on before. After attending the course, I understand the reasons why things worked in certain ways and understand engineering concepts better. I was promoted to the position of Senior Sales Engineer. The expanded job scope offers me the opportunity to work on product design.”

A*STAR SIMTech-WDA WSQ Upgrading Programme

The new training programmes to be rolled out are:

-Four new Master Classes on:

- Biomedical Technology for medical device manufacturing and commercialisation
- Energy Efficiency Management Systems in Manufacturing
- Automated Health Management of Engineering Assets
- Industry Competitive Intelligence

These Master Classes are identified to help local companies to capture the emerging innovative technologies for new business opportunities or, for improvement of production efficiency and productivity. They are conducted by internationally renowned experts on the respective topics in collaboration with SIMTech researchers.

-Three new WSQ graduate diploma programmes in the areas of Manufacturing Processes, Corrosion and Corrosion Prevention, and Surface Engineering. These programmes are designed to meet the needs of companies involved in either metal-based or polymer-based product manufacturing. Essential technical skills and competency required for fabricating high-value engineering products in manufacturing processes of forming, machining, joining, surface engineering and corrosion protection will be provided through practical training.

-Two programmes on in-demand Production Planning and Scheduling in the e-Learning format, enhanced with hands-on practical training. E-Learning will make the WSQ programmes more accessible and flexible, so that many more can benefit.