SPEECH BY DR KOH POH KOON, SENIOR MINISTER OF STATE, MINISTRY OF TRADE AND INDUSTRY & NATIONAL DEVELOPMENT, AT THE 25TH ANNIVERSARY OF YAMAZAKI MAZAK'S MANUFACTURING PLANT IN SINGAPORE, ON TUESDAY, 20TH JUNE 2017, 10.05AM

Mr. Tomohisa Yamazaki, President & CEO of Yamazaki Mazak,

Mr. Toshimitsu Kito, Managing Director of Yamazaki Mazak Singapore,

Distinguished guests,

Ladies and Gentlemen,

Good morning.

Opening remarks

1. I am pleased to join you today to celebrate Yamazaki Mazak's 25th anniversary in Singapore.

2. Yamazaki Mazak opened this manufacturing plant in 1992, to tap on Singapore's skilled workforce for the production of high-precision components. As Singapore's economy shifted towards higher value-added activities, the company also grew, expanding into final assembly, testing and turnkey solutions. During the 2008 financial crisis, the company doubled its production capacity here and transferred global product charters to Singapore.

3. Today, Yamazaki Mazak Singapore is the company's top production facility for tool-holders globally, employing over 280 workers. Singapore is also the company's Regional Headquarters for Southeast Asia, and a leading hub for R&D activities. The company's latest investments in advanced manufacturing, including Smart Factory solutions and additive manufacturing, represent another significant milestone in the strong partnership between Yamazaki Mazak and Singapore.

Advanced manufacturing technologies are transforming the manufacturing sector.

4. Advanced manufacturing technologies, such as robotics, additive manufacturing and the Industrial Internet-of-Things, are transforming the manufacturing sector, changing the way products are created and supply chains are organised. Companies are increasingly harnessing these technologies to develop Smart Factories, where data from machines is continuously collected,

analysed and disseminated, thereby enabling greater flexibility and productivity in manufacturing processes.

5. Advanced manufacturing technologies are also creating new growth markets. Take the example of additive manufacturing, which has the potential to inject greater speed and customisation into the product development and prototyping process. Analysts expect the global additive manufacturing market to grow by more than 20% per annum from 2015 to 2020, from US$6 billion to US$20 billion.

The Government is committed to preparing our manufacturing sector for the future, by investing in advanced manufacturing technologies and equipping our workforce with the requisite skills.

6. Manufacturing is a key pillar of the Singapore economy, contributing about 20 percent of GDP and 14 percent of total employment in 2016. Productivity in the manufacturing sector increased by 6.4% per annum from 2009 to 2016, compared to the economy average of 2.6%. Manufacturing therefore contributes significantly to our overall productivity growth, as well as generates positive spinoffs for the rest of the economy.

7. The Committee on the Future Economy (CFE) recommended the building of a globally competitive manufacturing sector, at around 20% of GDP over the medium term. To achieve this, the CFE has identified advanced manufacturing as one of the key growth areas for Singapore. Digital manufacturing is also a key thrust under the Precision Engineering (PE) Industry Transformation Map (ITM), which was launched in October 2016 by our Minister for Industry, Mr S Iswaran.

Investments in advanced manufacturing

8. The government is committed to investing in advanced manufacturing technologies, and supporting its adoption by our companies.

9. Under the Research, Innovation and Enterprise (RIE) 2020 plan, we have set aside S$3.2 billion for Advanced Manufacturing and Engineering, to develop capabilities in areas such as additive manufacturing, digital manufacturing, robotics and automation, and advanced materials.

10. The government will continue to partner leading industry players such as Yamazaki Mazak to build up our capabilities in advanced manufacturing. I am pleased to note that Yamazaki Mazak will implement its new iSMART Factory in Singapore, which will enable digitalised factory management by connecting machines across the shopfloor to the office level. Managers and production

workers alike will be able to view the latest manufacturing and administrative updates from any desktop computer or mobile device. The iSMART Factory will also provide a suite of software applications to optimise tasks such as production planning and tool management. Altogether, this initiative is expected to significantly increase Yamazaki Mazak's manufacturing productivity.

11. Besides the iSMART Factory, Yamazaki Mazak will also be opening its Additive Manufacturing Solutions Engineering Centre ("AMSEC") in Singapore, which will showcase the company's latest additive manufacturing equipment. Under AMSEC, local companies will be able to partner Yamazaki Mazak to co-develop a diverse range of products and processes, from fine medical instruments to heavy industrial parts in offshore rigs and aircraft engines.

12. Such partnerships are an important enabler for industry transformation, and I encourage Yamazaki Mazak to continue to seek collaboration opportunities with our local companies. This will help us collectively to realise the potential of advanced manufacturing.

Equipping our workforce with the requisite skills

13. As we transform our manufacturing sector, new job opportunities that require deeper skills and knowledge will be created. Under the PE ITM, an additional 3,000 PMET jobs are expected to be created in the PE industry by 2020. The government is committed to equipping our workforce with the requisite skills to take on the new job opportunities.

14. As part of the ITM process, we are developing Skills Frameworks, which will help employers and employees to identify key skills and competencies required for different job roles. The Precision Engineering (PE) Skills Framework was launched together with the PE ITM in October 2016. We will also continue to partner our Institutes of Higher Learning (IHLs) to build a talent pipeline for advanced manufacturing. For example, we currently have over 100 postgraduate students at Nanyang Technological University (NTU) enrolled in additive manufacturing courses.

15. Companies and workers must also play their part in identifying and participating in training opportunities. Mr. Stephen Lee is a good example of how workers can advance in their careers, with training support from their companies. Mr. Lee first joined Yamazaki Mazak in 1990 with a Diploma in Manufacturing from Singapore Polytechnic. He started off as a Manufacturing Associate, working on frontline machining tasks. With the company's support, Mr. Lee participated in technology transfer courses in Japan, where he was trained to use advanced equipment and manufacturing methods. Yamazaki Mazak also sponsored Mr. Lee to complete a Masters in Engineering Science. Today, Mr.

Lee is the General Manager of the company's Machine Tool Division, responsible for overseeing operations for the production and assembly of Yamazaki Mazak's CNC machines.

16. I am pleased to hear that Yamazaki Mazak will continue investing in training and upgrading its workers here, including providing opportunities to work on new roles related to the iSMART Factory and additive manufacturing.

Concluding remarks

17. Let me close by reiterating the government's commitment to working with all our industry partners to prepare our manufacturing sector for the future, by investing in advanced manufacturing technologies, and equipping our workforce with the relevant skillsets for the future.

18. I am confident that Yamazaki Mazak's latest investments will better position Singapore to capture the opportunities in advanced manufacturing. We look forward to deepening our partnership with Yamazaki Mazak, and wish the team every success for the future. Thank you.