# NEWSLETTER MALAYSIAN TIN PRODUCTS

QUARTERLY | JANUARY - MARCH 2021







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## NIHON SUPERIOR (M) SDN BHD



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- Liquid Flux
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- Solder Preform
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## **Solving the Laser Soldering Problems of Slow Wetting and Spattering**



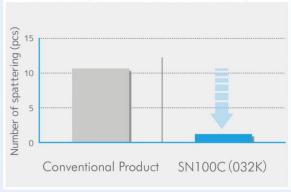




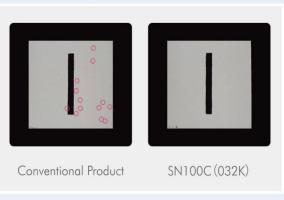


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# THE MALAYSIAN TIN PRODUCTS NEWSLETTER

QUARTERLY | JANUARY - MARCH 2021

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ASSOCIATION MEMBERS

# PRESIDENT'S NOTE

Dear Members,

It has been a year since Malaysia imposed its first Movement Control Order (MCO) 1.0 on 18 March 2020 to combat the spread of the Covid-19 pandemic. The initiative was highly successful in keeping the numbers down, and Malaysia won accolades from numerous quarters globally. The MCO 1.0 ended on 3 May 2020, but Malaysia continued with its efforts to contain the pandemic through the imposition of targeted MCOs in areas with unusually high number of infections. Just when the pandemic was thought to be under control, complacency sets in, and in September 2020 a second wave struck in the aftermath of the Sabah State Election. Attendees at the State Election's rallies and gatherings brought back the infections to Peninsular Malaysia, and soon the situation went out of control. The Government had to impose MCO 2.0 on 13 January 2021 with lockdowns of all non-essential activities in the Federal Territories of Kuala Lumpur, Putrajaya and Labuan, and the States of Selangor, Penang, Melaka, Johor and Sabah.

Fortunately, amidst the imposition of the MCO 2.0, the Government managed to secure sufficient supply of the Pfizer, Astra Zeneca and Sinovac vaccines to kick start its National Covid-19 Immunisation Programme (PICK) on 24 February 2020. PICK will be undertaken in several phases, starting with the First Phase for frontliners followed by the Second Phase for senior citizens aged 60 years and above, and those with co-morbidities and chronic diseases. The Third Phase will be for adults 18 years old and above. It is hoped that employees in our industry would also be given priority in the vaccination programme so that they could return to work and help boost the economy.

Resulting from the Covid-19 pandemic, Malaysia recorded another contraction in its GDP of -3.4% in Q4 2020, bringing the country's overall GDP for the year 2020 to -5.6%. This figure is quite respectable when compared to our neighbouring countries, such as Myanmar with -10.0%, the Philippines -9.6%, and Thailand -6.1%.

The RM320 billion of economic stimulus packages instituted by the Government in 2020 had successfully cushioned the impact of the pandemic. The Government has pledged to provide further financial assistance in 2021 with RM15 billion under the *Perlindungan Ekonomi dan Rakyat Malaysia* (PERMAI) schemes to help business and industries to pull through the aforementioned MCO 2.0 lockdowns.

Despite the gloomy global economic situation, the tin market reacted the opposite direction. Tin prices continued to strengthen from US\$20,000 per tonne level on the Kuala Lumpur Tin Market (KLTM) in January 2021 to surpass the US\$27,000 per tonne level in March 2021. This was largely contributed by strong demand, especially from the electric and electronic (E&E) sector and insufficient tin supply globally. As tin-based manufacturers, we have no choice but to face and bear with the increasing prices of this essential raw material, and more so in securing its constant supply for our production needs.

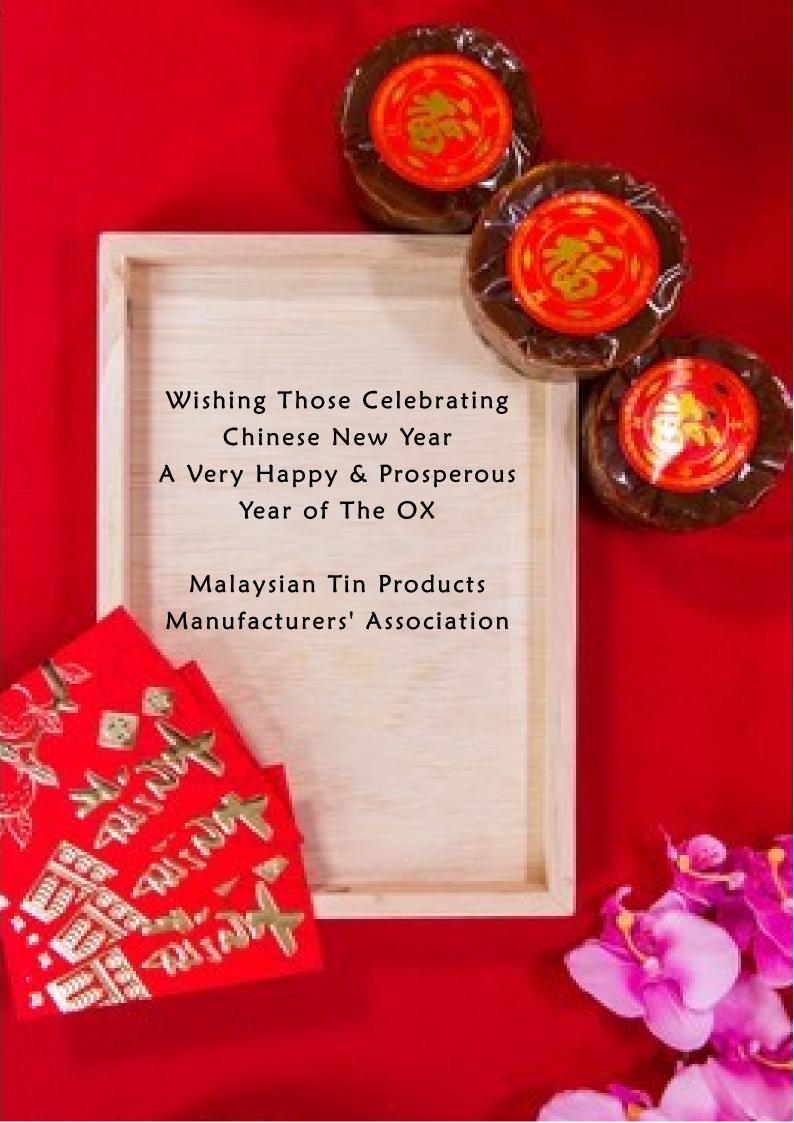
In concluding this brief President's Note, I would like to urge all members to encourage their staff to register for the Covid-19 vaccination through the *MySejahtera* app. It is important that the herd immunity be achieved in order to return to some form of normalcy.

With warmest regards.

New Wei Aun



YEW WEI AUN
PRESIDENT
THE MALAYSIAN
TIN PRODUCTS
MANUFACTURERS'
ASSOCIATION
(MTPMA)



## **ECONOMY NEWS**

#### IPI seen to Rebound in Second Quarter

The industrial production index (IPI), a measure of the rate of change in the production of industrial commodities, will likely stage a rebound in the second quarter but at the same time, there may be a challenge for the economy to achieve the Budget 2021 growth target. The IPI contracted 2.2% in November 2020 compared with the same month in the previous year. It is expected to come under pressure in the first quarter of 2021 before gaining momentum in the subsequent quarters. The IPI measures the rate of change in the production of industrial commodities in real terms over time for the manufacturing, mining and electricity sectors.

According to economists, the Covid-19 resurgence would impact the IPI figures at least in the first quarter. The current movement control order (MCO), which was implemented in six key states, contributes over 60% of the national economy. The two-week MCO started on January 13 until January 26, subject to further reviews. They six states involved are Selangor, Penang, Johor, Sabah, Melaka and the three federal territories (Kuala Lumpur, Putrajaya and Labuan).

Sunway University professor of economics Yeah Kim Leng told StarBiz the current trend suggested the latest MCO would likely see the IPI remaining in slightly negative territory in the first quarter and turn positive in the second quarter, largely due to the low-base effect. "The manufacturing sector, which carries nearly 70% weightage in the IPI, continues to show positive growth of 3.1% in the third quarter and an estimated 2.1% in the fourth quarter. With manufacturing exports likely to stage a stronger rebound on the back of the anticipated global recovery powered by China and US, the outlook for Malaysia's industrial production in 2021 remains favourable despite the latest MCO," he noted.

The IPI is estimated to fall by -3.5% in 2020, he said, adding that it is forecast to expand by 4%-5% this year, supported by the recovery of domestic and global demand. The resurgence of the pandemic would at the same time make it more challenging to hit the 6.5%-7.5% gross domestic product (GDP) growth expected in Budget 2021, he said. Given the continuing pandemic threat, the likelihood of MCO extension and the time needed for mass vaccination rollout, Yeah said the 5.5%-6.5% range may be a more realistic expectation for GDP growth this year.

AmBank Group chief economist Anthony Dass agrees that the GDP growth target set for Budget 2021 would pose a challenge. With the ongoing uncertainties over the Covid-19 cases and restrictive measure, he said more downside risk prevails at the moment, especially with the drag likely to be felt in the first quarter. The potential growth of the GDP would depend on the efficacy of the Covid-19 vaccine. He noted that the restrictive measures are expected to weigh on

domestic spending. "Pressure on the job market with more being laid off would hurt domestic spending. This, in turn, will impact manufacturing production volume and sales. A more subdued output and new order will thus weigh on the IPI. Concern in the coming months is the rising Covid-19 that may lead to tighter restrictions locally and abroad. It would also effect production for both trade and domestic-oriented industries," Dass noted. However, he said, the recovery in China's production would help moderate the decline in the domestic industrial production in the near future. Besides, he said, Budget 2021 should provide some positive impetus.

Juwai IQI chief economist Shan Saeed views the declining IPI numbers as short term. With the economy slowly picking up amid the implementation of the MCO, he expects the government to come up with structural and economic policy levers to bolster the economy. "We expect manufacturing to lead the way for IPI to grow faster and better than many other economies in Asean. The notable sectors to watch out for will be semiconductor, transportation and logistics as well as rubber, plastics and petroleum. IPI will pick up the momentum, moving stronger in the second half with domestic and global economic recovery in a structured way. China and Asean markets are the key to the growth landscape," Shan said.

OCBC Bank economist Wellian Wiranto agrees that the level of industrial production may see a decline overall in the first quarter due to the relative pullback in economic activities due to the MCO. He said this might be felt especially in the electricity industrial production sub-component from the suspension of normal business activities for those sectors that are not deemed essential. However, he said, the degree of pullback may be mitigated by the fact that the manufacturing sector - which is a key component of the overall IP index - remains open due to its essential classification. "We have cut our growth forecast from 6% to 5.7% for the whole year and see a chance that GDP growth may dip into -0.1% year-on-year in the first quarter," Wellian noted.

Bank Islam Malaysian Bhd chief economist Mohd Afzanizam Abdul Rashid noted that the manufacturing sector, especially the electrical and electronics, would be the growth driver for IPI to rebound. He said the outlook for the IPI for 2021 is expected to be subdued, especially the mining-related sector, as the country is also participating in the production cuts under the Opec+ agreement. "The downside risks are highly visible and we expect business and consumer sentiments to remain weak. The government will need to play an active role to curb the virus spread and at the same time, keeping the economy and businesses afloat," Afzanizam said.

Source: The Star, 18 January 2021

## SEMICONDUCTOR INDUSTRY NEWS

# Chip Assembly and Test Providers in the Spotlight

The continued rise in global demand for semiconductor amidst the gradual economic recovery bodes well for local outsourced semiconductor assembly and test providers. Global semiconductor sales grew 1% month-on-month (m-o-m) and 13.2% year-on-year (y-o-y) in January 2021 to US\$40bil. According to TA Securities, this was the first-time that sales growth on a y-o-y basis crossed into the double-digit territory since the start of the upcycle in February 2020. "This aligns with the strong chip demand and loadings local semiconductor players are seeing," it said in a note yesterday. The World Semiconductor Trade Statistics organisation projected that global semiconductor sales would grow 6.6% to a record high of US\$469.4bil in 2021.

By geography, January's m-o-m sales were driven by China (+3.4% m-o-m), Europe (+2.0% m-o-m), and Asia-Pacific (all others) (+1.5% m-o-m) while sales eased in Americas (-3.0% m-o-m) and Japan (-1.0% m-o-m). Meanwhile, the strong monthly sales growth of 13.2% y-o-y remained driven by all regions. Except for Americas (+15.4% y-o-y), all other regions recorded accelerated growth led by Asia-Pacific (All Others) (+16.0% y-o-y), China (+12.4% y-o-y), Japan (+9.6% y-o-y), and Europe (+6.4% y-o-y). "Billings started off strong as well, with January 2021's higher 13.4% m-o-m and 29.9% y-o-y to US\$3.04bil. This also marked monthly billings at a record high and the first time it touched the US\$3bil mark," said TA Securities. The robust growth for semiconductor equipment was mainly attributed to accelerating digitalisation amidst the pandemic.

The research house said billings in 2021 are expected to increase further, driven by continued investments across both the front and back end, especially with fabs expanding capacity to meet current global chip shortage. "This is also on top of the advancements to leading-edge nodes, growing commercialisation of 5G, and robust fab investments in China amid efforts to achieve chip self-sufficiency," it added. Given the robust demand, TA Securities reiterated its "overweight" stance on the semiconductor sector, with "buy" recommendations on Inari Amertron Bhd, Unisem (M) Bhd and Malaysian Pacific Industries Bhd (MPI) and Elsoft Research Bhd.

"Within our semiconductor universe, we continue to favour outsourced semiconductor assembly and test providers including Inari, Unisem and MPI for their clear order visibility and robust earnings growth prospects. Their pipeline is generally strong, backed by emerging areas including global 5G rollout, accelerating digitalisation amid the Covid-19 pandemic, as well as prospects of a global economic recovery," it said. Key downside risks to TA Securities' recommendation include a prolonged Covid-19 pandemic weighing on economic growth and sentiment, a prolonged

and heightened trade war, weaker-than-expected sales, and a weakening of the US dollar against the ringgit.

Source: The Star, 7 January 2021

#### Industry shows Resilience

Global semiconductor sales hit the highest monthly sales in two years in November, demonstrating the sector's resilience to the Covid-19 pandemic and economic headwinds. Sales in November climbed a further 1.1% month-on-month and 7% year-on-year to US\$39.4bil. Year-to-date, numbers are up 5.6% to US\$396.9bil, said TA Securities in a report. "The outlook remains bright with the World Semiconductor Trade Statistics organisation forecasting global semiconductor sales to grow further from US\$433.1 (+5.1%) in 2020 to a record high of US\$469.4bil (+8.4%) in 2021," it added.

By geography, November's m-o-m sales growth was driven by almost all regions except for Asia Pacific (-0.5%). Meanwhile, the sales growth of 7% y-o-y was underpinned by Americas (+12.5%), the accelerated growth from China (+6.5%), Asia Pacific (+6.5%), Japan (+5.1%), and a moderated contraction from Europe (-0.7%). Billings in November eased slightly by 1.4% m-o-m but grew 23.1% y-o-y to US\$2.6bil. Year-to-date, billings are up robustly by 24.3% to US\$27.1bil.

TA noted that billings are expected to grow further in 2021, underpinned by continued investments across both the front and back end. This is alongside the advancements to newer nodes, emerging technologies including 5G, Internet of Things and artificial intelligence, as well as robust investments in China amid localisation efforts. "In all, we reiterate our 'Overweight' stance on the semiconductor sector with maintained recommendations of 'Buy' on Inari Amertron Bhd (target price: RM3.26), Unisem (M) Bhd (TP: RM6.73), and Malaysian Pacific Industries Bhd (TP: RM29.40)," TA said.

The research firm continues to favour out-sourced semiconductor assembly and test providers including Inari, Unisem, and MPI for their robust earnings growth prospects. It said these companies' earnings visibility remained strong with their pipeline backed by emerging trends including global 5G rollout, increasing digitalisation amid the Covid-19 pandemic, as well as prospects of a global economic recovery. However, key downside risks remain to its recommendation including a prolonged Covid-19 pandemic weighing on economic growth and sentiment, a prolonged and heightened trade war and a weakening of the USD against the ringgit.

Source: The Star, 4 March 2021

# ELECTRICAL & ELECTRONIC INDUSTRY NEWS

# Global Semicon Industry Set to Soar in Fabrication Equipment Spending

The global semiconductor industry is on track to record a rare three consecutive years of record highs in fabrication equipment spending, the Semiconductor Equipment Manufacturers Industry (SEMI) says. It said that the increased investments in the fab equipment would be fuelled by surging pandemic-inspired demand for electronics devices. In its quarterly World Fab Forecast report, SEMI said after the 16% increase in 2020, it forecasts an increase in investments of 15.5% this year and 12% in 2022.

"Fabs worldwide will add about US\$10bil (RM41bil) worth of equipment in each of the three years as spending climbs to top US\$80bil at the end of the forecast period. "Explosive demand for electronics that are the backbone of communications, computing, healthcare and online services sectors that mounted robust responses to the Covid-19 outbreak as the world rallied to curb the coronavirus's spread - account for much of the spending," it said. SEMI said fab equipment spending has historically been cyclical, with one or two years of growth typically followed by a downtrend of roughly equal length.

The semiconductor industry last saw three straight years of fab equipment investment growth in a run that started in 2016. It was nearly 20 years before that streak that the industry recorded an expansion of at least three years. In the mid-1990s, the chip industry recorded a four-year period of growth. "The bulk of fab investments in 2021 and 2022 will be seen in the foundry and the memory sectors," it said. SEMI pointed out that driven by leading edge investment, foundry spending is expected to growth 23% in 2021, reach US\$32bil and flatten in 2022.

Overall memory spending will increase in the single digits to reach US\$28bil in 2021 while dynamic random access memory (DRAM) will surpass NAND Flash, and then surge by 26% in 2022 on the strength of both DRAM and 3D NAND investment. It also said the power and microprocessor unit (MPU) segment will also see strong spending growth over the forecast period. "Power is forecast to show strong investment growth of 46% and 26%, respectively, in 2021 and 2022 driven by strong demand for power semiconductor devices. MPU will add to the momentum with 40% growth in 2022 as microprocessor investments increase," it said. SEMI said the World Fab Forecast report lists 1,374 facilities and lines globally, including 100 future facilities and lines with various probabilities that will start volume production in 2021 or later.

Source: The Star, 18 March 2021

# Business Continues for Electronics Firms

Companies in the country's electronics manufacturing sector will carry out their business strategies as planned despite the Movement Control Order (MCO). "We are all familiar with the standard operating procedures (SOPs) to curb the spread of Covid-19, which don't interfere with the production process. The requirement for only 30% of the management staff to be allowed at the office doesn't slow down production, as the supervision and management could also be done virtually and remotely,"

Globetronics Technology Bhd chief executive officer Datuk Heng Huck Lee said. Heng, however, said the prolonged closure of the borders was a concern because it would deter new investments from entering the country. Potential customers are facing difficulties in carrying new site certifications and qualifications because they cannot travel in and out of the country without having to undergo quarantine. We already have a customer from China delaying their project with us. If the borders open up soon, we plan to allocate up to RM65mil to expand our operations this year," he said.

According to Heng, the group's business plans for 2021 would carry on as planned. "We have four new projects for this year and beyond, which will boost our growth and bottom line starting from the first half," Heng said. According to Heng, the group will spend about RM11mil to build a 25,000-sq-ft of factory space, equipped with a clean room facility. "Construction of the facility will start before year-end and it will support the production of advanced smart sensors. We are allocating RM34mil to upgrade our design and development and the digitalisation of our sensor operation with Industry 4.0 capabilities," he added.

MMS Ventures Bhd managing director T.K. Sia said the MCO would not disrupt the group's efforts in securing new projects this year. "We are negotiating with a China-based customer to purchase our test-equipment to check sensors in 5G smartphones. If successful, we could see a sale of about RM30mil worth of test-equipment to the customer in China. The restriction on overseas travelling, however, will check forthcoming investments, as our customers will not be able to visit us to qualify our facility here," Sia added.

Pentamaster Corp Bhd chairman C.B. Chuah said international travelling restriction during the MCO period is a major issue. "During the MCO, are the foreign embassies opened? Can we still obtain visas to travel although we are in the essential services? Some 80% of our customers are in the US, China, Japan, Taiwan and Europe. If we can't travel to install the test-equipment, that could be a problem for getting new customers.

Our order book for the first quarter of 2021 is already filled up. Barring unforeseen circumstances such as a delay in the shipment of orders, our sales for the first quarter of 2021 should improve by a double-digit percentage over the corresponding period of 2020," he said. Chuah said entry-level 5G and 4G smartphones would drive demand in emerging markets. He said a Digitimes Research Report showed that demand for these devices are expected to reach over 1.5 bullion units in 2023 and 1.7 billion units in 2025. "We expect to rebound strongly in 2021," he added.

According to Taiwan-based market intelligence provider Trend-Force, because of the Covid-19 pandemic, the global smartphone production reached a mere 1.25 billion units in 2020, a record-breaking 11% year-on-year drop. It said the top six smartphone brands ranked by production volume for 2020, in order, are Samsung, Apple, Huawei, Xiaomi, OPPO and Vivo. The most glaring change from the previous year is Huawei's market share. Looking ahead to the rest of 2021, TrendForce believes the global smartphone market will gradually recover as people become accustomed to the new normal resulting from the pandemic. "Moreover, this year will likely see a relatively strong wave of device replacement demand a well as demand growth in the emerging markets. Assuming that these conditions will materialise, the annual global smartphone production for 2021 is forecast to increase by 9% to 1.36 billion units," TrendForce said.

Source: The Star, 9 January 2021

# Grow the E&E Golden Goose up The Value Chain

To drive the electrical and electronics products (E&E) industry in Malaysia to new heights, there must be government support for improved tax incentives for local companies and foreign investors, strategies to attract and develop talent, policies to boost local capabilities in designing integrated circuits (IC) and industrial software, as well as campaigns to encourage buying locally produced components and machinery.

Electrical and Electronics Productivity Nexus (EEPN) chairman Datuk Seri Wong Siew Hai says the E&E industry is a leader in back-end manufacturing (assembly, test and packaging) which contributes only 10% to the value of the finished semiconductor chip. According to a study by the Belfer Centre for Science and International Affairs, Harvard Kennedy School in July 2020, the remaining 90% are contributed in equal portions by front-end manufacturing (wafer fabrication), and design and development. "This does not mean we are not doing well, because back-end manufacturing also

involves high technology. However, we should also develop our capabilities into high value areas where we are lacking such as design and development," says Wong.

EEPN is an industry-drive and government supported initiative that was formed in 2017 under the Ministry of International Trade and Industry's Malaysia Productivity Corporation (MPC), to boost the E&E industry's contribution to the national economy. The E&E industry is among the nine priority subsectors within the Malaysia Productivity Blueprint (MPB), launched in May 2017 as part of the 11<sup>th</sup> Malaysia Plan, that were identified as having high growth potential for the country. Wong, who has spent three decades in the E&E industry, and was formerly Intel's vicepresident of technology and manufacturing group, says the sector's importance to the Malaysian economy since 1972 cannot be overstated. He points out that statistics showed that in 2019, the industry accounted for 6.3% of the country's gross domestic product (GDP) and employed 560,000 people.

According to Malaysian Investment Development Authority (MIDA), the E&E industry is the single largest contributor to the manufacturing sector, and was the country's largest export earner in 2019, with exports totalling RM372.67bil or 44.7% of all manufacturing goods exported. In 2019, the E&E industry also recorded the highest approved investments, at RM25.65bil or 31% of the total RM82.71bil. These approved investments in 157 E&E projects are expected to create 22,936 jobs. The 2018/2019 Economic Impact Survey report by MAEI noted that Malaysia is the seventh largest E&E exporter in the world, with more than 100,000 jobs being created in this sector. Malaysia's top five export destinations in 2019 were Singapore, Hong Kong, United States, China and Japan, with Singapore accounting for the lion's share of 16.2% of all E&E exports, amounting to RM60.42bil.

Wong explains that the country's E&E industry is known for its manufacturing strengths in semiconductor assembly test and packaging, storage, electronics manufacturing services (EMS), medical devices, light-emitting diodes (LEDs), solar systems, and industrial electronics as well as global business services (GBS) and automation systems. "Malaysia is strong in automation and it has grown in capabilities. We need to make it known to the world," he says. He also says Malaysian companies are also involved in IC design, embedded system design and development, industrial software, artificial intelligence (AI) and 5G, wafer fabrication, integration of robotic systems and testing equipment. "But we don't have a significant presence in these areas which deliver more innovation and higher value. As such, we can focus on growing local capabilities in these areas where we

have a weak presence. We also need to grow the medical device industry here," he says.

Wong points out that the country's E&E industry is not able to design vision cameras, robotic arms, surface mount technology (SMT) equipment, wafer fabrication processing equipment, bonders, direct material for semiconductors and E&E manufacturing, and machine learning algorithms. He says to move the Malaysian E&E industry up the value chain, there has to be a holistic strategy for talent development among students. "The majority of students nowadays are not interested in STEM (science, technology, engineering and mathematics) subjects. And yet, we want to become a nation of innovation in science and technology," he says. Wong says in the past three years, EEPN had organised hackathons for university students and plugfests for engineers. The hackathons saw participation from 132 university students and were held at Technology Park Malaysia (Kuala Lumpur) in October 2019, as well as Johor and Sarawak in October 2020. "We gave the university students the task of solving an industry problem, we want to give them the exposure and create the interest," he says.

EEPN is also driving a Structured Industry Apprenticeship Programme (SIAP) for IC design, which has seen participation from seven universities namely Universiti Sains Malaysia (USM), Universiti Malaysia Perlis (UNIMAP), Universiti Malaya (UM), Universiti Teknologi Malaysia (UTM), Universiti Teknologi MARA (UITM), Universiti Putra Malaysia (UPM) and Universiti Tun Hussein Onn Malaysia (UTHM). SIAP is a university curriculum enhancement and embedment programme for IC design and development, created in partnership with the Ministry of Higher Education. Thus far, it consists six industry-driven training modules namely introduction to design, digital front-end, digital back-end, design for testability (DFT), analog and circuit layout.

"What we wanted to do was to take the industry curriculum and put it into the universities. We are also promoting SIAP to private universities," says Wong. Meanwhile, the two plugfests saw the participation of 177 engineers from 92 companies. "In the plugfests, we wanted the engineers to solve problems under real work conditions. We gave them a simple project and they work on it with a kit and learn programming. Then the companies realise that the learning curve is not so complex and expensive. We are discussing with HRDF (Human Resources Development Fund) to help to fund this training," says Wong. He also says the government can help via providing programmes in industrial upskilling for unemployed graduates, as well as advanced skill enhancement in IC design and embedded software development. Wong says EEPN had held successful training and work placement programmes for 121 unemployed

engineers. "After three to six months, we placed everyone who joined the programme," he says.

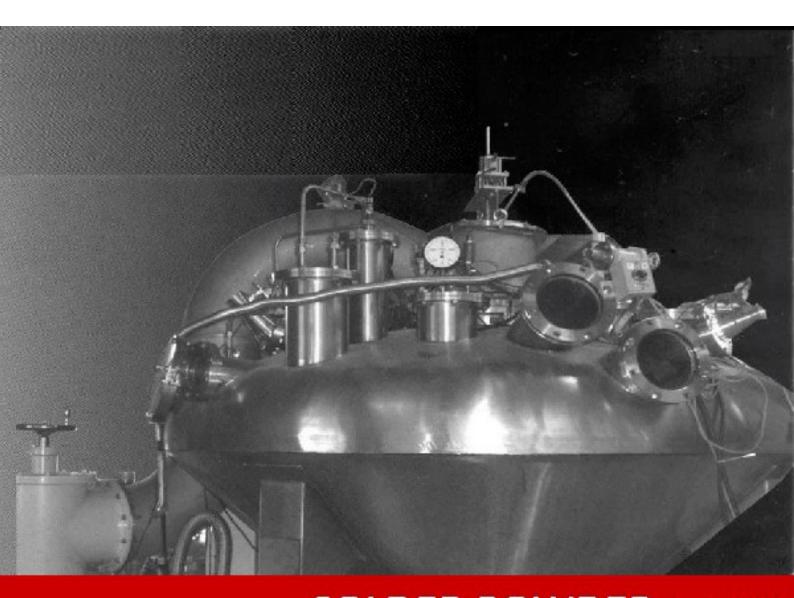
To further attract young talent to consider design and development in the E&E industry as a career, Wong also suggests higher automatic individual relief for personal income tax as an incentive. He also suggests allowing foreign engineering graduates, who are studying in Malaysia, to work locally. "We can use talents from other countries. Of course, the typical view is that if we hire foreigners, we deprive Malaysians of jobs. My counter argument is, if we hire these people, we could win and support projects and thus, create more jobs," he says. Wong says more tax incentives are needed for E&E companies in Malaysia to invest in research and development, and innovation. "Reduce the red tape, and make it easier to meet the criteria for the incentives, especially during this difficult pandemic period."

For foreign investors, there should be transparent and clear tax incentives of 10 years or more. "Multinational corporations (MNCs) who invest in foreign countries look at the long-term horizon in their business planning." Also, different set of tax incentive criteria should be given to Malaysian companies who are growing and manufacturing new products and technology. "With the tax incentives, the local companies would have extra funds to invest in design and developments and new innovations. This would allow them to compete with other companies around the world," says Wong. He also said there should be incentives for MNCs and local companies to source for supplies from the domestic ecosystem. "Electronics manufacturer Inari Amertron Bhd is a role model; it has spent hundreds of millions in supporting local companies," says Wong.

In recent years, EEPN has organised small and medium enterprises (SMEs) leadership training for companies with revenue from RM3mill to RM10mill. The focus is to expose them to business and marketing strategies, pitch and win, digitalisation and develop and retain talent. "Feedback from owners, founders and CEOs were very positive and we hope the companies will grow and be publicly listed one day," he says. Meanwhile, the www.eemm.com.my portal was also set up and launched on November 30, 2020, to promote Malaysian E&E companies to the world. Wong says the portal was sponsored by 27 companies and is free for two years, to encourage more companies to sign up. "We have about 50 companies listed on the portal, but we need more. The idea is to help overseas companies who are looking for Malaysian E&E companies to work with," he says.

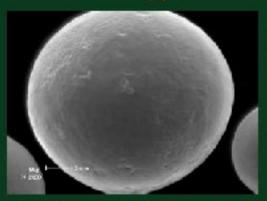
Source: The Star, 18 January 2021

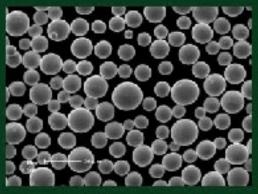


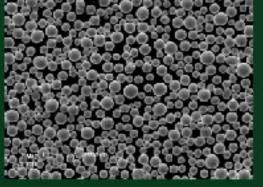


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- ► Extruded octagonal section anodes

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## MEMBERS' NEWS

#### A Pewter-Smiting Time

"Royal Selangor will have the ideal gift for your dear friend." I recall this suggestion from my dad a decade ago when scratching my head thinking of what souvenir to get for a friend who was visiting from another country. And yes, I ended up buying the iconic Petronas Twin Towers pewter cardholder for her. It was not only a memorable pick but also a great desktop decorative item too! Aside from iconic souvenirs, Royal Selangor, which is one of the oldest and world's most renowned pewter brand, also has handcrafted pewter tableware products ranging from tankards to tea sets, as well as jewellery and silverware. It has quite a number of stores in Malaysia as well as standalone stores in top retail capitals around the world, including Singapore, Hong Kong, China and Australia.

Curious to know more about the pewter industry, I head to the Royal Selangor Visitor Centre which is located in Setapak, Kuala Lumpur. Here, I get to uncover the secrets of pewtersmithing through exhibits and craft workshops, both of which are quite mentally stimulating and educational. The best part is, the visitor centre is currently offering 'A Weekend' package. It's a unique full experience that includes a free guided tour, a craft workshop and a special menu at The Cafe, an inhouse F&B outlet. My sister and I have to first register at the front desk. Guests can either go on a self-guided tour using the audio headset or opt for a personalised guided tour. We choose the latter. Our guide, Eliza, begins the tour right from the escalator, located next to the front desk that takes us to the first floor, where the museum is located.

#### THE HISTORY

The origins of the local pewter industry can be traced to a young pewtersmith from Shantou, China, who came to Malaya in 1885. Yong Koon started as a humble tinsmith and in the early days, he only made Chinese ceremonial items. In 1930, his wife Loh Pat bought a shop-house in Pudu Road and the couple started their business, the Malayan Pewter Works, together with their sons. By then, the demand for Western-style items had increased and so they started to make tankards, European-style cigarette boxes, ashtrays, vases, teapots and more utilitarian items.

During the Japanese Occupation in Malaya, their sons - Peng Sin, Peng Kai and Peng Seong - started Selangor Pewter to make sake sets for the Japanese military. However, after World War II ended, Peng Kai, who is Yong Koon's third son, took over the entire business and opened a modest retail space on Kuala Lumpur's busiest shopping street, then known as Batu Road, which is Jalan Tuanku Abdul Rahman (or Jalan TAR) today. The business flourished and in 1962, Selangor Pewter moved to a modern, bigger factory in Setapak. Within 70 workers, they focused on making gifts and souvenirs. A few years later, the company opened a shop in

According to Eliza, the company received the Royal Warrant from Sultan of Selangor in 1979. To reflect the royal endorsement, Selangor Pewter was renamed Royal Selangor in 1992. The company took out the world "pewter" because it also has two sister companies - Selberan and Comyns. Selberan specialises in creating 18k gold, platinum and gemstone, including diamond jewellery while Comyns is famed for its fine sterling silverware.

#### THE PEWTER

"So, what is pewter exactly?" I ask Eliza. She explains that it is an alloy made of tin and other metals such as antimony and copper. Eliza then shows us a large replica of a very rare form of currency called animal money. It looks like a crocodile and is said to be a common currency shape used in the past. Made from 100 per cent tin, it was believed to be used by the royal courts of the Malay Peninsula from the 15<sup>th</sup> to the 18<sup>th</sup> centuries. The value of the currency was based on its weight the heavier it was, the more valuable it was! Its size is actually smaller than what Eliza shows us but it still won't fit regular pockets. She points to the biggest one in the glass showcase that's in the shape of an elephant and tells me that it's the most valuable of the lot.

As these currencies were heavy and not easily carried around, coins in the form of a "money free" were used. A typical "tree" would have 13 coins attached to a branch. Each coin could easily be snapped off from the branch to be used as currency. These branches were later collected and recycled. Eliza also shows us the tools used in the tin mining days, including a wooden pan used in dulang washing or tin ore panning. The pan was used to scoop earth, which contained tin, from the river bed. Basically, mud and gravel, being lighter, would flow out while the heavier tin ore would sink to the bottom of the pan. The tin ore would then be collected and sent to the factory to be melted down to tin blocks weighing between 5kg and 45kg to be exported and sold. Eliza also shows us some of the products made by the company. They include households items such as teapots, tea candies, tea sets and tankards. One of the most interesting pieces in the museum is the Lucky Teapot, a melon-shaped teapot that was once owned by a man named Ah Ham. It is a stunning teapot with stout segmented body and a whimsical stem on the lid. It bears the personal engraved seal of Yong Koon. The story behind this teapot is an interesting one. During World War II, many people were desperate to feed their family and so, despite the bombing, they resorted to raiding warehouses in search of food.

Ah Ham, who was among them, was at a warehouse when he spotted a melon-shaped teapot on the floor. As he bent to pick it up, he heard shrapnel whistle above his head. The teapot, he strongly believed, saved his life. For years, he regaled his friends with wartime stories as he poured them tea from his lucky melon pot. So how did this teapot find its way "home"? Well, the story goes that Ah Ham once sent it back to the factory to get it polished. There, a worker noticed the engraved personal seal at the bottom and informed Peng Kai's daughter. She then approached Ah Ham to buy the lucky teapot to be displayed at the factory but, as expected, Ah Ham declined. After some persuasion, however, he agreed to part with it as he was getting old and he felt it should be in a place where it would be admired by the public.

#### THE PRODUCTION

While pewter is heavy, it maintains temperature longer. This property makes it unique and especially useful if fashioned into teapots. According to Eliza, the teapot made by Royal Selangor is one of the most popular items because it can maintain a constant temperature up to an hour! Our tour continues to the Live Demonstration Area. First, we stop at the Drinks Counter where Eliza serves us with a refreshing drink in a small pewter tankard. At the demonstration area, Eliza walks us through the stations, beginning with the casting station. Here, the pewterer shows us the first process in which pewter which has been heated and melted at 250 degrees Celsius is poured into a hot pot. Using a casting ladle, she pours the molten liquid into the mould with extreme care. Molten pewter hardens very quickly so we could see the final product - the handle of a tankard - in a matter of seconds. Here's a trivia: Each station makes at least 250 handles per day.

Next is the polishing station. Traditionally, abrasive leaves of tetracera scandens (locally known as stone leaves or mempelas) were used to polish pewter as they would impart a soft lustre. These days, a polishing machine makes the job easier. A pewterer needs a steady hand to do the job. Nothing goes to waste as shavings will be collected and put back in pots to be reused. At the finishing station, a pewterer will use a file to remove the rough edges of every item. Each pewter piece was previously hand-finished with a stone leaf which had tiny barbs. Since the early 1980s, however, sandpaper was used. The most interesting process is at the hammering station, which involves application of decorative techniques. For this step, flat sheets of fine pewter are shaped by being hammered onto wooden forms.

Basically, on a tankard, for instance, a pewterer will have to hammer 700 dimples on it. On each dimple, the pewterer has to hammer twice at the same spot! If there's a mistake, the whole piece goes back into the melting pot. Each pewterer needs a year of training to master the hammering skills. Guests can try their hand at hammering but it is not easy. There's also the soldering station as well as the rattan weaving station before the tour ends with the view of the factory. There are about 250 workers and they are all locals who have been with the company for up to 40 years. According to Eliza, every employee has to master every step of the pewter - making process but they will only need to specialise in one skill. All in all, it will take them more than two years to master all the pewter - making skills.

#### TRY-IT-YOURSELF

We then head to the ground floor to join one of the workshops, one of two offered at the centre. The Foundry workshop allows visitors to create pewter accessories freehand or from existing moulds. The process involves casting, polishing and decorating. It cost RM180 per person and takes an hour. Only those 15 years old or older are allowed to participate in the workshop. The School of Hard Knocks is an easier option to experience one of the pewter-making processes. My sister and I pick this workshop which is priced at RM65 per person for a duration of 30 minutes. Our task is to produce an engravable pewter dish.

We start by engraving our names using traditional tools, similar to those used by pewter smiths more than 100 year ago. We basically first select an engraved alphabet stamp. Using a hammer, we hammer twice on the same spot using the same hard pressure. Done with the engraving, we then have to make a bowl out of the plate by using wooden blocks and a wooden hammer. It's actually quite a therapeutic session. I just need to focus a lot to make sure the bowl turns out well. The best part is, you get to take home the end product, along with a certificate of completion and even the apron!

#### **WEEKEND SPECIALS**

The Royal Selangor Visitor Centre is offering a weekend promotion for visitors. Every weekend, a renowned restaurant in the Klang Valley will be invited to showcase its specialties at The Cafe. During our visit, it was Ombak Kitchen, a restaurant located in Bangsar and Bukit Jelutong that's known for its All About Seafood meals. Its seafood spread special combo for the weekend was priced at RM89.90 for two persons. There were extra-large prawns, white squid, blue mussles, clam hamaguri, vegetables such as corn potatoes and broccoli, and rice. For bigger groups, the Crab XL Live combo at RM139.90 caters to four persons. Royal Selangor will update on the selected restaurant for each weekend on its Facebook page.

Source: New Straits Times, 14 January 2021

## QUARTERLY | JANUARY - MARCH 2021

#### **MALAYSIAN TIN STATISTICS**

(In Tonnes)							
Period	Production of Tin- In- Concentrates	Imports of Tin- In- Concentrates	Refined Tin Production	Local Consumption	Exports of in Metal		
2016	4,158	30,536	26,849	2,238	27,470		
2017	3,894	29,866	27,211	2,707 1,964	27,147		
2018	3,868		27,450 27,115		27,342		
2019	3,611	25,644	24,387	1,441	24,418		
2020	n.y.a.	22,288	20,149	1,512	20,268		
2016							
Jan	357	2,667	2,550	167	2,172		
Feb	304	2,273	2,939	205	2,779		
Mar	377	1,697	2,611	213	3,153		
Apr	361	2,333	2,381	233	2,849		
May	349	1,984	2,529	236	2,563		
Jun	342	2,101	1,951	151	2,029		
Jul	311 303	2,054	1,873	116 200	1,720		
Aug	335	2,293 1,823	2,159	200	2,238 1,730		
Sep Oct	347	· ·	1,865 1,920	173	· ·		
Nov	359	1,948	1,920 1,977	154	1,766		
Dec	378	2,267 2,172	2,094	186	2,149		
2017	3/0	2,172	2,094	100	1,834		
Jan	351	2,377	1,683	171	1,530		
Feb	316	2,033	2,167	203	2,635		
Mar	306	1,723	2,044	322	2,091		
Apr	275	2,441	1,832	263	1,777		
May	339	2,598	2,572	218	2,326		
Jun	308	2,446	2,121	258	1,732		
Jul	333	3,154	2,605	320	2,768		
Aug	329	2,428	2,812	178	3,106		
Sep	314	2,565	2,149	179	2,275		
Oct	323	2,775	2,256	225	2,116		
Nov	368	2,740	2,478	204	2,510		
Dec	338	2,586	2,492	166	2,281		
2018		•	· · · · · · · · · · · · · · · · · · ·		·		
Jan	308	2,424	2,060	171	1,950		
Feb	297	2,046	2,214	190	2,009		
Mar	323	2,488	2,340	158	2,584		
Apr	330	2,430	2,111	192	2,401		
May	336	2,895	2,343	171	2,435		
Jun	292	2,494	2,219	192	2,162		
Jul	342	2,609	2,571	162	2,687		
Aug	393	2,619	2,470	215	2,257		
Sep	280	1,653	2,068	149	1,899		
Oct	319	2,284	2,282	117	2,138		
Nov	324	1,844	2,563	102	2,746		
Dec	306	1,874	1,874	145	2,074		
2019	205	2.460	1 007	105	2 205		
Jan Feb	325 278	2,169 1,700	1,887 1,912	125 99	2,205 1,694		
Heb Mar	324	1,700 2,263	1,912 2,169	134	2,195		
Apr	301	2,263	2,169 2,145	125	2,195		
May	282	1,842	1,836	145	1,891		
Jun	213	2,393	1,536	129	1,630		
Jul	263	2,393	2,491	144	2,347		
Aug	299	2,381	2,476	122	2,257		
Sep	320	1,998	2,234	111	1,886		
Oct	312	2,506	1,478	111	1,790		
Nov	323	2,147	2,137	105	2,086		
Dec	356	1,762	2,086	91	2,340		
2020		, -	,		, -		
Jan	288	2,136	2,224	93	2,069		
Feb	265	1,449	1,880	119	2,138		
Mar	162	1,105	978	71	1,009		
Apr	36	1,198	878	75	813		
May	252	2,187	1,243	99	1,356		
Jun	278	1,927	1,737	190	1,469		
Jul	272	1,972	1,695	150	2,100		
Aug	277	2,785	2,484	151	2,118		
Sep	292	2,398	1,742	138	1,873		
Oct	295	1,565	1,803	146	1,802		
	iminon	1,000	1,000		1,002		

\* : preliminary

n.y.a. : not yet available

Sources : Department of Statistics, Malaysia

Department of Minerals and Geoscience, Malaysia

Malaysia Smelting Corporation Bhd

## QUARTERLY | JANUARY - MARCH 2021

#### **DOMESTIC TIN CONSUMPTION**

(In Tonnes)

(In Tonnes)							
Period	Total Consumption	Solder (*)	Tinplate	Pewter	Others (*)		
2017	2,707	1,348	737	63	559		
2018	1,964	1,019	759	39	147		
2019	1,441	695	639	19	88		
2020	1,512	738	626	8	140		
<b>2017</b> Jan	171	102	54	10	3		
Feb	203	133	64	12 2	4		
Mar	322	139	76	13	94		
Apr	263	100	72	2	89		
May	218	150	61	3	4		
Jun	258	108	61	12	77		
Jul	320	143	76	1	100		
Aug	178	79	62	2	35		
Sep	179	101	40	1	37		
Oct .	225	104	68	4	49		
Nov	204	95	49	1	59		
Dec	166	94	54	10	8		
2018							
Jan	171	101	57	3	10		
Feb	190	133	54	1	2		
Mar	158	93	49	13	3		
Apr	192	103	78	1	10		
May	171	106	56	1	8		
Jun	192	116	61	13	2		
Jul	162	99	60	0	3		
Aug	215	132	75	1	7		
Sep	149	62	62	1	24		
Oct	117	23	69	1	24		
Nov	102 145	11 40	61 77	0 4	30 24		
Dec 2019	140	40	11	4	24		
2019 Jan	125	66	51	1	7		
Feb	99	60	35	0	4		
Mar	134	69	56	1	8		
Apr	125	51	64	2	8		
May	145	70	62	1	12		
Jun	129	66	56	1	6		
Jul	144	60	47	3	3		
Aug	122	41	51	1	10		
Sep	111	41	60	3	7		
Oct	111	41	59	3	8		
Nov	105	45	52	1	7		
Dec	91	35	46	2	8		
2020							
Jan	93	40	48	0	5		
Feb	119	62	52	0	5		
Mar	71	22	45 53	0	4		
Apr	75 99	19 49	53	0	3		
May Jun	190	49 74	44 67	0 3	6 46		
Jul	150	74 84	55	3	8		
Aug	151	49	65	0	37		
Sep	138	85	46	0	7		
Oct	146	77	59	0	10		
Nov	125	78	40	2	5		
Dec	155	99	52	0	4		
2021	100						
Jan	n.y.a	n.y.a	66	n.y.a	n.y.a		
Feb	n.y.a	n.y.a	37	n.y.a	n.y.a		
Mar	n.y.a	n.y.a	68	n.y.a	n.y.a		
Apr	n.y.a	n.y.a	68	n.y.a	n.y.a		
May	n.y.a	n.y.a	46	n.y.a	n.y.a		
Jun	n.y.a	n.y.a	50	n.y.a	n.y.a		
Jul	n.y.a	n.y.a	64	n.y.a	n.y.a		
Aug	n.y.a	n.y.a	57	n.y.a	n.y.a		
Sep	n.y.a	n.y.a	53	n.y.a	n.y.a		

n.y.a : not yet available

Sources: Department of Minerals and Geoscience, Malaysia

Malaysia Smelting Corporation Bhd

 $^{\star}$   $\,\,$  : The figures include high-grade tin (99.9% Sn) imported for consumption.

\*\* : Preliminary.

Note : Local consumption of tin metal refers to the use of tin in a particular application.

Sales to manufacturing industries have been used as proxy for consumption except in the case of manufacture of tinplate for which actual consumption data available.

**WORLD STOCKS OF REFINED TIN** 

(In Tonnes at Period End)

(In Tonnes at Period End)								
Period End	LME Stocks	Country Stocks	US Strategic Stockpile					
2017	2,235	19,245	4,020					
2018	2,165	16,790	4,020					
2019	7,130	23,217	4,020					
2020	1,890	22,129	4,020					
2017	5.000	40.000	4.000					
Jan	5,800	18,902	4,020					
Feb Mar	5,560	18,769	4,020					
Apr	3,510	18,227	4,020 4,020					
Арі Мау	2,865 1,910	18,189 18,469	4,020					
Jun	1,690	19,336	4,020					
Jul	1,985	19,374	4,020					
Aug	1,910	19,436	4,020					
Sep	2,070	18,814	4,020					
Oct	2,095	18,818	4,020					
Nov	2,395	18,983	4,020					
Dec	2,235	19,245	4,020					
2018	2,200	10,210	1,020					
Jan	1,955	19,318	4,020					
Feb	1,720	19,318	4,020					
Mar	2,060	19,087	4,020					
Apr	2,225	19,025	4,020					
May	2,420	15,387	4,020					
Jun	3,130	14,304	4,020					
Jul	2,970	17,872	4,020					
Aug	2,940	17,741	4,020					
Sep	2,865	18,332	4,020					
Oct	3,085	15,332	4,020					
Nov	3,045	17,728	4,020					
Dec	2,165	16,790	4,020					
2019	2,:00	.0,.00	-,,					
Jan	1,845	16,439	4,020					
Feb	1,325	16,552	4,020					
Mar	950	22,333	4,020					
Apr	890	23,132	4,020					
May	2,810	23,083	4,020					
Jun	6,045	23,524	4,020					
Jul	4,640	23,524	4,020					
Aug	6,830	23,449	4,020					
Sep	6,620	23,017	4,020					
Oct	6,020	23,104	4,020					
Nov	6,235	23,217	4,020					
Dec	7,110	23,217	4,020					
2020								
Jan	6,630	22,546	4,020					
Feb	7,440	22,431	4,020					
Mar	6,205	22,211	4,020					
Apr	5,375	22,094	4,020					
May	2,455	22,183	4,020					
Jun	4,230	22,330	4,020					
Jul	3,675	22,268	4,020					
Aug	5,040	22,143	4,020					
Sep	5,550	22,480	4,020					
Oct	4,533	22,398	4,020					
Nov	3,805	22,290	4,020					
Dec	1,860	22,129	4,020					
2021								
Jan	820	22,366	4,020					
Feb	1,745	23,044	4,020					
Mar	1,740	21,579	4,020					
Apr	1,245	21,589	4,020					
May	755	21,589	4,020					
Jun	2,015	21,539	4,020					
Jul	2,290	21,499	4,020					
Aug	1,395	21,499	4,020					
Sep	1,235	n.y.a	n.y.a					

n.y.a : not yet available

Sources : Metal Bulletin / World Bureau of Metal Statistics

## QUARTERLY | JANUARY - MARCH 2021

KLTM & LME TIN PRICES								
		LME CASH						
	Average	Price (*)	Total Turnover	Average Price				
	(USD / Tonne)	(RM / Kg)	(Tonnes)	(USD / Tonne)				
2017	20,029	86.12	8,890	20,098				
2018	20,151	80.99	9,075	20,168				
2019	19,168	79.11	6,445	18,671				
2020 <b>2017</b>	17,504	79.90	4,088	17,134				
Jan	20,801	92.92	722	20,750				
Feb	19,548	86.99	658	19,492				
Mar	19,762	87.80	744	19,832				
Apr	19,885	87.59	687	19,991				
May	20,104	86.84	744	20,231				
Jun	19,707	84.39	625	19,702				
Jul	20,178	86.64	711	20,273				
Aug Sep	20,438 20,729	87.67 87.39	774 722	20,570 20,855				
Oct	20,729	86.58	780	20,469				
Nov	19,477	81.46	923	19,575				
Dec	19,353	78.93	800	19,440				
2018	,			, -				
Jan	20,415	80.77	973	20,711				
Feb	21,558	84.37	756	21,694				
Mar	21,049	82.15	933	21,214				
Apr	21,151	82.22	744	21,340				
May	20,740	82.36	710	20,900				
Jun Jul	*		907 857	20,663 19,700				
Aug	19,687 19,299	79.80 78.99	642	19,700				
Sep	18,905	78.29	736	18,999				
Oct	19,048	79.18	762	19,129				
Nov	19,133	80.09	536	19,139				
Dec	19,208	80.17	519	19,243				
2019								
Jan	20,417	84.05	719	20,480				
Feb	21,268	86.67	628	21,268				
Mar	21,317	86.95 84.48	1,046	21,444				
Apr May	20,528 19,394	84.48 80.85	833 388	20,684 19,531				
Jun	19,065	79.34	344	19,177				
Jul	18,074	74.55	416	17,991				
Aug	16,532	69.22	422	16,577				
Sep	16,730	70.05	392	16,840				
Oct	16,562	69.34	464	16,603				
Nov	16,624	69.11	417	16,369				
Dec	16,883	70.00	376	17,093				
2020	47.044	60.40	406	17.0EC				
Jan Feb	17,014 16,536	69.42 68.85	406 354	17,056 16,457				
нер Mar	16,536 16,417	68.85 69.47	236	16,457 15,321				
Apr	CLOSED	CLOSED	CLOSED	15,039				
May	15,110	65.65	268	15,410				
Jun	16,605	71.03	374	16,806				
Jul	17,287	73.79	358	17,452				
Aug	17,515	73.47	343	17,672				
Sep	17,846	74.12	444	17,946				
Oct	18,026	74.90	383	18,154				
Nov	18,433	75.84	413	18,568				
Dec 2021	19,693	79.90	509	19,727				
Jan	22,085	89.25	314	21,955				
Feb	25,965	105.05	456	26,717				
Mar	26,162	107.64	494	27,396				
Apr	27,106	111.89	327	28,427				
May	31,132	128.61	298	32,524				
Jun	31,857	131.49	61	32,678				
Jul	CLOSED	CLOSED	CLOSED	34,183				
Aug Sep	CLOSED CLOSED	CLOSED CLOSED	CLOSED CLOSED	35,205 35,048				

Sources : Kuala Lumpur Tin Market / Malaysia Smelting Corporation Bhd

<sup>:</sup> As from 1 February 2001, KLTM price is quoted in US Dollar

 $<sup>(\</sup>mbox{\ensuremath{^{'}}}\xspace)$  KLTM's monthly average price is arrived at on a weighted average against total tonnage basis.

LEAD COPPER SILVER

LME PRICES & STOCKS				LME PRICES & STOCKS			LONDON SPOT PRICES		
	Cash	Stocks	1		Cash	Stocks	ĺ		London
	Settlement	Period End			Settlement	Period End			Spot
	(US\$ / Tonne)	(Tonnes)			(US\$ / Tonne)	(Tonnes)			(US Cents / Troy Oz)
2017	2,508.82	142,225		2017	6,801.16	200,650		2017	1,616.00
2018	1,965.47	107,375		2018	6,094.21	132,175		2018	1,470.00
2019	1,899.25	66,200		2019	6,062.43	144,675		2019	1,711.00
2020	2,018.60	133,175		2020	7,755.24	105,800		2020	2,488.74
2017				2017				2017	
Jan	2,236.69	189,050		Jan	5,737.43	260,850		Jan	1,681.00
Feb	2,321.73	189,600		Feb	5,941.55	200,725		Feb	1,787.00
Mar	2,277.30	184,275		Mar	5,821.52	283,900		Mar	1,759.00
Apr	2,231.31	169,425		Apr	5,697.67	253,675		Apr	1,804.00
May Jun	2,131.67	180,275		May	5,591.50 5,699.48	308,000		May	1,676.00
Jul	2,131.18 2,266.40	164,150 152,800		Jun Jul	5,978.60	278,275 295,525		Jun Jul	1,696.00 1,614.00
Aug	2,357.32	148,425		Aug	6,478.18	223,500		Aug	1,691.00
Sep	2,377.29	157,475		Sep	6,583.19	295,500		Sep	1,745.00
Oct	2,506.30	149,250		Oct	6,797.39	273,675		Oct	1,694.00
Nov	2,464.41	145,000		Nov	6,825.57	183,525		Nov	1,701.00
Dec	2,508.82	142,225		Dec	6,801.16	200,650		Dec	1,616.00
2018	2,000.02	1 12,220		2018	0,001.10	200,000	ł	2018	1,010.00
Jan	2,589.77	133,250		Jan	7,080.30	304,675		Jan	1,717.00
Feb	2,580.83	125,225		Feb	7,001.80	328,000		Feb	1,666.00
Mar	2,397.00	129,100		Mar	6,795.76	383,025		Mar	1,647.00
Apr	2,357.38	130,775		Apr	6,838.55	325,525		Apr	1,661.00
May	2,363.88	133,475		May	6,821.76	317,950		May	1,647.00
Jun	2,440.74	131,775		Jun	6,954.79	289,875		Jun	1,652.00
Jul	2,212.91	127,025		Jul	6,248.18	251,950		Jul	1,571.00
Aug	2,064.86	122,925		Aug	6,039.75	262,475		Aug	1,501.00
Sep	2,028.23	115,700		Sep	6,020.03	199,125		Sep	1,426.00
Oct	1,985.15	113,550		Oct	6,215.89	136,675		Oct	1,458.00
Nov	1,940.16	105,125		Nov	6,193.00	134,200		Nov	1,437.00
Dec	1,965.47	107,375		Dec	6,094.21	132,175		Dec	1,470.00
2019				2019				2019	
Jan	1,994.16	72,450		Jan	5,932.02	149,950		Jan	1,559.00
Feb	2,062.08	76,875		Feb	6,278.20	126,100		Feb	1,580.00
Mar	2,054.57	78,750		Mar	6,451.02	168,525		Mar	1,532.00
Apr	1,948.85	74,425		Apr	6,445.10	225,925		Apr	1,504.00
May	1,817.21	69,400		May	6,028.31	211,800		May	1,463.00
Jun	1,891.50	65,750		Jun	5,868.43	240,900		Jun	1,500.00
Jul	1,974.02	78,500		Jul	5,939.85	287,800		Jul	1,575.00
Aug	2,043.19	77,525		Aug	5,707.98	335,850		Aug	1,714.00
Sep	2,070.86	69,500		Sep	5,745.48	258,775		Sep	1,817.00
Oct	2,184.30	70,075		Oct	5,742.89	255,025		Oct	1,762.00
Nov	2,031.90	67,125 66,200		Nov	5,859.69	208,525		Nov	1,718.00
Dec 2020	1,899.25	00,200		Dec	6,062.43	144,675	ł	Dec	1,711.00
2020 Jan	1,925.16	66,800		<b>2020</b> Jan	6,049.20	179,800		<b>2020</b> Jan	1,796.50
Feb	1,872.30	68,100		Feb	5,686.45	216,950		Feb	1,790.30
Mar	1,744.64	70,900		Mar	5,178.68	221,200		Mar	1,491.82
Apr	1,651.53	73,650		Apr	5,048.25	251,475		Apr	1,504.55
May	1,618.16	75,825		May	5,233.82	255,725		May	1,623.24
Jun	1,739.86	66,500		Jun	5,742.39	213,325		Jun	1,771.98
Jul	1,812.15	118,150		Jul	6,353.76	126,675		Jul	2,040.50
Aug	1,935.20	124,900		Aug	6,496.70	88,250		Aug	2,686.25
Sep	1,881.36	137,000		Sep	6,712.41	163,125		Sep	2,588.61
Oct	1,777.07	124,400		Oct	6,702.77	169,600		Oct	2,429.84
Nov	1,914.48	112,700		Nov	7,063.43	149,925		Nov	2,404.33
Dec	2,018.60	133,175		Dec	7,755.24	105,800		Dec	2,488.74
2021				2021				2021	
Jan	2,214.93	96,775		Jan	7,970.50	74,275		Jan	2,592.84
Feb	2,085.75	94,625		Feb	8,460.25	74,200		Feb	2,734.60
Mar	1,960.76	119,550		Mar	9,004.98	143,775		Mar	2,561.35
Apr	2,006.33	110,575		Apr	9,335.55	137,400		Apr	2,564.03
May	2,185.92	97,325		May	10,183.97	120,700		May	2,746.32
Jun	2,188.98	80,250		Jun	9,612.43	211,975		Jun	2,698.16
Jul	2,336.98	59,750		Jul	9,433.59	238,650		Jul	2,575.32
Aug	2,428.52	52,250		Aug	9,357.19	252,725		Aug	2,401.64
Sep	2,257.25 t yet available	51,000	l	Sep	9,324.07	217,175	J	Sep	2,330.73

n.y.a. : not yet available Source : London Metal Exchange The Silver Institute

## ASSOCIATION MEMBERS

Currently, the Association comprises one associate and 15 ordinary members covering the three main sectors of Malaysia's tin-based products manufacturing industry, namely the tinplate, solder and pewter sectors as listed below:

#### **ORDINARY MEMBERS:**

#### **TINPLATE**

Perusahaan Sadur Timah Malaysia Bhd (PERSTIMA)

#### **SOLDER**

Henkel (M) Sdn Bhd
Nihon Superior (M) Sdn Bhd
RedRing Solder (M) Sdn Bhd
Selayang Metal Industries Sdn Bhd
Selayang Solder Sdn Bhd
Senju (M) Sdn Bhd
Shen Mao Solder (M) Sdn Bhd
Premium Metal Sdn Bhd
Rian Resources Sdn Bhd

#### **PEWTER**

Oriental Pewter Sdn Bhd
Royal Selangor International Sdn Bhd
Selwin Pewter Sdn Bhd
Tumasek Pewter Sdn Bhd

### ASSOCIATE MEMBER:

Malaysia Smelting Corporation Bhd

