



Singapore Welding Society

JUNE 2016 MCI (P) 076/11/2015

WELD POINT



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PRESIDENT'S REPORT 2016

Presented at the 38th Annual General Meeting, 27 May 2016 (Fri)

1) Introduction

It is with great honour and privilege that I present this Annual Report on behalf of the Council for the term of office 2015/2016. I wish to express my sincere appreciation and gratitude to my fellow Council members for their time and dedication in serving the Society. Together, we inspired and challenged ourselves to do better each year. I would also like to thank all SWS members for the continued encouragement and support during this period.

Since the start of this term, the Council and our committees wasted no time in setting out their plans and actions along the Society's long-term strategic objectives that we had defined for ourselves earlier in 2013:



- a. To participate in regional/international activities that benefit SWS and Singapore
- b. To provide a platform for members to interact, share knowledge/experience
- c. To organize forums, welding related activities and regional/international conferences
- d. To increase membership and attract/nurture young members to serve the Society
- e. To facilitate education and training programs for the industry
- f. To assist in the development of national and international standards
- g. To seek growth for the Society, promote productivity and innovation

The actions and achievements of each Committee during 2015/2016 are summarised and highlighted in the following pages.

2) Council Members for Year 2015/2016

Mr. Perianan Radhakrishnan	President
Mr. Eddie Ko Beng Lee	Vice President and Chairman, International Affairs
Dr. Sun Zheng	Vice President and Chairman, Singapore Welding Competition 2016
Mr. Sze Thiam Siong	Honorary Secretary and Immediate Past President
Mr. Goh Lak Hee	Honorary Treasurer
Mr. William Chong Jun Hua	Assistant Honorary Treasurer
Mr. Chow Ngai Mun	Chairman, Education & Training and Past President
Mr. Kelvin Lee Chee Fatt	Chairman, Publications
Dr. Zhou Wei	Chairman, Welding Technology & Standardization
Mr. Juerg Schweizer	Chairman, Property Acquisition and Vice Chairman, Technical Talks
Mr. Ivan Lim Poh Huat	Chairman, Common Welder Qualification Scheme (CWQS)
Mr. Md Habibur Rahman	Vice Chairman, Common Welder Qualification Scheme (CWQS)
Mr. Foo Hoe Ming	Chairman, Technical Talks
Mr. Yusoof Aynuddin	Chairman, Membership
Mr. Khoo Kok Leong	Vice Chairman, Membership

3) Finance

Honorary Treasurer: Mr. Goh Lak Hee

Assistant Honorary Treasurer:

Mr. William Chong Jun Hua

The Society's revenue from membership fees has seen a healthy increase, but the revenue from the certification and training programs has declined due to the current poor economic climate. We continue to face intense competition from both the local and overseas training providers and there is a general decline in take-up rate for some of the existing courses as well. However, we will continue to explore new training courses and certifications, which will help our members to upgrade their skills/knowledge and achieve higher qualifications/certifications.

As approved at last year's AGM, the Society has acquired a property at *TradeHub21* to establish a permanent office cum training facility as well as for long term investment. With this acquisition, our accumulated fund in the bank has reduced to S\$929,080 from S\$1,833,904 last year.

The overall expenditure for this acquisition and renovation is summarised in the table below:

Purchase price of property including GST	S\$781,389
Stamp duty	S\$16,500
Lawyer fee and Property agent fee	S\$7,975
Property tax for the year	S\$3,740
Renovation cost	S\$79,839
Office equipment (one aircon, water dispenser, tv etc.)	S\$6,145
TOTAL (property & related expenses)	S\$895,588

The total income for the year was S\$196,683.78 against the expenses of S\$266,137.58 resulting in a deficit of S\$69,453.80 before taxation. Due to the purchase of the above-said property, there were extraordinary expenses this year amounting to S\$72,675.92 (*Depreciation, Stamp duty, Legal fees, Property agent fees and Property tax for one year*).

We will continue to explore new revenue streams to sustain the growth of the Society in the coming years. A copy of the financial report is attached for reference.

4) Education & Training Committee

Chairman: Mr. Chow Ngai Mun

SWS has always placed great emphasis on education and training as one of its long term strategies to help members improve their capabilities and professionalism. To this end, the Society continues to promote programs that help members to realize their aspirations and attain mastery of skills in their workplace. This is also in line with the government's call to invest more in *Continuing Education and Training (CET)* through the *Singapore Workforce Skills Qualifications (WSQ) system*, to meet the rising skills needs of the industries.

It has been an active year for this committee, as we managed to organize two workshops and one seminar/certification for our members. Both workshops were accredited by the Professional Engineers Board (PEB) and were awarded 3 PDU points each.

- a. The workshop, '*Refining & Petrochemical Workshop*' was delivered by Mr. Gary Coates from *Nickel Institute, Canada*. It was held on 27 January 2015 at *Holiday Inn Singapore Atrium Hotel* and was attended by 40 participants from the Oil & Gas, Marine & Offshore industry. The speaker covered a wide range of topics including high temperature corrosion mechanisms, effect of high temperature on SS & nickel alloys, refinery applications and welding fabrications issues, types of cladding and issues, design issues, etc.
- b. Another workshop, '*Stainless Steel in Architecture & Construction Workshop*' was delivered by Dr. Graham Sussex from *Nickel Institute, Australia*. It was held on 20 November 2015 at *Furama City Centre Hotel* and was attended by 39 participants mainly from the Construction industry. The topics covered by the speaker included grades of stainless steel, corrosion resistance and life cycle analysis, influence of surface treatment performance and appearance and design, fabrication, installation and maintenance.

SWS had signed a cooperation agreement with *Japan Welding Engineering Society (JWES)* on 13 May 2015. Under this agreement, SWS will organize the various training seminars leading to the certification of *Senior Welding Engineer (SWE)*, *Welding Engineer (WE)* and *Associate Welding Engineer (AWE)*. During 9-13 January 2016, we organized the first '*Welding Engineer*' seminar and certification in Singapore. The seminar was delivered by two experts, *Prof. Dr. Kunio Takahashi* and *Mr. Hideaki Harasawa*. The response was good with 21 candidates attending the seminar and certification. The certificates were awarded jointly by SWS and JWES. The topics covered include welding processes and equipment, materials and their behaviour during welding, construction & design and fabrication & applications engineering.

In addition to the above events, SWS continues to conduct regular training courses on visual inspection of welds, welding metallurgy, metal joining & cutting processes, structural welding design, safety in welding and cutting processes, certified welding inspector, storage tank inspector, pressure vessel inspector and piping inspector.

To date, SWS has also conducted a total of 524 certification examinations under the BINDT PCN scheme in the multi-sector, weldment and aerospace sectors for the various NDT methods.

We strongly encourage members to take advantage of the education and training programs offered by the society to further their career and professionalism. I wish to thank all members for their strong support and participation in our education and training programs.

5) International Affairs Committee

Chairman: Mr. Eddie Ko

For the Year 2015/2016, the society participated in the following regional and international activities:

- a. 20th Beijing Essen Welding & Cutting Fair 2015, *Shanghai New International Expo Centre*, 16-19 June 2015 - Represented by *Dr. Sun Zheng*.

- b. 68th IIW Annual Assembly/IIW Board of Directors/ Technical Management Board/ IAB Groups A & B meetings, *Helsinki, Finland, 28 June to 3 July 2015* - Represented by *Dr. Sun Zheng, Mr. Eddie Ko and Mr. Ang Chee Pheng*.
- c. 24th AWF Governing Council & 17th AWF Task Force meetings, *Surabaya, Indonesia, 20-23 October 2015* - Represented by *Mr. P. Radhakrishnan, Mr. Sze Thiam Siong and Mr. Eddie Ko*.
- d. AWF Constitution Review Working Group meeting, *Singapore, 18-19 January 2016*. SWS hosted the meeting at our new office. Delegates from Malaysia, Indonesia, Philippines, Thailand, Japan and China attended - Represented by *Mr. P. Radhakrishnan, Mr. Sze Thiam Siong, Mr. Eddie Ko, Mr. Juerg Schweizer and Mr. William Chong*.
- e. IIW IAB/IAB, AAA and RA Intermediate meetings, *Paris, France, 1-5 February 2016* - Represented by *Mr. Eddie Ko*. (Note: *Two countries including Singapore had submitted a bid to host the IIW Annual Assembly in 2020. IIW Board of Directors had recommended Singapore to host this event. The Board's recommendation will be submitted for final approval at the IIW Annual Assembly in Melbourne in July 2016*).
- f. 25th AWF Governing Council & 18th AWF Task Force meetings, *Osaka, Japan, 13-15 April 2016* - Represented by *Mr. P. Radhakrishnan and Mr. Sze Thiam Siong*.

Singapore Welding Society - Authorised National Body (S-ANB) of the International Institute of Welding (IIW):

- a. Surveillance audit of S-ANB was conducted by IIW/IAB on 15 March 2016. One NC was recorded and corrective action has been taken and a report submitted to the Lead Assessor (LA).
- b. The agreement to conduct the IIW International Welding Engineer and International Welding Technologist courses has been signed with GSI-SLV. Under this Agreement GSI-SLV will assist SWS to conduct the IWE/IWT courses. It is our

plan to run the first course around the 4th Quarter of this year, subject to demand.

- c. In conjunction with the above, S-ANB will also offer the transition arrangement again for the IIW IWE/IWT courses for those who are eligible, once the details are approved.

6) Publication Committee

Chairman: *Mr. Kelvin Lee*

The voice of SWS, *Weldpoint* has been serving intriguing and captivating articles throughout the year. The contributors to *Weldpoint* trawl through the year's proceedings and technical articles to provide the most compelling and au fait coverage of SWS' events and highlights. With an increasing circulation at the current 750 copies and a growing overseas presence, *Weldpoint* is the indispensable go-to for the latest updates in the welding and joining scene in Singapore.

Weldpoint has strived to keep readers updated on the latest technological advancements in the welding and its related industries. The writers provided a comprehensive insight on new technologies. It is the belief of the Publication Committee to constantly educate and update the industry with new knowledge, information and insights so as to continuously elevate the standards of Singapore's welding industry.

The committee would like to extend its appreciation to the industry players for their support in advertising in *Weldpoint*. While the newsletter is undoubtedly an outstanding platform to publicise their companies' products and service, the support allows SWS to continue to provide more insightful articles for the betterment of the welding community.

Moving forward, *Weldpoint* will continue to evolve, delivering more quality articles of significance, in a timely fashion and to increase readership over the next year. The committee would like to encourage members to provide their valuable feedback and to contribute more welding-related articles for review to be published. Once again, thank you for your support for *Weldpoint*.

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Leeden NOX

features the global leader
in fall protection

From the makers of innovative fall protection products, DBI-SALA and Protecta manufactures quality fall protection gear that allow wearers absolute safety from great heights.

On top of that, the company's fall protection gear features premium materials that are resistant to fire and sparks. Now you have one less worry when things get high and hot.



DBI SALA 1104625
Kevlar Harness



PROTECTA 1340185
PRO Hot Works Lanyard



DBI SALA 1240558
Kevlar Lanyard



PROTECTA 1191369
PRO Welders Harness



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7) Welding Technology & Standardization Committee

Chairman: Dr. Zhou Wei

ISO Standards:

With the generous support of SPRING and SMF, SWS represents Singapore to participate in welding standards development work of ISO/TC 44 and its subcommittees as a P member (full voting member). By this, we are able to have a direct voice in influencing the development of international welding standards. Dr. Zhou Wei actively participates in the meetings and his contribution to the ISO/TC44 is building further credibility for Singapore and SWS.

The ISO standards cover terminology, definitions and the symbolic representation of welds on drawings, apparatus and equipment for welding, raw materials (gas, parent and filler metals), welding processes and rules, methods of test and control, calculations and design of welded assemblies, welders' qualifications, as well as safety and health.

Singapore remains a P-member of ISO/TC44 and the following subcommittees (SC) under this TC:

- TC 44/SC 5 Testing and Inspection of Welds
- TC 44/SC 9 Health and Safety
- TC 44/SC 10 Unification of Requirements in the Field of Metal Welding
- TC 44/SC 11 Qualification Requirements for Welding and Allied Processes Personnel
- TC 44/SC 14 Welding and Brazing in Aerospace

It is worth noting that ISO/TC44/WG 4 has now become ISO/TC44/SC 14. We have contributed a lot to the development of this WG into SC.

SWS was represented by Dr. Zhou Wei at the following ISO meetings:

- ISO/TC 44 plenary meeting and its subcommittee meetings, Helsinki, Finland, 6-10 July 2015
- ISO/TC 44/WG 14 meeting, Renton, Washington, USA, 13-15 October 2015

Singapore Standards:

In addition to the work on ISO standards, SWS is tasked by SPRING Singapore to revise Singapore Standard SS 510. The revised standard has recently

been approved by GESSC (General Engineering & Safety Standards Committee) and will be launched on 1 July 2016.

SWS is honoured to be represented at the GESSC. Singapore Standards Council is the final authority to approve Singapore Standards. GESSC is entrusted by the Singapore Standards Council to approve standards related to general engineering and safety. Members represented at GESSC include big organizations like SPRING, MOM, HDB, LTA, BCA, SMF, NTU, NUS, IES, SISO, SLP and ASME. As a member of GESSC, SWS is privileged to participate in the approval of Singapore Standards during the past year.

We will continue to participate actively and contribute to the development of welding standards both locally and internationally.

8) Technical Talks Committee

Chairman: Mr. Foo Hoe Ming

Vice Chairman: Mr. Juerg Schweizer

Over the past one year, the Technical Talks committee has been actively organizing several technical talks covering a wide range of areas, which includes welding technology, advanced NDT, specialized welding consumables, productivity, special welding processes and life-skills. It was also the first time that we had a talk on a life-skills topics (*Financial Planning Begins Now – Measuring Your Financial Fitness*) and it was very well received.

The following technical talks were organised during the year:

- a. Weld Inspection according to ISO 17636-02 for Digital Radiography in July 2015.
- b. Remote Inspection Process Control & Productivity Gain with GE Mentor EM in August 2015.
- c. Financial Planning Begins Now – Measuring Your Financial Fitness in September 2015.
- d. Recent plasma cutting technology developments and successful applications (with live demo) in October 2015.
- e. Welding of high, extra-high and ultra-high strength steels in March 2016.

Two technical talks/seminars were organised by an institutional partner *SIMTech*, a member of *A*Star* and extended to SWS members. Our sincere appreciation and thanks to *SIMTech*.

- a. Seminar on Friction, Magnetarc, Friction Stir Welding : Advanced Joining Solutions for a Great Variety of Materials & Welding Automation For Productivity Improvement
- b. Seminar on Advanced Welding & Cladding Technologies

We are grateful to our corporate members who had generously sponsored and delivered technical talks for the benefit of our members. We encourage all SWS members to take advantage of these technical talks and benefit from the knowledge shared. These events also provide ample opportunities for members to network and renew friendships.

9) Membership Committee

Chairman: Mr. Yusoo Aynuddin

Our membership drive which started two years ago has brought in a steady stream of new members but this has slowed down in recent period due to the poor economic climate prevailing during the year. Yet, we recognise that the society is only as strong as its members.

In our attempt to boost the new membership drive, the committee had launched a ‘*Member-Get-Member (MGM)*’ campaign for the first time. The objective of this campaign was for the existing members to bring their friends and colleagues to join the Society and be rewarded handsomely. More importantly, we wanted the existing members to share their experience and knowledge as well as the Society’s benefits with the new members. The response to this campaign was lukewarm but we will not be discouraged by the outcome and will look forward to tweak our membership drive in the coming years.

Notwithstanding the above, we all had our fair share of fun during the past twelve months. Our first-ever Bowling tournament for members was held on 13 November 2015 at *Jurong SuperBowl*. We had a sumptuous buffet dinner followed by two games with the competition. A total of forty-four members participated in the event. The Winner was presented with a trophy and a voucher worth \$150. The 1st

Runner-Up and 2nd Runner-Up received their trophies with \$100 and \$50 vouchers respectively. It was a fun-filled event for members to relax and make new friends.

We held our annual Members’ Night on 22 April 2016 (Fri) at *Zes @ The Chevrons*. The event room had a cosy ambience, a spacious floor and a cosmic-themed wall décor. In conjunction with this event, we also organized two award presentation ceremonies – for the winners, judges and sponsors of the Singapore Welding Competition 2016 and for the successful recipients of the SWS – *JWES Welding Engineer Certification program*. We had a huge turnout of about 150 members and guests who had a great time chatting and drinking beer/wine with old friends, while making new ones. Members and guests were treated to a sumptuous buffet dinner and the atmosphere was filled with fun and excitement. Needless to say, it was a memorable and enjoyable night.

Our total membership as at 31 March 2016 was as follows:

Member Type	Number
Student	2
Associate	10
Fellow	10
Full	231
Corporate	204
Total	457

Our total membership has seen a marginal increase from 447 last year. The Membership committee will be working hard to bring you more exciting and memorable events in the coming year. Please come down, have fun and support us in a big way!

10) Common Welder Qualification Scheme (CWQS) Committee

Chairman: Mr. Ivan Lim Poh Huat

Vice Chairman: Mr. Md Habibur Rahman

The focus and concern of the *Common Welder Qualification Scheme (CWQS)* committee has been mostly around ensuring the integrity and quality of the scheme through periodic monitoring. Spot checks were performed to close up gaps and trends of integrity and quality breaches. We will continue to monitor and take appropriate actions and will not

tolerate any lowering of quality in the practices by our stakeholders. Modus operandi of integrity and quality breaches are dealt with and studied in depth to prevent recurrence. *Welder Qualification Test Centres (WQTC)* have been dished with suspension when found with such breaches. Complementary checks and assurance are also in place to ensure that welding inspection personnel are certified and competent.

Feedback has been sought to address issues and concerns relating to the performance, quality and productivity of welders registered. Concerns were centred on qualification, updating performance and competency of welders registered. Timely updates of qualified welders are also raised from our stakeholders and have been looked into for improvements.

SWS continues to support the *Asian Welding Federation (AWF)* with the *Common Welder Certification Scheme (CWCS)*. The foremost challenge of implementing CWCS has been the introduction of ISO provisions into the domestic standards and gaining acceptance from our stakeholders. Currently, most stakeholders in our Oil & Petrochemicals industry prefer performing procedure qualification and welder qualification in accordance with ASME standards.

Currently there are eleven approved WQTCs serving the industry. The committee will be organizing and conducting feedback session for our stakeholders. In addition, stakeholders are constantly being updated on relevant information and enhancement relating to CWQS.

11) Property Acquisition Committee (PAC)

Chairman: Mr. Juerg Schweizer

During this term, SWS has achieved a very important milestone! We have acquired an office space at 18 Boon Lay Way, #08-112 TradeHub 21, Singapore 609966 and renovated it to accommodate a simple reception counter, a cosy lounge for members and a training room for about 25 participants. Our unit has a spacious floor area of 1484 sqft and lease duration of 60 years starting from December 2003. With the Urban Redevelopment Authority's (URA) vision for Jurong Lake District and our close

proximity to it, we are confident that it is a worthy long-term investment for SWS.

The resolution to purchase an office cum training space subject to a total cost of S\$800,000 (S\$ Eight Hundred Thousand) was approved at the last AGM on 29 May 2015.

The costs incurred to purchase our property are summarised below:

Purchase price paid to NSH Marine Engrg PL (seller)	S\$ 730,289
7% GST on purchase price	S\$ 51,100
Stamp duty paid	S\$ 16,500
Lawyer fee paid to Chen Legal LLC	S\$ 2,500
TOTAL	S\$ 800,389

As the unit when vacated by the seller had little or no facility, the Council had set aside and approved S\$80,000 for renovation. The renovation work was completed at a cost of S\$79,839 incl. GST. We had invited six contractors to submit their proposals for the renovation works. Although all the six contractors had made the on-site viewing and received the work scope from us, only three contractors finally submitted their proposals. After an evaluation, clarification of details and further negotiations, the contract was awarded to i-Details Pte Ltd. As we wished to host the 'AWF Constitution Review WG meeting' during 18-19 January 2016 at the new premises, the PAC had a very tight timeline to follow. On the contrary, hosting this meeting at a hotel would involve additional expenditure and logistic issues. The renovation project was finished well within the given timeframe and within budget.

Members of the PAC: *Mr. Juerg Schweizer (Chairman, Council member), Mr. Gerry Lim (SWS Corporate member), Mr. Lester Lee (SWS Corporate member), Mr. P Radhakrishnan (Council member), Mr. Sze Thiam Siong (Council member), Mr. Goh Lak Hee (Council member), Mr. Eddie Ko (Council member) and Mr. William Chong (Council member)*

Mr. Eddie Ko Beng Lee and Mr. Goh Lak Hee were appointed by the Council to be the Trustees for the said property, acting on the advice of our lawyer. On

behalf of the Society, we would like to express our appreciation and gratitude to both of them for taking up this responsibility.

The Council would like to acknowledge the time and effort put in by this committee who have worked tirelessly and made many sacrifices to see the completion of this purchase and renovation works. Credit should also go to the previous council (2014/15) who had the vision to table this resolution at the previous AGM and received overwhelming support from the members. This new facility truly symbolises another important milestone in the history of our Society!

12) Singapore Welding Competition 2016 Committee

Chairman: Dr. Sun Zheng

Singapore Welding Competition 2016 was held successfully on 16 March 2016. This was the sixth time that we conducted this competition and it was held at *PEC Training Centre*. The last welding competition was held two years ago. This year's competition attracted 24 welders from 8 companies. It was held in three categories / welding processes, SMAW, GMAW and GTAW.

Category: SMAW		
Winner	Saiful Askar Ali	Yongnam Engineering & Construction Pte Ltd
Runner up	Niala Alferdo JR Ebal	Sankyu (S) Pte Ltd
Category: GMAW		
Winner	Dannina Nageswara Rao	Yongnam Engineering & Construction Pte Ltd
Runner up	Palani Anbarasu	Yongnam Engineering & Construction Pte Ltd
Category: GTAW		
Winner	Murallo Essex Degala	PEC Ltd
Runner up	Kolli Pradeep Reddy	Rotary Engineering Ltd

We received sponsorship from ten of our corporate members. Our sincere appreciation and heartfelt gratitude to our generous sponsors:

Platinum sponsors

- (1) *Holcam Construction Pte Ltd*
- (2) *PEC Ltd*

Gold sponsors

- (1) *Leeden National Oxygen Ltd*
- (2) *Lincoln Machinery Pte Ltd*
- (3) *Setsco Services Pte Ltd*
- (4) *Yongnam Engineering & Construction Pte Ltd*

Silver sponsors

- (1) *Hypertherm (S) Pte Ltd*
- (2) *Meisei International Pte Ltd*
- (3) *Sankyu (S) Pte Ltd*
- (4) *Singapore Takada Industries Pte Ltd*

Award for Winners: S\$800 cash sponsored by *Holcam Construction Pte Ltd*, a medal and SWS certificate of participation. The winners will also represent Singapore at the '*International ARC Cup Welding Competition*' in *Beijing* in June 2016. We wish our welders success at this competition where they will compete against over 100 welders from 20 countries.

Award for Runner-ups: S\$500 cash sponsored by *Yongnam Engineering & Construction Pte Ltd*, a medal and SWS certificate of participation.

The award presentation ceremony for the winners, runner ups, judges and sponsors of the welding competition was held in conjunction with *SWS Members' Night* on 22 April 2016. We wish to thank all the welders and their employers for their participation in this competition. Our sincere appreciation and gratitude to our generous sponsors, panel of judges and the team of organizing committee for their great contributions.

13) Conclusion

On the whole, the term 2015/2016 has been a very fulfilling and challenging year. Some new initiatives were rolled out and some achievements were made during the past 12 months:

- Established SWS' own 'Home' with proper office and training facilities. The property is fully paid-up and is perceived to be a good investment on the long term.
- Started 'Welding Engineer' certification program in collaboration with JWES. Continued to organize workshops in niche topics and other training/certification programs.
- Participated in international and regional meetings. Cooperation agreement signed to offer IIW's IWE/IWT programs and working on offering transition arrangement too.
- Presented a strong case to host *IIW Annual Assembly 2020* in Singapore. With our 2009 experience and STPB's support, we are well placed with our bid.
- Reached out to members, industry stakeholders and associations locally and worldwide through 'Weldpoint'. Advertising revenue sustains the cost of publication.
- Continued with our involvement in the standardization program and thereby having a voice in influencing the development of welding standards both locally and internationally.
- Organised technical talks for members on latest welding technologies and related developments. Facilitated the sharing of knowledge and networking among members.
- Conducted our first-ever Bowling tournament for members and organised the annual Members' Night for fun-filled evenings in a casual setting.

- Monitored the smooth operation of CWQS through management of the scheme, auditing of the test centres and management of the service providers.
- Organised 'Singapore Welding Competition' for the sixth time. Our champion welders will represent Singapore at 'ARC Cup International Welding Competition' in Beijing.

The Society has every reason to feel contented and look forward to a more fruitful year ahead. Time passes very fast, nevertheless we have managed to deliver several benefits for our members during this short period.

Again, I wish to express my appreciation and heartfelt gratitude to my fellow colleagues in the Council and the Secretariat for making this possible. I also wish to thank all SWS members for giving us the opportunity and the strong support to serve you.



Perianan Radhakrishnan
President
Singapore Welding Society



AWF MEETINGS IN OSAKA, JAPAN

By: Mr. P Radhakrishnan, President and Mr. Sze Thiam Siong, Honorary Secretary / Past President

Japan Welding Engineering Society (JWES) proudly hosted the 25th AWF Governing Council Meeting, the various task force meetings and CWCS auditor workshop during 13-15 April 2016 at Osaka, Japan. The meetings were held at the Osaka Academia, which is a modern facility conveniently located right next to Osaka's International Exhibition Center (*Intex*). The AWF meetings were held in conjunction with the Japan International Welding Show (*JAWS*) 2016.

The AWF meetings over three days, provided valuable time for discussion and facilitated decision making for various task force committees, working groups and the Governing Council. The agenda covered discussion, identification and development of best practices in areas of standardisation, organisation structure, AWF website, CWCS, audit, training and education. Delegates from Japan Welding Engineering Society, Chinese Welding Society, Indian Welding Society, Indonesian Welding Society, Institute of Materials Malaysia, Korean Welding & Joining Society, Malaysian Welding & Joining Society, Mongolian Material Science & Welding Society, Myanmar Welding Society, Philippines Welding Society, Thai Welding & Inspection Association, Vietnam Welding Society, Singapore Welding Society and representatives from Kobe Steel Limited had plenty of opportunities to interact and share knowledge/experience on issues relating to welding, NDT and other related topics. The Governing Council also approved Vietnam Welding Society as a new member of AWF and also accepted their request to host the AWF meetings in 2017.

It was the 24th time that the Japan International Welding Show 2016 was being held. It is organised every other

year in Tokyo and Osaka in the history of 45 years, corresponding with the industrial needs of each time. It is now well accepted as one of the most exciting expositions to collectively showcase the cutting-edge product technologies and services, from welding and cutting to laser processing, micro joining, powder process, surfacing, NDT and CAD/CAM/CIM's. The welding industry is now globally facing the time to establish a new stage of manufacturing, making full use of highly advanced technologies such as digital computers, robots and lasers; the exhibition was truly an excellent showcase of these technologies. We had a great time looking around the booths and learning new things for more than 5 hours. It is reported that the show had attracted 88,945 trade visitors over four days out of which 3,214 were overseas visitors.

JWES hosted the AWF delegates to a traditional Japanese dinner at 'Nori' Restaurant. The delegates were also invited to the Welding Promenade Reception at Hyatt Regency hosted by Sanpo Publications Inc. This was a great opportunity to network with the organisers of the Japan International Welding Show (*JAWS*), leaders from welding and joining societies worldwide and exhibitors at JAWS.

SWS extends our most sincere thanks and appreciation to JWES for the excellent arrangement of the AWF meetings and for their very warm and memorable hospitality in Osaka. We wish to thank all the JWES staff who made this possible and Sanpo Publications Inc, Japan Welding Technology Centre & Kobelco for their kind hospitality.

A NIGHT TO REMEMBER – 2016 MEMBERS’ NIGHT

By: Mr. Yusoo Aynuddin, Chairman, Membership



First of all, what an amazing and fruitful event, it turned out to be. You could say the venue was “out of this world”, creatively decorated to bring about the atmosphere of a free and easy environment. Work related matters were put aside as colleagues, friends and acquaintances connected and catch up.

With wine and beer flowing free, there was no stopping the members from getting into the mood of the event. If that wasn’t enough, our guests were invited to a wide spread of scrumptious food.

With the tone of the event set perfectly, it was time to continue with the night’s programme. Appreciating our members and creating a platform to network with others who share the same interest in the welding industry.

This momentous occasion was held on the evening of 22 April 2016. The event was hosted at *The Chevrons, ZES function hall*.

With the slideshow running, music flowing, prizes arranged on the stage, we were set to go before the arrival of our first member.

Even though the event was scheduled to start at 6pm, some started arriving as early as 5.30pm. As we had

expected this situation, we were ready at the registration counter for the arrival of these “early birds”.

Many of the members who had attended the past Members’ Night were pleasantly surprised at the function hall’s decorations and layout arrangement.

The above pictures show some of our members and guests, who were enjoying the cocktail reception. As the members and guests arrived, the function hall



started to fill with laughter and chit-chat masking the background music. At 7pm, the event commenced, in a rather unique manner, by opening the bar and the buffet dinner, postponing the opening speech for later.



Some members and guests choose to have their dinner from the comfort of the air conditioning in the function hall, while others went to sit out in the open porch, under the evening sky, for dinner. It was no doubt our members enjoyed the food as empty plates were everywhere by the end of the night. How could we forget our vegetarian friends? A special menu was catered for the vegetarian members.

With our stomachs contented, drinks grasped in our hands and friendly vibes surrounding the room. Members and guests gathered in the function hall for the event to start proper.

The opening message was delivered by SWS President, *Mr. P Radhakrishnan*, who finished his opening speech with a thought provoking story that introduced a rabbit with a PhD as the main character.

Following so, a prize and award ceremony for the winners of the *Singapore Welding Competition 2016* and the recipients of the *JWES Welding Engineer Certification* was held.

The turnout was satisfactory, with more than 159 members and guests enjoying the ambience of the ZES function hall. This joyful atmosphere was appreciated by members chatting away with old friends and catching up with stories in their business sectors.

Certainly no one would forget the free flow of beer, wine and the buffet dinner that kept our members excited and lively till we had to call it a day, which was unfortunately around 10pm. Needless to say, it was an eventful and joyful night. SWS would like to thank its members for their support and hope this society flourishes in years to come.



38th SINGAPORE WELDING SOCIETY (SWS) ANNUAL GENERAL MEETING (AGM)

By: Mr. Sze Tham Siong, Honorary Secretary / Immediate Past President



The 38th Singapore Welding Society Annual General Meeting (AGM) was held on 27 May 2016 at the *Civil Service Club's Hilltop Garden Restaurant* in *Bukit Batok*. Members started to arrive as early as 5.30pm to catch up with old friends and business associates. The atmosphere was warm, relaxed and members helped themselves to some refreshments and snacks. The AGM had to be adjourned half an hour later as the quorum could not be achieved by the stipulated time. Nevertheless, the AGM proceeded smoothly at 6.30pm. SWS President, Mr. Perianan Radhakrishnan, welcomed all and introduced the council members for the current term of office 2015/2016.

The Honorary Secretary, Mr. Sze Thiam Siong, presented the following agenda for the evening:

- To confirm the minutes of the 37th Annual General Meeting held on 29 May 2015
- To consider, approve, and adopt the Annual/President's Report of the Council

- To consider, approve, and adopt the Statement of Accounts and Balance Sheet for the Year 2015/2016
- To elect Council members for the Year 2016/2017
- Any other businesses

The minutes of the 37th AGM was approved.

SWS President, Mr. P Radhakrishnan, presented his Annual/President's report by expressing his sincere appreciation to all the SWS members for their unwavering support given to the council members during this term of office. He reiterated his team's commitments to achieve the Society's long-term strategic objectives set out in 2013. He emphasized the importance of staying focused and serving the needs of its members so that the Society can continue to stay relevant and grow with the industry. He summarized the various committees' activities/achievements for the year with his presentation slides. He complimented the works performed by each committee and welcomed new members to join them in pursuit of excellence.



A copy of the President's report is featured in this issue of Weldpoint.

The Assistant Honorary Treasurer, *Mr. William Chong*, then presented the audited financial statement for the year ending 31 March 2016. He reported that the accumulated fund stood at S\$929,080.04 after deducting the cost of the acquisition of a new SWS office at *TradeHub 21*. He mentioned that the Society's fund remains healthy. He said that 2016/2017 will be a challenging year for the Society as the country faced economic slowdown and poor market sentiment.

Both the President's and Treasurer's reports were adopted and unanimously approved by the members at the AGM.

The Honorary Secretary, *Mr. Sze Thiam Siong*, informed that at the close of nomination date/time, twelve valid nominations were received for the twelve seats available.

He announced the new council members for 2016/2018 are as follows:

- 1 Mr. Perianan Radhakrishnan
- 2 Mr. Eddie Ko Beng Lee
- 3 Dr. Sun Zheng
- 4 Mr. Sze Thiam Siong
- 5 Mr. Goh Lak Hee
- 6 Mr. William Chong Jun Hua
- 7 Mr. Chow Ngai Mun
- 8 Mr. Foo Hoe Ming
- 9 Dr. Zhou Wei
- 10 Mr. Juerg Schweizer
- 11 Mr. Kelvin Lee Chee Fatt
- 12 Mr. Yusoo Aynuddin
- 13 Mr. Khoo Kok Leong
- 14 Mr. Roger Hu Hengbiao
- 15 Mr. Lim Zhi Yang



On behalf of the Society, *Mr. Sze* thanked the outgoing council members, *Mr. Ivan Lim Poh Huat* and *Mr. Md Habibur Rahman* for their past contributions and efforts. *Mr. Md Habibur Rahman* commented that it had been a great honour and privilege for him to serve in the Council and he greatly appreciated the support given by the members during his past tenure. He reiterated his continued support for the Society. *Mr. Chow. N M* spoke on behalf of *Mr. Ivan Lim*, saying that they both





In closing, *Mr. Radhakrishnan*, thanked the outgoing council members for their dedication and contributions during their term of office and welcomed onboard the two new council members for 2016/2018. He asked the two new council members to introduce themselves to the members. *Mr. Roger Hu* said he worked for Keppel Fels Limited as a Quality Assurance Manager. *Mr. Lim Zhi Yang* said he worked for ST Kinetics as a Senior Engineer/ Material & Special Processes. Both thanked the members for their nominations as well as the confidence and trust placed in them to serve the Society.

worked for the same organization. He introduced *Mr. Ivan Lim* to join SWS some years back as they both shared the same passion to help the members and the industry. He said *Mr. Ivan Lim* enjoyed helping the industry and appreciated the support given by the members in his role as *Chairman of the Common Welder Qualification Scheme (CWQS)*.

The AGM concluded at 8pm and members were invited to the restaurant for their dinner. Members enjoyed the dinner served with beer/wine to keep the night alive. They also took the opportunity to catch up with old friends and network with business associates and new members.

SINGAPORE WELDING COMPETITION 2016

By: Dr. Sun Zheng, Vice President, SWS

The Singapore Welding Competition 2016 was successfully held on 16 March 2016 at the PEC Training Centre. This year's competition is the 6th welding competition organized by the SWS. The most previous event was in 2014, two years ago. This year's competition attracted 24 welders from 8 companies.

Three welding processes, namely, SMAW, GMAW and GTAW, were used for the competition. There was one winner and one runner-up for each process.

This year's competition has obtained the strong support from 10 sponsoring companies, *they are as follows:*

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Sankyu (S) Pte Ltd



Singapore Takada Industries Pte Ltd



The winners and runner-ups of the 2016 welding competition are as follows:

Position	Name of Participant	Company Name
Category SMAW		
Winner	Saiful Askar Ali	<i>Yongnam Engineering & Construction Pte Ltd</i>
Runner up	Niala Alferdo JR Ebal	<i>Sankyu (S) Pte Ltd</i>
Category GMAW		
Winner	Dannina Nageswara Rao	<i>Yongnam Engineering & Construction Ltd</i>
Runner up	Palani Anbarasu	<i>Yongnam Engineering & Construction (Pte) Ltd</i>
Category GTAW		
Winner	Murallo Essex Degala	<i>PEC Ltd</i>
Runner up	Kolli Pradeep Reddy	<i>Rotary Engineering Ltd</i>

The Awards Ceremony of the Singapore Welding Competition 2016 was held in conjunction with SWS Annual Members' Night at *The Chevrons* on 22 April 2016. The award for the winners include: S\$800 cash, sponsored by *Holcam Construction Pte Ltd*, a gold medal and a SWS certificate. On top of these, the winners will be representing Singapore to compete at the International ARC Cup welding competition in *Beijing*, June this year. This international competition has been successfully organized three times, in 2010, 2012 and 2014. This year will be the 4th time and it expects over 100 welders from more than 20 countries to compete in *Beijing*. The award for runner-ups include: S\$500 cash, sponsored by *Yongnam (S) Pte Ltd*, a silver medal and a SWS certificate. The employers of both the winners and runner-ups have also been awarded with a Commendation Plaque.

We would like to thank the welders and their companies for the participation in this competition. We would also

like to thank the support of the sponsors, panel of judges and the team of the organizing committee for their great contributions. SWS will continue to organize welding competitions regularly to provide welders a good platform to show their skills.



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Inside Back Cover	NA	\$450	NA	(consecutive issues)
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INTERNATIONAL WELDING INSPECTION PERSONNEL

SETSCO TRAINING CENTRE



Setsco Training Centre is an Approved Training Organisation (ATO) certified by Singapore Welding Society

OVERVIEW

This course is designed for welding personnel who are already active in job functions such as supervision, instructors and technical sales.

ACCESS CONDITIONS

The recommended minimum age of 20 years including a minimum of 2 years of job related experience is required

Route 1

ITE qualification including mathematics and science.

Route 2

A qualified, professional worker in a metalworking profession with a minimum of three years' experience and who has successfully completed the International Welding Specialist Qualification Level 0.

COURSE CONTENT

THEORY:

- Welding processes and equipment
- Materials and their behaviour during welding
- Construction and design
- Fabrication applications engineering

PRACTICAL:

- Does not aim at practical skills but at gaining knowledge on the control of the different welding processes, difficulties and typical defects associated with the incorrect use of different welding methods and consumables.



OUTCOME OF TRAINING

Successful students will:

- Understand in general, the basics of electricity in relation to the requirements of welding technology and also key electronic components used in power sources
- Understand the principles of carbon contents, addition of alloys, crystal structures and their representation in phase and transformation diagram
- Understand basic metallurgy of steels, testing of materials and heat treatments
- Weldability of different alloys and problem-solving
- Understand the weldability of metals under different loads and the design of welded structures
- Identify the different non-destructive testing methods and repair methods

International Welding Inspection Personnel Course

For more information, please contact the Training Department:

Tan Hock Chen / See Wah Kiaw

Tel: +65 68950615 / 566 7777x633

Email: tanhc@setsco.com / seewk@setsco.com

COURSE SCHEDULE 2016

Venue: Setsco Training Centre - 18, Teban Gardens Crescent, Singapore 608925

COURSE	Hours	IWI-Basic	Hours	IWI-Standard
PRACTICAL WELDING To gain knowledge on the control of the different Welding processes. The student shall become familiar as possible with the problems and typical defects associated with incorrect use of the different welding methods.	(40)	3-7 Oct	(63)	7-18 Nov
WELDING PROCESSES AND EQUIPMENT Theoretical training and understanding of all different welding processes including MMA, GMAW, FCAW, GTAW, SAW, Resistance, Plasma, Electro Slag, Laser, Thermal Cutting, Surfacing, Mechanised, Robotic, Brazing and Soldering	(11)	10-11 Oct	(13)	21- 22 Nov
MATERIALS AND THEIR BEHAVIOR DURING WELDING Manufacture of steel, Alloys and phase diagrams, Iron Carbon Alloys, Testing of materials at the weld joining, Heat treatments, Structures at the welded joining, Carbon and Carbon Manganese steels plus weldability problems and problem solving	(25)	17-19 Oct	(41)	24-30 Nov
CONSTRUCTION AND DESIGN Fundamentals of strength of materials, Basics of weld designing, Behaviour of metals under different loads. Weld joining design with predominantly static loads. Thermodynamically loaded structures. Structures fabricated from aluminum and its alloys. Reinforced steels.	(12)	24-25 Oct	(17)	5-6 Dec
FABRICATION, APPLICATIONS AND ENGINEERING Economic considerations with regard to joint design and the influence of the amount of metal deposited, Quality Assurance, Weld stresses and distortion, Plant facilities, Welding jigs and fixtures, NDT i.e. Liquid Penetrant, Magnetic Particle, Ultrasonic, Radiography, Repair welding and actual case studies.	(17)	1-3 Nov	(23)	12-14 Dec
Total Recommended Hours	105		157	

COURSE DURATION

Practical: 5 days (IWI-B), 8 days (IWI-S)

Theory: 8 days (IWI-B), 12 days (IWI-S)

Exams: Fees to be paid separately to Singapore Welding Society (SWS)

TRAINING EVALUATION

Examination for the International Welding Inspection Personnel (IWIP) Diploma

CLASS SIZE

Minimum: 6 students

Maximum: 12 students

COURSE FEES

Corporate Members: S\$4400 (IWI-B), S\$6,600 (IWI-S)

Non-members: S\$4900.00(IWI-B), S\$7,300 (IWI-S)

IWE/IWT Course 2016-2017

International Welding Engineer (IWE) International Welding Technologist (IWT)

Course according to IIW Guideline IAB-252r3-16

Distance & Blended learning – a combination of interactive online and classroom learning

OVERVIEW

The course leads to a diploma which is required according to ISO 3834 and ISO 14731. Its contents correspond to the requirements of industrial practice. The course will be of great interest for engineers, technologists, welding coordinators, technical, quality or workshop managers in the following fields:

Process plants, storage tanks, structural steelwork, pressure vessels, offshore structures, ship-building and ship-repairing, pipework and pipeline, bridges, general heavy machinery, power generator equipment and for material testing.

Classroom training will take place at SWS or Setsco training premises

ACCESS

The course is open to those who have completed an approved engineering degree or equivalent for IWE or completed an approved polytechnic diploma or first degree or equivalent for IWT.

DIPLOMA

After successful completion of the course and passing the examinations, the participant receives an IIW diploma and the title

International Welding Engineer (IWE)

or

International Welding Technologist (IWT)

COURSE FEE

	IWE	IWT
Distance Learning Part 1	\$ 3,600	\$ 3,600
Classroom Learning Part 2 & Blended Learning Part 3	\$14,700	\$11,200
TOTAL	\$18,300	\$14,800

FOR MORE DETAILS PLEASES CONTACT:

The SECRETARIAT
SINGAPORE WELDING SOCIETY
Phone: (65) 6779 7706
Fax: (65) 6274 4055
secretariat@sws.org.sg



Part 1

01 November 2016 to 24 February 2017
Distance Learning - Part 1 notes provided upon enrolment

25 February 2017 -Classroom Learning

- Part 1, Module 1

10 March 2017 – Examination – Part 1

Part 2

27 Feb to 09 Mar 2017- Fundamental practical skills in oxy-acetylene, manual metal arc, gas shielded metal arc & gas tungsten arc welding. Demonstration of other welding processes. Practical training (38 hrs) and Demonstration-Videos presentations (22 hrs.)

Part 3

11 March to 28 May 2017 - Distance Learning – Part 3, Module 1

29 May to 03 June 2017 – Classroom Learning – Part 3, Module 1

03 June 2015 – Examination - Part 3, Module 1

04 June to 05 November 2017 – Distance Learning – Part 3, Module 2, 3 and 4

17 – 21 July to 2017 – Classroom Learning

- Part 3, Module 2

21 July 2017 – Examination -Part 3, Module 2

11 to 15 Sept 2017 – Classroom Learning

- Part 3, Module 3

15 Sept 2017 –Examination–Part 3, Module 3

6 to 14 November 2017 – Classroom Learning

- Part 3, Module 4

15 November 2017 – Examination

- Part 3, Module 4

16 November 2017 – Oral Examination (IWE & IWT)

Module Titles for IWE and IWT

1. Welding processes and equipment
2. Materials and their behavior during welding
3. Construction and design
4. Fabrication, application engineering

(Note: Course schedules are subject to change)

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Corporate

Tang Wei Li	Managing Director	Vanquish Offshore Services Pte Ltd
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Full

Ong Weiyong	Engineer	International Engine Component Overhaul Pte Ltd
Tiah Nam Kuan	Senior Engineer	Petrochemical Corporation of Singapore
Nagarajan Karthikeyan	Senior Process Engineer	NTS Components Singapore
Ahmad Mohd Shukor	Senior Resident Engineer	Rankine & Hill (S) Pte Ltd
Hoon Kim Huat	Supervisor	Petrochemical Corp Of Singapore (Pte) Ltd
Chia Chih Hsiung	Engineer	Cameron (S) Pte Ltd

New Membership for May 2016

Corporate

Hu Roger	QA Manager	Keppel FELS
----------	------------	-------------

Full

Lim Teck Huat Kenny	Sales Director	Stainless Structural Asia Pte Ltd
Anandan Suresh	Mfg Laboratory Engineer	Rolls-Royce Singapore Pte Ltd
Subramanian Rajmohan	Senior Operation Manager	Affinity Test Services Pte Ltd
Singh Avishek	Technician	Asiaheat Treatment Pte Ltd
Issac Jayasingh	Inspector	Asia Heat Treatment Pte Ltd

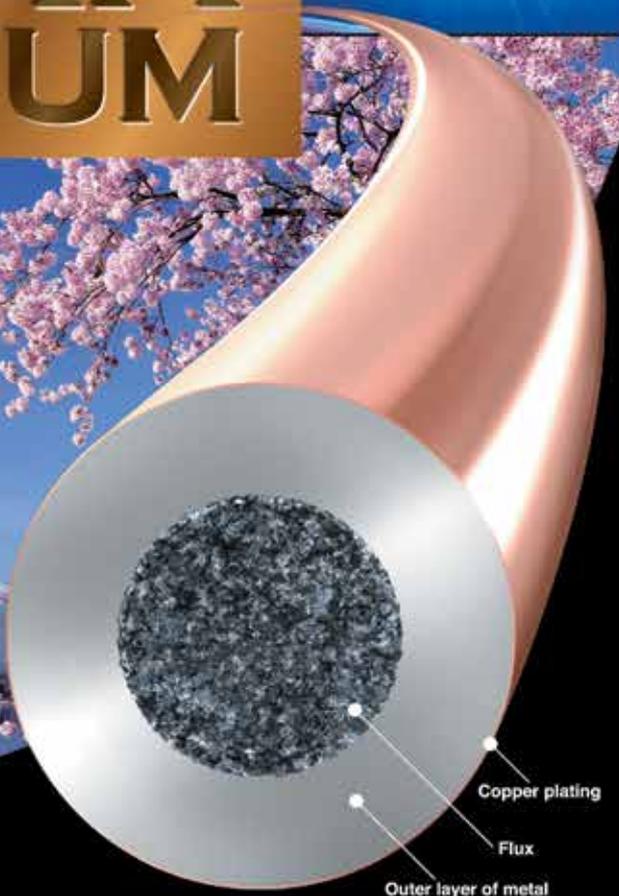


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Orbital MIG Welding System

Quality Assurance for Orbital MIG Welds

When it comes to demanding industries like construction or process piping, orbital welds are subject to an exceptionally high standard of quality and productivity. Calibration at the front end of the process can be challenging and time consuming, but the orbital MIG welding system meets the challenge.

Superior Orbital MIG Welds - The First Time, Every Time.

The mechanized HELIX® M85 welding system sets up quickly and delivers precision calculation and control of travel time, weld distance, weld speed and other essential variables. The result is consistent, high-quality welds with little or no time wasted on setup or rework.

The system is driven by Lincoln Electric's APEX® 3000 Mechanized Controller. Each system power supply is interchangeable with an ArcLink®-enabled third-generation Lincoln Power Wave® machine.



Shown with Optional STT Module



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Ask for a free demonstration today!