

## AIGA Celebrates A Milestone

**A**sia Industrial Gases Association (AIGA) board reached a major milestone when it met for the 50th time in Singapore on 29th June 2018. Since its formation at the end of 2002, the board has never missed the regular meetings reinforcing its high commitment to safety. AIGA board oversees the activities and programs being carried out by its Technical Committee and multiple Work Groups.

Established in Singapore by leading Industrial Gases producers in Asia, AIGA is a non profit technical and safety oriented organisation with the purpose of promoting safety, health, environmental awareness and physical security in the areas of manufacturing, distribution and use of industrial, medicinal and various speciality gases.

It aims to foster the exchange of technical information among its members in the safe handling and use of industrial, medicinal and speciality gases. AIGA also closely liaises with the regulatory authorities in various countries in Asia to work towards the highest level of safety, health and environmental practices across the region. AIGA also actively participates in the harmonization of standards across the gas industry on a global level by collaborating with other major associations in Europe, Japan and United States (EIGA, JIMGA and CGA).

At the 50<sup>th</sup> meeting, Wilbur Mok, Board President commented "This is indeed a milestone event! I congratulate all current members and also thank all the past members for their contribution over last 15 years that helped to develop AIGA activities and publications. I strongly believe AIGA has been effective in making improvements in safety, health and environmental compliance in the industrial gases industry in Asia".

This milestone event was covered by Gasworld News on 11<sup>th</sup> June 2018 in [www.gasworld.com](http://www.gasworld.com)



**50<sup>th</sup> BD Meeting of AIGA 29 June 2018 Singapore**

### Welcome AIGA Board Member



Francois Abrial

At the November 2017 meeting, the Board welcomed Francois Abrial, VP-Asia Pacific of Air Liquide as a board member. He replaced Mok Kong Weng of Air Liquide who stepped down as member after serving the Board for more than 11 years. AIGA extends its sincere gratitude to Mok Kong Weng for his immense contribution to the association.

### New TC Chairman



Haris Farooqi

Haris Farooqi from Air Products joined the board as an ex officio member at the 48th board meeting on approval of his nomination as Chairman of Technical Committee. This position was previously held by Wichit Sophitanontrat who relinquished the chair position in Oct 2017 due to his personal reasons. AIGA wishes him success in his new endeavour. "I am delighted to lead the activities of AIGA Technical Committee which has been adding value to the Industrial Gases Industry in Asia by constantly working for improving safety, health and achieving environmental excellence", Haris observed on assuming the role.

Haris has been an active member of the Technical Committee since 2013 and will continue as sponsor of the Medical Gases Work Group.

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|----------------|--|
| President      | : <b>Wilbur Mok</b> (Air Products)                                     |
| Vice President | : <b>John Panikar</b> (Praxair)  |
| Secretary      | : <b>Norikazu Ishikawa</b> (Taiyo Nippon Sanso)                        |
| Treasurer      | : <b>Werner Hickel</b> (Messer China)                                  |
| Members        | : <b>Sanjiv Lamba</b> (Linde Corporation)                              |
|                | : <b>Francois Abrial</b> (Air Liquide)                                 |
|                | : <b>Makoto Horiguchi</b> (Iwatani Corporation)                        |
| Ex-Officio     | : <b>Haris Farooqi</b> (Air Products), Chairman of Technical Committee |
|                | : <b>Milan Sarkar</b> , Secretary General (AIGA)                       |

# AIGA Safety Seminars

AIGA working jointly with associations in India, Korea and Taiwan completed three safety seminars in the year 2017. A Work Shop on Laboratory Safety was also held by the Singapore Association. In the current year, AIGA China has already held a seminar on Electronic and Speciality Gases Safety in Shanghai on 27 April 2018 with CIGIA (China Industrial Gas Industry Association) as co host. This seminar was attended by more than 125 delegates and drew quite a lot of attention in view of ESG Safety being seen as a priority area of focus in China.

AIGA is pleased that all the safety seminars saw high quality presentations from some of the experts from AIGA member companies in their respective fields. It was also heartening to note that the seminars in Taiwan and Korea drew more than 200 participants. Taiwan Seminar was cosponsored by OSHA and NTUT (National Technical University Taiwan). India seminar also was well attended with 140 delegates including some of the product vehicle drivers from GIA member companies. Some of the details on the seminars held in 2017 and YTD 2018 are given in the below table and highlighted pictures are shown on last page.

Host NA	Seminar Topic	City	Date	Number of Participants	AIGA Speakers
THPGIA, Taiwan	Mechanical Integrity, Process Safety	Taipei	21-09-2017	220	Amir Riaz, Jerry LU, Rakesh Srivastava and Liu Lubing
GIA, India	Emerging Trends in Transportation Safety	Bangalore	14-09-2017	100	Sawet Thananirun & Milan Sarkar
KISGA, Korea	ESG Safety	Seoul	15-11-2017	200	JH Park
AIGA China	ESG Safety	Shanghai	27-04-2018	125	Garry Miller & Jerry LU

In 2018, AIGA continues to work with the national associations to organise eight safety seminars which significantly contribute to enhancing safety awareness among people associated with industrial gases industry in Asia region. AIGA affiliated associations in China, India, Korea, Taiwan, Thailand, Malaysia, Indonesia and Singapore have already started planning for safety seminars in their respective countries in the current year with AIGA as co-host.

## International Harmonisation update

The four regional associations in USA (CGA), Europe (EIGA), Japan (JIMGA) and Asia (AIGA) met in Kobey Bay Sheraton Hotel & Towers, in Japan on 13-14 March 2018 for the biannual meeting of International Harmonisation Council (IHC). This was the 42nd meeting of IHC and was hosted by JIMGA. "Observers" from some of the IOMA Global Committee member companies were also present in the meeting.

Milan Sarkar, Secretary General and Haris Farooqi (AP), Chairman of Technical Committee attended the meeting to represent AIGA.

The meeting focussed on

- Harmonized Publication Library Gap Analysis work to evaluate if the current publications have sufficiently addressed the various safety risks in some of the critical areas. Such gap analysis has already been completed for ASU, Acetylene and Pyrophoric Gases (Silane to start with). IHC is also reviewing opportunities and need for future gap analysis work.
- Review of progress with active harmonisation projects
- Further optimisation of work process to reduce the cycle time of harmonisation projects
- New work items for harmonisation

- Promoting harmonisation work among various stakeholders

AIGA has been actively supporting the harmonisation work being carried out by IHC by nominating Subject Matter Experts from member companies in the Joint Work Groups and also by adopting the harmonised publications in Asia. It is also engaged in promoting the benefits and purpose of globally harmonised standards among member companies, national associations and regulatory authorities in the countries in Asia region.

The next IHC Meeting is scheduled on 28<sup>th</sup>-29<sup>th</sup> August 2018 and will be hosted by the European Industrial Gases Association, in Antwerp, Belgium. The meeting following that will be hosted by AIGA in Singapore in 1Q 2019.



Participants at 42<sup>nd</sup> meeting of IHC held in Kobe Japan

# Technical Committee & Work Groups

## Changes in Work Group Representatives from AIGA Members

There were quite a number of changes at the Work Groups during 2017-2018. In the Safety Advisory Group, Venkatadas Devisetty replaced Rakesh Srivastava as the representative from Praxair while Aleron Tan of TNSC replaced Toshiaki Kuwano.

In Electronic and Speciality Gases Work Group, Alf HSU replaced Jason Thong as a representative from Air Liquide. Nattawud Janteb of Linde retired from Transport Safety Work Group B after being a member from Linde since 2006 and the position was filled by Md Aamir and Chutamat Mekmahaprom. Adisorn Ruangdej, of Praxair was nominated as the Chairperson of the Transport Work Group B which was previously held by Nattawud Janteb. Yu Ridong and Huang Sha of Air Liquide joined Transport Work Group A in place of Shao Haiyun.

Erika Love of Air Liquide joined Physical Security Task Force in place of Francois Erba. This task force works under the guidance of Safety Advisory Group and was formed in 2016 with Kalimuthu Thiagu of Air Products in Chair. Fawzy Din from Linde is also a primary member of this task force.

## Formation of New Work Group

AIGA Technical Committee has enlarged its' scope further by forming a new work group to focus on safety and related topics for both Cryogenic & non-Cryogenic Air Separation Units(ASU) and other Large Facilities(LF) viz pipelines, large cryogenic liquid supply installations, CO2 and HyCo facilities etc. This new group has been named as 'ASU & LF Work Group' and chaired by Jerry Lu of Air Products. Other members are Lihua Tong (Air Liquide), Guorong Gao (Praxair), Michael P Wood (Linde) and Wong Tuck Hoon (TNSC).

## Technical Committee Meetings

AIGA Technical Committee (TC) has been visiting National Associations (NAs) and jointly holding its triannual TC meetings to network and enhance engagement and cooperation with the NAs. In 2017-2018 these meetings were held in Pasig City in Philippines, Jakarta in Indonesia and Singapore with the members from PCIGI, AGII and IGAS who were the respective host country associations. The same effort continues and the next meeting will be held in Taipei City, Taiwan in Sept 2018 with THPGIA as host.

## New Programs

AIGA Technical Committee and Work Groups have launched or undertaken several new programs in the past 12 months to focus on some of the critical areas of safety. Learning from past accidents and incidents provided the direction required on taking up these initiatives. One such initiative was to collect and analyse the data from AIGA member companies on High Severity Product Vehicle Accidents (those resulting into roll overs, major human consequence, significant damage to equipment or product release). Two year data since 2016 was collected for all AIGA member companies in various countries in Asia and analysed by an expert group to understand the major consequences and also the root cause behind the incidents. AIGA Safety Advisory

Group (SAG) and Transport Safety Work Group jointly carried out this work and will be soon publishing the findings with suggested preventive measures in the form of a Safety Bulletin. AIGA believes this work will surely be useful to all associated with transportation of products in Industrial Gases Industry in Asia.

AIGA SAG is also currently working on a project to understand problems with work- related injuries and then analyse the data to determine areas to focus by the gas industry to mitigate the risks.

Group learning through sharing of past accidents/incidents has been a practice in AIGA TC & SAG meetings. Members added one more program in 2017 where individual members by turn shared a story from their respective organisations on topics of common interest, such as, a best practice or a new technology, a program that has made positive impact on safety and environmental performance. This generated much trust and interest among members. Some of the topics shared in the last year are

- ♦ Road Safety Strategy and Simple Risk Assessment Tool - by Alberic de Mareschal of Air Liquide
- ♦ Job Cycle Check – by Andy Cook of Linde
- ♦ Moments of Decision – by Rakesh Srivastava of Praxair
- ♦ Master The Basics – Joey Chen of Air Products
- ♦ Use of Technology in Monitoring of Driver Fatigue and Distraction – by MVS Ramakrishna of Praxair
- ♦ Safety Management at Construction Sites – by Thomas Rubbert of Messer China
- ♦ Approach to Factory Safety and Security During a Natural Disaster – by Ang Lee San of Iwatani Corporation
- ♦ Monthly Incident Review Committee – by Haris Farooqi of Air Products
- ♦ Driver Coaching and Score-carding Program – by Venkatadas Devisetty of Praxair

AIGA Board and TC have been providing encouragement to the sharing of best practices by members in keeping with the spirit of AIGA.



AIGA & AGII members at 45<sup>th</sup> TC meeting in Jakarta



# Technical Committee & Work Groups

Work Groups	Technical Committee	Safety Advisory Group	Medical Gases WG	Packaged Gases	Electronic Specialty Gases WG	Transportation WG(A)	Transportation WG(B)	ASU & Large Facilities WG (New)
Air Liquide	Henry Liu	Alberic de Mareschal	Jerry Guo	Kok Khoon Toh	Margaret Ang/Alf Hsu	Yu Ridong/Huang Sha	Vera JAarugaruna	Lihua Tong
Air Products	Haris Farooqi	Joey Chen	Mark Garrett	Mark Garrett	Young-Soo Kim/Elvin Tham	Nicholas Young/Cloud LIN	Nicholas Young/Amorn Jungskul	Jerry Lu
Linde Group	Andy Cook	Andy Cook	Sawet Thananirun	Ramana Vutukuru	Pornchai Lerk Annun	Daniel Zhou	Md Aamir / Chutamat Mekmahaprom	Michael P Wood
Iwatani	Ang Lee San	Md Dani	-	-	Dr Kunihiro Koike		Ang Lee San	-
Messer China	Du Pu	Thomas Rubbert	-	-	LI Hong Wei	Xiuping Yu		-
Taiyo Nippon Sanso	Toshiaki Kuwano	Aleron Tan	Koujirou Hirao	Tan Chin Tee	CH Ju	Kazuhiko Fujie	N. Pontheop	Wong Tuck Hoon/Huang Junjie
Praxair	MVS Ramakrishna	Venkatadas Devisetty	Arindam Das	Arindam Das	Laura Luo	Cyrus Liu	Adisorn Ruangdej	Gao Guorong
Co-opted	Milan Sarkar (Sec-General)					Note: Name in Blue indicates Chairperson		

## AIGA Work Plan 2018

In consultation with the Work Groups and the Board, the Technical Committee has finalized and rolled out the 2018 Work Plan.

### Highlights of the plan include the following:

- Work on Strategies for 'Enhancing field level use of AIGA and Harmonised Publications'
- Enhance field level engagement by networking with National Associations in Asia
- Transport Safety Work Groups to focus on new programs that help in reducing High Severity Product Vehicle Accidents (HS-PVAs)
- To focus on harmonisation projects on matters related to ASUs, HyCO and other large facilities
- Promote awareness on Process Safety Management in industrial gases industry
- Actively participate in IHC and IOMA meetings
- Higher level of interaction with CIGIA in China and AIIGMA in India to develop collaboration on projects of mutual interest that promote safety and/or protect health & environment
- Supporting National Associations who are keen to organize safety seminars in their countries

## AIGA Publication Update

### Recent Publications since July 2017 and 2018:

#### New AIGA Publications:

- AIGA 097/17 – Reference Guide on Medical Gas Cylinder Valves
- AIGA 98/17 – Reference Guide for Industrial Gas Cylinder Valve Outlet Connections
- AIGA 99/17 - Process Safety Management Framework Guidance
- AIGA 95/16 – Mechanical Integrity of Syn Gas Outlet Systems
- Safety Bulletin SB 08/17 – In Vehicle Camera and How Does it Improve Road Safety

- Safety Bulletin AIGA SB 10/17 – Prevention of Accident Due to Overheated or Burning Tyres
- Safety Bulletin AIGA SB 11/18 – Human Behaviour Within Transport Safety Operations
- Position Paper PP 05/18 – Long Term Durability of Steel Gas Cylinders
- Safety Poster SP 03 – Driver Distraction Due to Use of Mobile Phones, Series 1
- Safety Poster SP 04 - Driver Distraction Due to Use of Mobile Phones, Series 2
- Safety Poster SP 05 – Asphyxiation Hazard
- Training Package 23/18 – Recent (2017) Accidents/Incidents in the Gases Industry in Asia

#### Revised AIGA Publications:

AIGA 003/18 - Site Security Guidelines

AIGA 019/17 - Connection of Portable Liquid Cylinders

AIGA 023/17 - Good Manufacturing Practice for Medicinal Gases

AIGA 049/17 - Guideline to Medical Oxygen Supply Systems for Healthcare Facilities

Several revised and new harmonised publications were also released by AIGA during this period as part of its participation in the activities of International Harmonisation Council.

#### Work In Progress:

- Reference Guide on Industrial and Medical Gas Cylinder Colour Coding Practices in Asia( New AIGA publication)
- Safety Bulletin on High Severity Product Vehicles Accidents and Challenges in Transportation Safety in Asia ( New AIGA publication)
- Safety Guide in Product Conversion Of Transport Tankers ( New AIGA publication)
- Guidelines on How to Track and Manage Aggressive Drivers ( New AIGA Publication)
- Safety Posters on Manual Handling of High Pressure Cylinders and Process Safety

# National Association Round Up

## Updates from AIGA China Representative Office:



Claudia Wang

Claudia Wang was appointed as new Secretary General of AIGA China in Dec 2017. She took over from David Anderson of Linde who held the role of Secretary General of AIGA Representative Office in China as a part time responsibility. Claudia holds a Bachelors degree from Zhejiang University, an EMBA from State University of New York, and has over 25 years diverse working experience ranging from project management to sales & marketing, business development, operations and consultancy for different local and international companies in China involving government engagement and advocacy. She is based in Beijing.

AIGA congratulates M/S Yingde Gases for joining China Rep Office since 3Q 2017 by becoming an Associate Member.

AIGA China also enhanced collaboration with CIGIA in multiple areas which would help to enhance the safety and regulations in the Industry by jointly holding the first ESG Forum in Shanghai in April 2018 and also agreeing to collaborate in developing consortium standards.

## Updates from Gas Industries Association India (GIA)

Moloy Banerjee of Linde India took over the role of Chairman of Governing Council of GIA from Francois Boinnard of Air Liquide.

GIA TC has recently added a Packaged Gases Work Group in order to focus on areas concerning safety with filling, storage and handling of compressed gases in cylinders.



Photo of a test tanker fitted with outrigger and ABS/EBL at a new track & field driver training facility near Chennai, India which has been jointly developed by one of the leading GIA Member Companies and an international vehicle safety equipment manufacturer. The purpose is to give the transport tanker drivers experience of new safety technologies on a test track under various road conditions and how to prevent roll overs, jack knifing etc

## Updates from Industrial Gas Association Singapore (IGAS)

Lenny Lim of Linde Singapore took over the role of Chairman of Management Committee of IGAS from David Leblanc of Air Liquide.

IGAS has been working on the review and re-issue of multiple code of practice on industrial gases at SS (Singapore Standards) in accordance to current global and regional practices. It has now planned to review SS 597 - Oxygen tank installation at customer site.

## Updates from Taiwan High Pressure Gas Industries Association India (GIA)

LU Yung-Cheng of Air Products Taiwan took over the role of Board President of THPGIA from John Miao of Linde Lienhwa. THPGIA has

done excellent work in translating and publishing multiple AIGA publications in Chinese language.

## Updates from Korea Industrial and Speciality Gases Association (KISGA)

The Executive Committee of KISGA at its board meeting unanimously elected Kyo Yung Kim of Air Products Korea as Chairperson.

After successfully working with govt authorities in allowing Ultrasonic Testing (UT) of seamless HP Gas Cylinders, KISGA is now working on expanding its range from 5 to 125 L water capacity cylinders.

## Updates from Siam Industrial Gases Association (SIGA)

SIGA Board elected Wuthichart Anansuthivara of Linde Thailand as President after the resignation of Wichit Sophitanonrat.

SIGA Technical Committee worked closely with Thai Regulatory authorities in the areas of creating a country specific guideline on safety inspection for cylinder fill stations and aligning TIS 359 with ISO 9809(High Pressure Seamless Steel Cylinder Specifications). SIGA also took the lead in making a presentation on the Safe Use of Compressed Oxygen at the 2017 safety seminar of Air Conditioning Engineering Association of Thailand (ACAT). This was done owing to multiple incidents that happened due to incorrect use of HP compressed oxygen in leak testing on AC and refrigeration systems during maintenance work. SIGA has been closely co-operating with ACAT in creating awareness on the safe use of oxygen.

## Updates from Asosiasi Gas Industri Indonesia (AGII)

AGII organised its 10th Congress and Technical Seminar in Hotel Novotel Samator, East Surabaya, on 5 - 6 July 2018 which saw a large number of participants from Indonesia and neighbouring countries. Shahzad Razi from Linde was the key note speaker from AIGA delivering a talk on 'Improving Transport Safety by the 'Use of Emerging Technologies and Sustaining Changed Behaviour of Drivers'.



Shahzad Razi  
at 10<sup>th</sup> Congress of  
AGII Indonesia.

## Updates from Philippines Confederation of Gas Industries (PCIGI)

Vinayak Kembhavi of Linde Philippines took over the role of Board President of PCIGI which fell vacant due to resignation of Alex Co. AIGA is closely collaborating with PCIGI Technical Committee to boost the safety and technical activities of the association.

## Updates from Malaysian Gas Manufacturers Association (MIGMA)

Eugene Lim of Linde Malaysia assumed the role of MIGMA Board Chairman in place of Connell Zhang.

MIGMA has planned to hold a seminar on Safe Use of Compressed Gases' on 23 Oct 2018 in Johor Bahru along with a field demo session on safe handling of Oxy-Acetylene and Liquid Nitrogen Systems at a nearby facility.



## Highlights from recent events



AIGA & AGII Members at 44<sup>th</sup> TC Meeting in Manila, Philippines



2017 Seminar of KISGA Korea



AIGA & IGAS Members at 46<sup>th</sup> TC meeting in Singapore



Amir Riaz from Linde speaking at the 2017 Taiwan Safety Seminar



GIA Board President speaking at 2017, India Safety Seminar



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