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Industrial Gases Council Report

Mark Begg, 2010-2011 Chairman

I have the great pleasure to make this my fourth and final Report as IGC Chairman as I prepare to hand over to my successor towards the end of 2011. As you will see the Working Groups (WG) remain very active in the creation of new documents and in the upkeep of existing technical material. These help us as an industry not only to react in a consistent and responsible manner to legislation and technical developments but also to proactively shape developing legislation and to effectively “self regulate”, helping to keep the burden of external regulation at a pragmatic level. You can read the detailed WG reports on the following pages.

Since my last report there have been a number of important events and milestones. The 2011 Symposium was a great success – not only because of the large number of attendees but also in terms of the quality and openness of the presentations and the high degree of interaction between speakers and delegates. Importantly, the profile of Process Safety as an industry theme has been elevated to the point that WG-3 – the current custodian of Process Safety in EIGA – is engaging with a broader range of Process Safety professionals from our member companies to review whether we as an industry are doing enough and have the right approach to key topics like key performance indicators, measures, hazard review, quantitative risk assessment and other core process safety matters of critical importance. Of course as soon as one Symposium draws to a close another one starts in the planning phase – so indeed Messer will be hosting the next Symposium - a milestone event in 2013 which will be the 90th Anniversary of EIGA – where the subject will be “Safety and Environment in Industrial Gases, Past, Present and Future”. Against a concerning current trend in safety performance in our industry this will be a very appropriate time in the history of EIGA to reflect on previous successes, weigh up the current challenges we face and map out the work that needs to be done to ensure the Industrial Gases Industry continues to do whatever is necessary to maintain the safety of its people, the respect of the communities we operate in and the good reputation we have established as a responsible industry.

Directly after the Symposium in January there was a full meeting of the International Harmonisation Council (IHC) in Brussels also attended by Bob Dixon (Air Products), chairman of the IOMA Global Committee. During the meeting a new simplified harmonisation work process was completed in draft format with planned finalisation at the summer IHC – another significant milestone not only for EIGA and its members but also for the other regional gas associations across the world.

This year two other important events – the EIGA WG Chairs’ Meeting and the National Associations Meeting – were run in sequence in Brussels with one half day of overlap, affording the WG Chairs the



opportunity to update and interface directly with all of the National Association delegates present. This was seen as an exercise that was of enormous benefit to all involved and is likely to become a standard feature of these two meetings. The WG Chairs' Meeting was a great success with discussion of current activities, areas of common interest and possible overlap, sharing of views on WG Chairs tenure periods and possible rotation practices, as well as a discussion on future IGC strategy, focus and WG architecture.

In closing I would reflect on a couple of themes that I have regularly touched upon in my previous reports. The first is change. In the last few years we have seen significant change in EIGA, with the creation of new councils, adjustment of the statutes and much greater leverage of information technology and communication tools to help us become more efficient and more effective. EIGA is also taking great strides to work closer with key stakeholders – other IHC affiliated Regional Associations, National Associations and Regulators. Change is a constant dynamic - as reflected in some of the new ideas and moves being explored and already discussed in this report – and it is something that has to remain as a central topic going forward in order that we position ourselves to continue to succeed as an Association in a world that will continue to change.

The IGC has therefore dedicated its Summer 2011 Meeting to consider some fundamental strategic questions. Is the IGC and are the WGs structured, staffed and equipped to face the next challenging years? Do we have the right Working Groups? Do we have the right document portfolio and structure? Do we need a vision of what the gas industry in Europe needs as a complete suite of documents for the future, i.e. a library that we will complete over a strategic timeframe that could even be harmonised across the globe with other associations? All questions that will at least start to be addressed as IGC continues to check whether it can position itself even better at the heart of EIGA to meet the needs of the industry.

My second and final reflection is associated with our people – the technical experts who have contributed significant personal time and made personal sacrifices to complete the work that fundamentally makes this industry what it is today in terms of safety and responsible operation. I thank them for their dedication and congratulate them on their achievements and certainly look forward to their continued efforts to not only continue this important mission themselves but to encourage, coach, train and nurture the next generation of technical experts to accept the challenges that face us and to join EIGA to continue the work into the future.

At the end of 2011 the leadership of the IGC will pass to Johann Ringhofer of Messer Group to whom I offer my best wishes and support and wish a rewarding and successful tenure as the next Chairman of the Industrial Gas Council.

Details from the IGC chairman: Mr Mark Begg at Air Products (Belgium)
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beggm@airproducts.com

Medical Gases Council (MGC)

Carlos Sainz, 2011-2012 Chairman

The first Medical Gas Council (MGC) meeting of 2011 was held in Barcelona on March 9th. On this occasion the new Chair of Working Group WG-7 was introduced: Stefania Mariani (SOL) replaces Peter Henrys (LINDE) as Chair of WG-7. We would like to take this opportunity to express our thanks to Peter for his leadership of WG-7 and for his professionalism and dedication. A new chairman for WG-10 will be announced shortly.

David Garcia (Praxair) was introduced as the new secretary of the MGC, replacing Jan Strybol (AP) in this function.

A number of matters of interest within the Working Groups were addressed at the meeting. Among these it is worth highlighting the ongoing discussion to include new homecare devices among the guidelines and recommendations currently being developed by EIGA, which are focused specifically on oxygen (GOX, LOX and oxygen concentrators).

To assist in the understanding of Homecare applications, members of WG-10 will be gathering information on incidents relating to medical devices for their analysis and subsequent discussion with the MGC.

Regarding EIGA's proposal to amend EU Directive 93/42 concerning the reprocessing of medical devices, a reply has been received from the Commission to our proposal and we are hoping to enter into more detailed discussions on the matter.

WG-7 and WG-10 are working on the presentations for the medical stream at the Oxygen Safety Workshop to be held in January of next year, and these should provide detailed information on the safe use of oxygen within the medical activity.

Other matters addressed at the meeting were the development of Position Papers for a harmonised European approach to QP release of medicinal gases (WG-7) and for onsite manufacturing of gases for medical purposes (WG-7).

The MGC continues to work with the National Associations, particularly where there are areas of significant and common concern.

The work carried out by WG-10 on the creation and launch of the “Homecare Awareness Package” (TP 24 and SL 05) has been completed, and is available on the EIGA website. This material is being used by WG-10 members for the general presentation of EIGA homecare documents to the National Associations.

For more details please contact the MGC chairman: Mr Carlos Sainz at Praxair Euroholding (Spain) Tel.: +34.91.453.72.08 Fax: +34.91.453.72.43 E-mail: carlos_sainz@praxair.com

Regulatory Environment Council (REC)

Olivier Imbault, 2011-2012 Chairman

During its first full year of activity from July 2010 to June 2011, REC has developed an intensive programme of advocacy on the upcoming Emissions Trading System (ETS) regulations, in particular on the three key issues of allocation of free emission allowances, transferred carbon dioxide and state aids on indirect emissions.

Allocation of free emission allowances:

The revised ETS directive provides that, for the third phase of ETS (2013-2020), full auctioning of allowances shall be the rule for the power sector and a transitional system for free allocation of allowances, based on benchmarks, shall be put in place for the industrial sector. The ETS directive also stipulates that benchmarks and allocation of free emission allowances, specifically for the industrial sectors exposed to carbon leakage, should be detailed in a future EU decision.

For the HyCO benchmark definition, REC has actively participated in the stakeholder consultations on the allocation of free emission allowances during 2010 and 2011.

The final decision on free allocation rules which was adopted by the EU on April 27, 2011 included the EIGA HyCO benchmark proposal (divided into two products: Hydrogen and Syngas) with the description of the HyCO installation and the mechanisms of allocation for each installation (SMR and POX).

According to the EU decision, the allocation of free allowances for an installation is calculated by multiplying the benchmark value (8.85 allowances/tonne of 100% purity H₂) with the historical production data of the installation.

The REC advocacy work on the allocation rules has successfully created a level playing field between in-sourced and outsourced hydrogen production (single and harmonized HyCO benchmarks/allocation rules).

REC is currently working with the commission on the guidelines which will be used by the Member States (as of September 2011) and eventually the EU (as of early 2012) to collect the data and to calculate the allocation of free emission allowances for each installation. At the same time, REC is supporting the

National Industrial Gas Associations regarding any possible interpretation of the decision by the Member States.

Transferred carbon dioxide:

According to the Monitoring and Reporting Guidelines (MRG) to be used by each industrial installation to report GHG emissions, “transferred carbon dioxide” is the carbon dioxide which is not emitted into the atmosphere but transferred to another installation.

During the first phases of ETS, the allocations were granted for free and the MRG guidelines allowed the installations to subtract from their emission the volume of carbon dioxide transferred to other installations. This was not an issue for our industry because most industrial installations, sources of carbon dioxide for the Industrial Gas sector, were not included in the Emission Trading System. After 2013, the situation will change and EIGA has informed the European Commission of possible market distortion and potential abuse (EIGA Position Paper, PP-32 October 2010).

In anticipation of ETS Phase 3, the European Commission has decided to review and transform the MRG into a regulation by the end of 2011. REC has taken this opportunity to advocate a change in the transferred carbon dioxide rules.

REC has held many meetings with the Directorate-General for Climate Action (DG CLIMA) during 2010 and 2011. The first results of the advocacy work are shown in the current draft of the revised MRG. It is now stated that transferred carbon dioxide cannot be subtracted unless the carbon dioxide is definitively stored (carbon capture and storage - CCS).

REC will carry on the advocacy work on transferred carbon dioxide to get the amendment approved in the final version of the revised MRG by the end of 2011.

State aids on indirect emissions:

From 2013 the power industry will have to buy on the carbon dioxide auction or exchange markets carbon dioxide allowances to cover all their emissions. The cost of the allowances will be passed on in electricity prices (e.g. an allowance costing 30€ CO₂ corresponds to an increase of 14€/MWh, based on the European average emission factor of 0.465 tonne of CO₂ per MWh). The electricity price increase due to indirect emissions may create a new form of carbon leakage for the European electric energy intensive industries.

The ETS directive provides that Member States may adopt financial measures in favour of these exposed sectors in order to compensate the cost increase and where such financial measures are in accordance with

EU state aid rules, which will be published by the EU by the end of 2011.

In April 2011 the Directorate-General for Competition (DG COMP) launched a consultation with stakeholders in order to assess the possible economic distortions on the EU market, to set out the eligibility of sectors to receive financial compensation and to detail the compensation mechanism based on ex-ante benchmarks of the indirect emissions of carbon dioxide per unit of production.

As in the case of the direct emissions of ETS, the future state aid guidelines may create a possible distortion between insourced and outsourced installations of energy intensive products, as oxygen and nitrogen.

REC is currently participating in the EU consultation and advocating firstly the principle of equality of treatment (according to Recital 23 of the ETS directive) and secondly the eligibility of the two Industrial Gas sub sectors, oxygen and nitrogen production, both for outsourced production as well as for insourced production. With regard to the ex-ante benchmark, REC has already published a Position Paper on the ASU indirect emissions benchmark (PP-33 Benchmark proposal for Air Separation Plant).

For more information, contact Mr Olivier Imbault, REC chairman, at Air Liquide (France) Tel: +33.1.40.62.58.65 Fax: +33.1.40.62.56.43 E-mail: olivier.imbault@airliquide.com

Safety Advisory Council (SAC)

◆ Annual Report – Work Injury Statistics

The 2010 Annual Report has been issued and distributed and showed that EIGA member companies did not continue the improvement in safety performance shown in the previous two years. The number of incidents resulting in a lost time injury reported by members increased from 142 in 2009 to 163 in 2010. This represents a 15% increase.

The numbers of days lost increased from 2128 in 2009 to 2875 in the last year. This is an increase of approximately 35%.

These figures should be ringing alarms in member companies. We have to do more to get back on track. This will need our commitment, engagement and concentration. One of the key elements must be the leadership of the management. We need this to change the behaviour of our employees and management and to focus on human factors.

◆ New Document

SAC has revised the document EIGA 904 “Work Injury Statistics (WIST)”. The document is intended to be used by those who are working with the EIGA statistics platform for reporting and analysing accidents (see WIST platform). The 2011 revision aligns the document to the updated WIST Platform.

Recent years have shown that a significant number of accidents were reported where the cause was classified as “human error”.

To analyse these causes in more depth, SAC has decided to split the category “human error” into subcategories of “human failure”. The document provides further information on the categories of human failure so as to better record the outcome of human factor analysis in investigations. The goal is to improve the value of safety statistics in helping to develop programmes to reduce incidents in the industry.

The document contains examples for code numbering major cause of injury and should help to interpret “human failures” which may cause an incident.

◆ TP -Information about Incidents + Accidents

Two new Training Packages (TP’s 22 and 23) have been issued by SAC. They contain the non confidential summaries of the information and photos of incidents and accidents reported to SAC.

The aim of these reports is to inform EIGA members about recent incidents in the gases industry and to provoke discussion and new ideas on how to improve safety in the industry.

◆ Oxygen Workshop 25th & 26th January 2012

SAC is working on the preparation of the Oxygen Workshop. The Workshop will be aimed at oxygen safety experts and those new to the industry, including operations managers, medical and healthcare professionals, regulatory and government officers, customers and customer facing representatives.

◆ Safety Information

Carbon Dioxide Physiological Hazards “Not just an asphyxiant!”

SAC has prepared a new Safety Information sheet about the physiological hazards of carbon dioxide.

While the asphyxiation hazard of carbon dioxide is well known, the intoxication hazard is not always well understood. This SI informs about the hazard of carbon dioxide intoxication and provides guidance on how to avoid mistakes when analysing ambient air.

The SI is intended to be used by those who are working with carbon dioxide, either on gas production or distribution sites or customer premises.

◆ Safety Awards

The EIGA Safety Awards are a recognition of the safety performance of the companies receiving awards and their personnel. The EIGA Extraordinary General Meeting held in Brussels January 2011 was used as an opportunity to present a number of these prestigious Safety Awards.

39 Non-Accident Safety Awards (14 gold, 12 silver and 13 bronze) were presented to 8 groups of companies for their sites having achieved subsequent years or worked hours without any lost time accident:

- Air Liquide Group: 11 awards
- Air Products Group: 5 awards
- Linde Group: 15 awards
- Messer Group: 1 award
- NIGC Saudi Arabia: 1 award
- Praxair Group: 2 awards
- SIAD Group: 1 award
- SOL: 3 awards

The winners of the **Road Safety Awards 2010** were:

For bulk vehicles driven

- more than 5 Mio km: Linde AG Germany
- 1 Mio to 5 Mio km: A.C.P. Belgium

For cylinder vehicles driven

- more than 2 Mio km: Rivoira Italy
- 0,5 Mio to 2 Mio km: Air Liquide Gas AB

The winner of the **Company Awards** in each member category were:

- Category 1: Praxair Europe
- Category 2: Air Products SA, France
- Category 3: Air Liquide Maroc

Congratulations to all companies having received awards.

For more information, contact Mr Hartmut Öhmen, SAC chairman, at Air Liquide (Germany) Tel: +49.211.6699.4736 Fax: +49.211.6699.313 E-mail: Hartmut.ohmen@airliquide.com

EIGA Office News

EIGA President

EIGA is very pleased to welcome Stefan Messer, Chief Executive of the Messer Group, as the new President of EIGA for his term of office 2011-2012. He takes over from Guy Salzgeber of Air Liquide.

Stefan Messer is succeeded as Vice-President of EIGA for 2011-2012 by Todd Skare, President, Praxair Europe & Middle East.

Working Group Meetings

In the first 5 months of 2011, EIGA Councils, Working Groups, Ad-hoc Groups and Task forces held 73 meetings, a similar meeting rate to 2010. A third of the meetings were net meetings or teleconferences. EIGA continues to upgrade and improve our meeting facilities and technology to ensure that the groups can continue to work effectively.

EIGA Staff Matters

EIGA staff this year celebrate a hat-trick of 20 year “anniversaries” with EIGA. Isabelle Rondeau, our Publications and Conference Coordinator joined EIGA on July 1st 1991 as an Assistant to the General Secretary.

Patricia Vanderplasschen, our Administrative and Conference Coordinator joined EIGA on 16th July 1991, also as an Assistant to the General Secretary.

Pierre Wolfs celebrates 20 years of close association with EIGA. Pierre was first seconded to EIGA as Deputy General Secretary from January 1991 until August 1995. He was seconded again to EIGA as Technical Manager in January 2005 until March 2009 and since then has been EIGA’s Technical Director.

At the Board meeting in January 2011, the Board approved the extension of Pierre Wolfs’ appointment as EIGA Technical director to the end of 2013.

Our congratulations and thanks to Isabelle, Patricia and Pierre for their years of service and ongoing support.

Revision of EIGA Statutes and Internal Rules

At an Extraordinary General Meeting during the Winter Session in Brussels in January 2011, the membership, in the presence of a Belgian Notary, approved the final changes to our Statutes and Internal Rules.

These final changes to the Statutes came out of the recommendations of the Board of Directors Task Force. They included amendments to ensure that sustainable development, climate change and regulatory aspects of our industry are clearly within the scope, aims and activities of EIGA. The importance of development and dissemination of documents and supporting international regulatory bodies, such as UN and EU institutions, with the specific know-how and expertise of our industry are now recognised in the Statutes. The need for a formal Ordinary Meeting during the Winter Session has been removed and may be replaced with a Winter Technical Meeting.

EIGA operates under Belgian Law and so these important changes have now been signed by Royal Decree and formally published in the “Annexes du Moniteur Belge”.

EIGA Events

Process Safety Symposium 2011:

EIGA’s 2011 Symposium “Process Safety in the Gas Industry” took place on 26th and 27th January with outstanding attendance by 269 delegates from more than 95 organisations and from 36 countries, including guests from as far away as Papua New Guinea, Japan and the USA.

We received very positive feedback and comments from delegates, which included the quality of the speakers, the engagement of the audience in the panel sessions and the networking between the sessions. On the basis of this feedback we consider that the event was a great success! Our sincere thanks go to all members of the Symposium Organising Committee.

Process safety is without doubt a key topic for the Industrial Gases industry and the Councils and Working Groups will continue to build on the momentum of the Symposium.

National Industrial Gases Associations Meeting 2011:

Representatives of twelve National Industrial Gases Associations gathered in Brussels for the 13th National Associations Meeting on the 13th and 14th April. A highlight of the meeting was a half day session where the chairs of the Working Groups each provided the National Associations' representatives with an update of their activities and future plans and provided the opportunity for some active discussions. The second part of the meeting included a number of presentations and discussions from the National Associations on areas of common interest and activity, including ageing plant, revision of the Seveso directive, research on acetylene cylinders in fires and cylinder ownership. The meeting also saw the launch of the web based EIGA National Associations Forum. This web forum will facilitate the sharing of information and news on regulatory issues between EIGA and the National Associations.

International Harmonisation Council Meetings

The IHC met in Brussels in January and finalised changes to improve the process and quality of harmonised documents. Proposals were also developed for prioritisation of future projects and to enable future development of harmonised best practices. A further 4 harmonisation projects were closed, i.e. the harmonised document has been published by all four participating associations (AIGA, CGA, EIGA and JIMGA). This brought the total number of projects closed in 2010 to 9, out of a total of 26 closed projects. Many of these closed projects are now due for revision, and one of the challenges ahead is to ensure that these documents remain harmonised during the revision process of each association.

For your diaries:

EIGA Summer Session 2011, 2nd & 3rd June 2011, Cascais, Portugal.

EIGA Winter Session and Workshop 2012, 'Oxygen Safety in the Industrial and Medical Supply Chain', 25th and 26th January 2012, Brussels.

EIGA National Associations' Meeting, 25th and 26th April 2012, Munich

EIGA Summer Session 2012, 31st May & 1st June 2012, Portoroz, Slovenia.

E-mail EIGA office: info@eiga.eu

Publications

Please visit www.eiga.eu to download the following publications (new since the last issue of the EIGAZette):

IGC-MGC-SAC-REC Documents

- Doc 57:** Recommendations for Avoidance of Sustained Load Cracking of Aluminium Alloy Cylinders (WG-2)
- Doc 64:** Use of Residual Pressure Valves (WG-2)
- Doc 89:** Medical Oxygen Systems for Homecare Supply (WG-10)
- Doc 96:** Alternatives to Hydraulic Testing of Gas Cylinders (WG-2)
- Doc 124:** 300 Bar High Strength Seamless Steel Gas Cylinders (WG-2)
- Doc 129:** Pressure Receptacles with Blocked or Inoperable Valves (WG-4)
- Doc 140:** Code of Practice - Compressed Fluorine and Mixtures with Inert Gases (WG-4)
- Doc 166:** Guidelines on Management of Waste Composite Cylinders (WG-5)
- Doc 167:** Methodology to establish a "Product Carbon Footprint" (WG-5)

EIGA Office Publication (for EIGA members only)

- EIGA 904:** Work Injury Statistics (SAC)

Position Paper

- PP-34:** Braille Labelling of Medicinal Gas Packages (WG-7)

Training Packages (for EIGA members only)

- TP 22:** Recent Incidents in the Industrial and Medical Gases Industry - SAC 122 (SAC)
- TP 23:** Recent Incidents in the Industrial and Medical Gases Industry - SAC 124 (SAC)
- TP 24:** EIGA Homecare Guidelines (WG-10)

Safety Information

- Info 18:** Devalving Gas Cylinders (WG-2)
- Info 24:** Carbon Dioxide Physiological Hazards - "Not just an Asphyxiant!" (SAC)
- Info 25:** Crane Transport of Cylinder Packages (WG-2)

Safety Leaflet

- SL 05:** Good Homecare Practice (WG-10)

EIGAnews

- Issue 4:** March 2011 (EIGA)

Working Group News

Transport (WG-1)

As a reminder, ADR 2011 will be fully applicable from the 1st July 2011 and includes three main changes:

Firstly, the instructions in writing which are carried in a vehicle and provide actions to be carried out by the driver in the event of an accident or emergency, commonly called a "Tremcard", have been revised and every vehicle will be required to carry the new version.

Secondly, substances that are classified as environmentally hazardous will have to be marked with the environmentally hazardous label, which comprises of a dead fish and a dead tree, on a white background.

Finally, the requirement in Packing Instruction P203 to carry out inspections of closed cryogenic receptacles was removed in ADR 2011. This requirement to carry out an inspection will be reinstated in ADR 2013, at the request of the competent authorities. Members are reminded that they still have a duty of care to ensure that closed cryogenic receptacles remain safe.

Road Tunnels: certain member companies in certain EU countries have a problem with the Tunnel Restriction Codes that were initially introduced in ADR 2009. These are being progressively implemented in more countries. This has meant that dangerous goods are now forbidden or restricted in certain road tunnels where they were previously allowed transit. This has led to an increase in journey times, route kilometres and associated costs.

WG-1 has explored the possibility of getting the tunnel restriction codes changed either by improving the original risk assessment model or refining the scenarios that were used in the original work. After investigation and discussions with CETU, the European Tunnel Authority, and certain national competent authorities, it is evident that there is no possibility of this being successfully agreed and being implemented in ADR, as each country has applied its own risk assessment model and criteria in its own way.

Therefore EIGA will support National Associations if they decide to challenge the tunnel restriction codes at a national level with the appropriate tunnel authorities.

For more information please contact Mr David Teasdale, Chair of WG-1 at BOC Gases (UK) - Tel: +44 1709 842 156 - Fax: +44 1709 828 939 E-mail: david.teasdale@hoc.com

Gas Cylinders and Pressure Vessels (WG-2)

Membership:

Els Vandererven has left the WG-2 team to tackle new challenges within Air Products. WG-2 thanks her for

her active participation during her time with us. Air Products has nominated Phil Rigby as her successor, so WG-2 stays as a strong Working Group with 8 active members.

Progress with Publications:

New revised documents include:

-Doc 96 - Alternatives of hydraulic testing of gas cylinders

-Doc 57 – Recommendations for avoidance of stained load cracking of aluminium alloy cylinders

-Doc 64 - Use of Residual Pressure Valve

-Doc 91 – Use of pressure relief devices for gas cylinders

-EIGA 908 – 300 bar residual pressure valve filling connector

-Info 25 – Crane transport of cylinder packages

Revised documents in preparation include:

-Doc 124 - 300 bar high strength seamless steel gas cylinders

Outlook:

We have planned to prepare a more user-friendly collection of incident reports for cylinder and valve accidents. The data collection should help EIGA members to identify incident trends and provide ideas for stopping these developing trends.

Another planned topic is the intensive revision of the document 36 which collects the control marks on cylinders. The original document was produced in 1990 and we will create a new version and format for easier use in the future.

For more information, contact Dr Wolfgang Dörner, Chair of WG-2, at The Linde Group, (Germany) Tel: +49 89 7446 1304 Fax: +49 89 7446 2071 E-Mail: wolfgang.doerner@linde-gas.com

Process & Process Equipment (WG-3)

In the first half of 2011 WG-3 met three times on February 22-24 in Brussels, a web meeting on April 19 and on May 17-20 in Monza, Italy.

In conjunction with the meeting in Monza a special one and a half day workshop on Process Safety was also held. Scope of the workshop was to capitalise on the outcome of the successful Process Safety Symposium in January 2011 by defining a process safety strategy and roadmap for EIGA in this very important field.

On the same occasion the issue of periodic inspection and maintenance of high hazard process plant was also discussed. The focus here is not only to limit the risk of operating aged plant without a proper level of mechanical integrity and of reliability of the safety systems but also to develop a position to counter any request from authorities to perform unnecessary internal inspections of equipment such as cryogenic columns of air separation plants or bulk cryogenic storage tanks.

Publications:

WG-3 is in the process of revising two very important harmonised documents of the EIGA library: Doc 65 “Safe operation of reboiler/condenser in Air Separation Units” and Doc 147 “Safe practices guide for Air Separation Plant”.

A Task Force of our industry experts is working to address the most challenging changes that have been proposed on the Harmonized Doc 13 “Oxygen Pipeline Systems”. Significant progress has been made, in particular on the redefinition of the maximum pressure (Exemption Pressure) up to which a material is exempt from velocity limitations, mainly depending upon the flammability of a metal at the use conditions.

For more information, contact Mr Andrea Mariotti, Chair of WG-3, at SOL SpA (Italy) - Tel: + 39.039.2396.361 Fax : +39.039.2396.377- E-mail: a.mariotti@sol.it

Special Gases (WG-4)**International harmonisation:**

WG-4 continues to work on the development of internationally harmonised documents with members of AIGA, CGA and JIMGA.

A document currently undergoing harmonisation is the revised Doc 30 ‘Disposal of Gases’ which includes an additional method of disposal for ethylene oxide, specifically the absorption of ethylene oxide in a counter-flow scrubber and the subsequent hydration to ethylene glycol.

WG-4 is also developing an EIGA version of the AIGA/JIMGA developed code of practice ‘Safe handling of electronic specialty gases’.

Publications:

Doc 140 ‘Code of practice – Compressed Fluorine and Mixtures with Inert Gases’: has been revised and published to include improved descriptions of different UN numbers under which mixtures containing fluorine may be transported and the restrictions attached to these UN numbers.

Doc 129 ‘Pressure Receptacles with Blocked or Inoperable valves’ has been updated and published following a 5-yearly review.

5-yearly reviews:

Doc 130 ‘Principles for the Safe Handling and Distribution of Highly Toxic Gases and Gas Mixtures’ has undergone an extensive re-write and is ready for approval and publication.

For more information, contact Mr Kevin Cleaver, Chair of WG-4, at BOC Gases (UK) Tel: + 44.1483.244.308 Fax+ 44.1483.45.07.41 E-mail: kevin.cleaver@boc.com

Environment (WG-5)

Environmental Award: The second EIGA Environmental Award was announced in January and

will be presented to the winners at the Summer Session 2011.

Congratulations to the winners:

1. SAPIO Soil treatment and recovery team, and
2. BOC Gases Morden site environmental team

These winners fall into 2 categories, the first is a gas application and the second is related to gas company operations.

EIGA received 12 other high quality applications for the award. A summary of the applications will be published in a newsletter so that Member Companies can share these examples of good environmental practices.

Legislation:

EIGA is still working to correct recent opinion by the Commissions’ Packaging Committee that cylinders are packaging as defined in the Packaging Directive (96/62). EIGA’s position is detailed in Position Paper PP-19.

The Commission has now revised the Integrated Pollution Prevention and Control (IPPC) Directive which is now called the Industrial Emissions Directive (IED) (Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on Industrial Emissions (Integrated Pollution Prevention and Control)). The IED does not apply to air gas and packaged gases filling plants. WG-5 is preparing a Briefing Note on the changes.

Documents in progress:

WG-5 is revising Doc 112 ‘Environmental Impact of Nitrous Oxide Plants’ and documents on Environmental Auditing (Doc135) and Decommissioning (Doc 137).

Environmental Newsletters on noise, waste, environmental awards and energy are in preparation for publication later this year.

WG-5 is drafting a document on the environmental impacts of smaller hydrogen plants to obtain a simpler permitting process under the IED (IPPC) Directive following so called ‘generally binding rules’.

New documents:

The document 167: Methodology to establish a ‘Product Carbon Footprint’ has been published. This will also reference recently published draft ISO standards and the World Resources Institute Protocol.

WG-5, with input from WG-2, have finalised ‘Guidelines on Management of Waste Composite Cylinders’, published as Doc. 166.

Revised documents:

WG-5 has recently revised the following documents which will be published shortly:

- Environmental Impact of ASUs (Doc 94),
- Environmental Impact of Hydrogen Plant (Doc 122)
- Environmental Impact of Transportation (Doc 113)

- Environmental Impact of Customer Installations (Doc 117)

- Environmental impact of acetylene plant (Doc 109)

If you need any more information, or would like to make any comments, please contact your WG-5 representative, the WG-5 Chairman or the EIGA office. WG-5 typically meets 3-4 times per year and have reduced our carbon footprint by adopting the virtual meeting guidelines.

For more information, contact Mr Stephen Bradley, Chair of WG-5, at Air Products Plc (UK). / Tel: + 44 1932 249 992 Fax: + 44 1932 258 529 E-mail: bradlesc@airproducts.com

Cryogenic Vessel Standards (WG-6)

EIGA WG-6 has considered with EIGA WG-3 the revised Doc. 119 “Periodic inspection of static cryogenic vessels”. It was agreed that WG-3 will prepare an equivalent document for ASU plants.

EIGA WG-6 reviewed the CGA doc. P-40 “Calculation for the prevention of overfilling of cryogenic tanks”. This will be published by EIGA as a harmonised publication within the next three months.

EIGA WG-6 is revising the Doc. 07 of the metering of cryogenic liquids and is considering the impact of the corresponding EU Directive which is now being implemented.

Finally, WG-6 is revising Doc. 115 “Storage of cryogenic air gases at users’ premises”.

ISO standards:

The ISO Technical Committee (ISO/TC 220) formed to develop Cryogenic Vessel standards has now published many standards. Standards which are available include those concerning materials, operational requirements and the design standards for small and large transportable vessels. This TC is very important, with a growing emphasis on developing national legislation based upon the UN Model Regulations, in creating global standards for our industry for use in both transport and static storages. The next meetings of this ISO TC and the corresponding WGs will take place during the week of June 20, 2011.

CEN standards:

The next CEN TC 268 meeting will take place the same week of the ISO/TC 220 meeting. The main discussion will be on the follow-up of the Safety Alert SA-15 “Recommendations for the Prevention of Brittle Failure of the Outer Jacket of Vacuum Insulated Cryogenic Storage Tanks”.

For more information, contact Mr Hervé Barthélémy, chair of WG-6, at Air Liquide (France) Tel: +33 1 40 62 55 01 Fax +33 1 40 62 57 95 E-Mail hervé.barthelemy@airliquide.com

Medicinal Gases (WG-7)

Braille labels on medicinal cylinders: The European Pharmaceutical Directive (2001/83EC) was recently amended to include the need to label all medicinal products with the name of the product in Braille (and to supply blind or partially sighted patients with instruction leaflets in an appropriate format so that they can be read by each patient).

The European Medicines Agency (EMA) has issued guidance to restrict these new requirements to those medicinal products that are self administered by the patient. This means the changes to the directive only affects those medical oxygen cylinders supplied to homecare patients.

WG-7 believes that fitting Braille labels to medical gas packages will not assist the safety of blind or partially sighted patients when they are prescribed medical oxygen for use at home. In a Position Paper (PP-34) WG-7 has proposed that the medical gas packages supplied to Homecare patients should be exempt from the requirement to fit Braille labels.

However, to meet the intent of the Directive and to promote patient safety for blind or partially sighted patients EIGA proposes that:

- An initial Homecare Risk Assessment be carried out when supplying medical oxygen to each patient at home which should consider and record whether the patient/carer is blind or partially sighted.
- Where the patient/carer is blind or partially sighted, all information and training should be provided in a suitable format so that the patient can handle and administer the medicinal gas in a safe manner.

On-site manufacturing of medicinal gases:

WG-7 is working on the preparation of a Position Paper regarding the manufacture or generation of medicinal gases that is performed at hospitals’ sites in order to supply the gas to the patients in the same location.

Today, no authorisation is required and this potentially gives rise to a risk to patient safety. EIGA’s proposal is to apply the same rules regarding manufacturing in GMP to these sites also. Today, on-site production refers mainly to medical and synthetic air but, due to the introduction of the Oxygen 93% Pharmacopoeia, this will become a subject also for medicinal oxygen.

For more information, contact Mrs Stefania Mariani, Chair of WG-7, at SOL SpA (Italy) Tel: +39.039.239.390 Fax: +39.03. 2396.371 e-mail: s.mariani@sol.it

Food Gases (WG-8)

The WG-8 had its latest meeting on March 10th 2011.

The AHG-8.1 "On site freezing and chilling equipment" sent the first draft to the WG-8 members for comments.

The AHG 8.2 "Design and operation of generators for food gases" also sent the first draft to WG-8 members for comments. WG-8 discussed the purity of the gas from generators at the meeting. Consensus was that even if the gas cannot meet the assay required by EU additives legislation, there is no problem as long as the customer is aware of this and hazardous contaminants are kept below specified levels.

The EFSA (European Food Safety Association) has recently contacted EIGA asking for the re-evaluation of carbon dioxide, and to submit an inventory of the available information on carbon dioxide (E290).

The final draft of the International Society of Beverage Technologists (ISBT) Guidelines on Nitrogen has been discussed at the annual ISBT meeting. The publication is expected during the coming year.

Carbon monoxide has been discussed again by WG-8, mainly because of an article in the magazine Gasworld, which described the use of carbon monoxide to stabilise the red colour in meat and applications in the colour preservation of fresh fish.

Nevertheless the use of carbon monoxide is prohibited by the EU and understood as a potential health-hazard. WG-8 has now been asked by the IGC to draft an EIGA Technical Bulletin to clarify the situation.

The issue of dioxins in gases was raised. Carbon dioxide has been analysed for dioxins and nothing was found. On the possibility of build-up of dioxins in ASU liquefiers, the WG will invite an expert for discussions at the next meeting.

Radioactivity in gases will be another issue for the next WG-8 meeting.

Doc 125 "Guide to the Supply of Gases for Use in Foods" and Doc 126 "Minimum Specifications for Food Gas Applications" updates have been edited and will be sent to WG-8 for final review.

For more information, contact Mr Klaus Krinninger, Chair of WG-8, at Industriegaseverband (Germany) - Tel: +49.221.91.25.75.12 Fax+49.221.91.25.75.15 E-mail: Krinninger@Industriegaseverband.de

Classification, Labelling, SDS (WG-9)

New EIGA documents:

EIGA product safety information now consists of two documents, soon to be published:

- "Classification and labelling guide": will contain the classification and labelling information important for classification experts.

- "Guidance on the compilation of safety data sheets": will contain information about subheadings and phrases to be selected to compile the content of a pure gas or mixture SDS.

Justification information is given for the selection of EIGA phrases for each section of the SDS.

The two documents will replace the existing Doc 918: "Classification, Labelling and Safety Data Sheet Guide in accordance with EC Regulations 1272/2008 (CLP Regulation) and 1907/2006 (REACH Regulation)".

WG-9 in cooperation with AHG REACH will now work on a harmonized structure for the extended Safety Data Sheet (eSDS).

LISAM:

LISAM 9.1 version was published in May 2011.

The new version complies with the new Annex II REACH SDS structure. The EIGA pure gas SDSs have been updated in content.

The EIGA GCM (Gas Classification Module) provides DPD and CLP calculation methods. Corresponding to the selected calculation method, the EIGA GCM also provides 2 SDS formats.

Users can apply the classification method and selection of the SDS format depending on the member company strategy on implementing the CLP requirements for mixture SDS' during the transitional period up to June 2015.

Important note: All non-EIGA substances (EIGA-code >600) have to be classified in accordance with CLP by member company users, before they can be used for CLP classification in a mixture with balance gases.

The sources of CLP classification and labelling data are the SDS of suppliers.

The REACH registration numbers of substances can be implemented when available from the supply chain of the member company.

The activities in WG-9 for the next upgrade of LISAM, version 9.2, have started already.

Version 9.2 will provide an enriched phrases database and more detailed subheadings in specific sections.

The task of WG-9 is now to evaluate the new REACH information from the revised SDS received from various suppliers and incorporate it in a harmonized, upgraded form of revised EIGA-SDSs.

The support of EIGA National Associations will be requested again for the translation of the newly selected EIGA phrases.

Regulations:

In March 2011 the 2nd Adaptation to Technical Progress (ATP) to the CLP Regulation (EC 268/2011) was published. It is applicable from December 1, 2012 for substances and from June 1, 2015 for mixtures.

A 2-year transitional period exists for products already on the market before the December 1, 2012 and June 1, 2015 milestones. "Highlights" of the 2nd Adaptation include:

- The use of the cylinder pictogram GHS04 is optional if cylinder products are labelled with the symbol “flame” GHS02 and/ or the symbol “crossbones” GHS06.
- Dimensions for label and CLP pictograms have been detailed.
- CLP enables users to always classify in accordance with “the latest” published version of ISO 10156.
- The additional EUH-hazard class “Ozone EUH059 - Hazardous to the ozone layer” has been harmonised with the new GHS hazard category Ozone 1 with a H-statement H420 replacing EUH059 and is accompanied by a new P-statement P502. The adaption will have an impact on cylinder labels for all gases which are hazardous to the ozone layer (see above for the transition time allowed).

For more information, contact Mr Joachim Eiselt, Chair of WG-9, at Air Liquide Deutschland (Germany) - Tel.: +49.2151.379.9162 Fax: + 49.2151.379.9278 E-mail: joachim.eiselt@airliquide.com

Homecare (WG-10)

The Ad-Hoc group have finalised their work on oxygen self-fill systems, i.e. systems for filling single oxygen cylinder at home. They have written a new section into our existing Doc. 89 “Medical Oxygen Systems for Homecare Supply”, which already covers the other modes of supply of homecare oxygen, i.e. cylinders, liquid oxygen vessels and oxygen concentrators. The new version of this document has been approved by MGC and published.

The MGC also approved the publication of the awareness package on the services we - as Homecare Service Providers - provide. This awareness package consists of a PowerPoint Presentation (TP 24) and a leaflet (SL 05) that will be used with all our stakeholders, such as authorities, prescribers, payers and patient associations.

Several WG-10 members are already in the process to present this package to their national gas and/or homecare associations.

WG-10 have started with two new work items which deal with the handling and external cleaning of medicinal containers when these are soiled. Both topics will be described in a Technical Bulletin.

As result of our first meeting with the EU Commission who are working on a revision of the Medical Device Directive 93/43/EC, we have sent them a letter with our comments on a particular aspect of medical devices of concern to our industry. This is the reprocessing of consumables which are for single patient use only, but which may be used several times by this patient. A good example is the oxygen cannula used in homecare and hospitals, used by the same patient for several days. EIGA have proposed a

new wording to the Directive to ensure that this practice may be continued.

For more information, contact Mr Jan Strybol, Chair of WG-10, at Air Products (B) - Tel.: +32.2.674.94.80 Fax: +32.2.663.41.80 Email: stryboj@airproducts.com

Hydrogen Energy (WG-11)

The ISO standard on hydrogen fuelling stations (ISO 20100 Gaseous hydrogen – Fuelling stations), has reached the stage of “draft international standard” and was released in March 2011 for comments and vote until August 21, 2011. WG-11 members have actively contributed to its development by leading the work on the topics of safety distances and hydrogen dispensing.

EIGA has proposed that NFPA 55 (US code for compressed gases) adopt a similar approach through formal submittal of a proposed change. WG-11 chairman presented this proposal at the NFPA meeting which took place in Phoenix in February 2011 in the framework of the NFPA 55 review process which is underway. This technical exchange will contribute to convergence and harmonization of separation distance requirements for hydrogen refueling stations.

Communication with the European Commission is continuing with regard to an increase of the quantity threshold for being covered by the Seveso II Directive. The current threshold, which is much lower than the one applied to other flammable gases, would unjustifiably compromise the deployment of a hydrogen vehicle refueling infrastructure, with large fuelling stations falling under the scope of the Directive.

A final draft of detailed requirements for underground storage of hydrogen, an attractive solution for reducing the footprint vehicle fuelling stations, is being circulated. Work has begun towards putting together EIGA comments on CGA G-5.4 covering hydrogen piping at user location, with the objective of producing a harmonized document.

For more information, contact Mr Frédéric Barth, Chairman of WG-11, at Air Liquide (F) - Tel.: +33.1.39.07.69.95 Fax: +33.1.39.07.62.64 Email: frederic.barth@airliquide.com

Acetylene (WG-12)

WG-12 have finished the technical revision of the IGC Doc.123 “Acetylene Code of Practice”. Currently this document is subject to editorial check and final comments from other Working Groups that are affected by part of the scope of this publication (e.g. WG-2 cylinders). It is planned to send this document for approval to IGC in May 2011.

The next document to be reviewed by the WG is IGC Doc. 26 “Permissible charge / filling conditions for acetylene cylinders”.

The cooperation with the CGA Acetylene committee continued, providing comments in documents related to the management of acetylene cylinders in fires, based on research works carried out by BAM (Federal Institute for Materials Research and Testing) and sponsored by a group of stakeholders that include the British Compressed Gas Association (BCGA).

In the next months, apart from publications work, WG-12 will be involved in activities which include cooperation with other organisations that have publications where acetylene is included (e.g. EN-ISO standards for testing acetylene cylinders), reviewing the parts of other documents from other working groups where acetylene is partially included and will continue the interaction with other Gas Associations in order to find some harmonisation opportunities.

For more information, contact Mr Ramon Castella, Chair of WG-12, at Carbueros Metalicos, (Spain) -Tel.: +34.93.290.09.05 fax +34.93.290.26.09 - Email: castella.r@carbueros.com

Security (WG-13)

The cooperation between CGA and EIGA security groups gets stronger. Following previous telephone contact and sharing of material, the membership of WG-13 were pleased to welcome to their last meeting in Brussels the Chair of the CGA Security Group, Jeff Gage. During the 2-day meeting he took a full and active part in WG-13 discussions, including issues of mutual concern and the sharing of security best practice.

This was an excellent example of international cooperation between two Industrial Gas Association

Working Groups which can only add benefit to EIGA, the CGA and their member companies going forward.

It is not difficult to understand that security must be seen as an integral part of the gas industry's culture and business. Putting in place the right safety and security standards not only helps our member companies protect their facilities, products and employees, but also the community, by reducing vulnerabilities and mitigating the risks and effects of incidents like vandalism, sabotage, violence, theft/misuse of product, and terrorism.

For more information, contact info@eiga.eu

EC Legislation

Commission Regulation (EU) No 10/2011 of 14 January 2011 on **plastic materials and articles intended to come into contact with food** (Custody WG-2 and WG-8)

L12 – Volume 54 – 15 January 2011 (pages 1-89)

Commission communication in the framework of the implementation of the Directive 97/23/EC of the European Parliament and of the Council of 29 May 1997 on the approximation of the laws of the Member States concerning **pressure equipment** (1) (*Publication of titles and references of harmonised standards under the directive*) (Custody WG-2)

C118 – Volume 54 – 15 April 2011 (pages 35-52)

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