SAFETY TRAINING OF EMPLOYEES

Doc 23/18

Revision of Doc 23/08

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Prepared by the Safety Advisory Council

Disclaimer

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Amendments to 23/08

Section	Change
All	Editorial revision to include references and latest EIGA style.
3.1	Publications terminology added.
All	Complete rewrite
Leaflets 01 to 22	Moved to individual Safety Training Leaflets in series Doc. 23.xx

1 Introduction

In the gases industry, accidents can and unfortunately do occur at all stages of manufacturing and handling such as production, cylinder filling and handling, maintenance and distribution.

Accidents also occur during the transportation of gases or while performing activities at customer sites, such as installation of equipment and maintenance of installed equipment.

Training helps people acquire the skills, knowledge and attitudes to make them competent in the health and safety aspects of their routine and non-routine work. Competence of staff is a key part of safe operation and it contributes to an effective safety culture.

EU Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work [1][1] stipulates in its Article 12 that "The employer shall ensure that each worker receives adequate Safety & Health training". However, regulations, being generic by nature, do not provide sufficiently detailed guidelines as to the content of the training required in a specific industry. This publication collates and shares the vast experience acquired by the industrial and medical gases industry in training employees.

2 Scope and purpose

2.1 Scope

This publication covers the key subject areas related to safety training of staff working for or in the name of EIGA Member companies. Although many recommendations of this publication may apply, it is not intended to cover contracted activities which have to follow specific rules (For examples see EIGA Info TS 03 *Training: induction and refresher training of drivers, management and other transport function personnel* [2] and EIGA Doc 118 *Safe Management of Contractors* [3]).

2.2 Purpose

This publication is intended to serve as a set of guidelines for company managers to develop their own safety training management system. All EIGA member companies should have an internal system to manage training and competence. See EIGA Info HF 02 *Individual - Training and Competence* [4].

3 Definitions

3.1 Publications terminology

3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May and need not

Indicate that the procedure is optional.

3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

[1] References are shown by bracketed numbers and are listed in order of appearance in the reference section

3.1.5 Can

Indicates a possibility or ability.

3.2 Technical definitions

For the purposes of this publication, the following definitions apply:

3.2.1 Safety training

Providing staff with professional knowledge and skills that relate to specific competence in safety and occupational health.

3.2.2 Competence

Ability to undertake responsibilities and to perform activities to a recognized standard. Competence is a combination of practical and thinking skills, experience, knowledge and commitment.

Training and competence are equally important to new employees, contractors and experienced employees.

4 Training types

Companies shall manage three different types of safety training:

- Training of new employees: this type of training is also aimed at an existing employee who is being transferred to a new job.
- Periodic refresher training on safety rules and practices for experienced employees.
- Extraordinary training.

4.1 Training of new employees

Accident statistics show that newly hired and inexperienced employees are more prone to accidents than others. Data that focuses not on age but on length of service gives similar results and confirms that the frequency rate of work accidents decreases with length of service. However, statistics fail to explain why so many accidents occur with new employees.

A newly hired or transferred individual should learn about the specific details of their job, the hazards of the materials they will be handling and the tools at their disposal. Lack of experience and training increases their vulnerability to all the hazards they are exposed to.

An employee can also be affected by the unfamiliar work environment of a new job which includes both the physical factors such as noise and heat, as well as the new relationships they have to establish with their colleagues and supervisors.

The arrival of new employees is a unique opportunity for management to help them understand the work environment and safety culture and ensure rapid and safe integration. This responsibility shall be accepted by management. A structured safety training programme helps to create an environment of trust which is beneficial to the safety awareness of all new employees.

Safety training for new employees and employees transferred to a new job includes:

- Induction safety training
- Full safety training

Induction safety training shall be performed before an employee starts to undertake any kind of activities related to their job. Induction safety training comprises, for example, the topics of:

- emergency preparedness,
- basic safety information,
- personal protective equipment.

For induction training, Doc 23.01 *Safety Training Leaflet for new employees* should be used. This publication is designed to be used by the employee's immediate manager to serve as a training plan, record and a feedback document.

Completion of the *Safety Training Leaflet for new employees* is not a substitute for full safety training. The Safety Training Leaflet is divided into sections but neither these sections nor the order of the items in a section constitutes a priority list.

Full safety training shall cover all relevant topics related to the activities performed and can be delivered in a classroom and/or at the work place, as well as in other formats.

Regarding the training program and intensity, the full safety training can last a few hours, a few days or even a few months. During this time the employee shall not be allowed to work unsupervised.

4.2 Periodic Refresher Training

Personnel shall be retrained (or where specified, their competency levels must be reassessed) as follows:

- At the frequencies specified in the training program.
- If significant change occurs in the operation or work environment.
- If lack of understanding of the topic is demonstrated.
- When a significant revision to the training material is issued.
- When regulatory or company's requirements change.
- When the employee was involved in an incident or near miss, indicating a lack of knowledge and/or awareness

If employee understanding of a topic is judged to be unsatisfactory according to a reassessment, then complete retraining must be undertaken.

4.3 Extraordinary training

Extraordinary training shall be performed when an incident or near miss occurs in a similar type of operation elsewhere and relevant lessons have been derived or dedicated campaigns are carried out.

5 Training process

5.1 Training plan

Each manager shall ensure that a training plan is compiled for all employees working in their area of responsibility that identifies the necessary training requirements for their job-function. Training plans shall be regularly reviewed.

5.2 Training programme

Each manager shall prepare a written Safety Training Programme consistent with the function of the employee/s. They should do this using different safety training materials:

- Safety Training Leaflet for new employees in case of Induction Safety Training. See Appendix 3.
- Safety Training Leaflets appropriate to the employee's job. See Appendix 1, 2 and 3.
- Safety videos.
- Training Packages (internal and external presentations or videos etc. which address specific topics relevant to the gas industry).
- Technical equipment manufacturers' guidance such as instruction booklets and manuals.
- Operating Instructions.
- Task / Job Risk Analyses.

- Other materials (books, magazines, brochures, etc.).

Various combinations of different training materials can fulfil the scope of the defined safety training. The duration and timing should be defined, and trainees should be named.

Documentation of training and assessments must be recorded in each employee's training record. If employee understanding of a topic is judged to be unsatisfactory according to the assessment, then complete retraining must be undertaken.

6 Programme selection matrix

Appendix 1 of this publication provides a training programme selection matrix. This matrix provides a listing of Training Topics (in alphabetical order) that are relevant to activities carried out in the industrial and medical gases industry on the vertical axis and on the horizontal axis lists typical job positions or roles within the industry. The matrix indicates whether training is recommended (R) or conditional depending on the specific position (C).

Appendix 2 provides references, where available, to EIGA Publications and Safety Training Leaflets that may assist in providing or developing materials for each topic.

7 Execution of safety training

It is not sufficient to just hand over written material to the trainee. The trainer, manager or supervisor shall work through each document to give the trainee the best opportunity to understand it. The training material should be supplemented by practical exercises or on-the-job-training exercises. For some content, e-learning or self-study can be appropriate formats, but it must be assessed if the appropriate level of competency has been achieved.

8 Competency assessment

The understanding of the trainee shall be checked after their safety training has been completed. Comprehension tests or job-observation shall be performed and documented.

9 Training of contractors

For contracted work, the contractor is responsible for safety training for all their personnel working for the industrial gases company. They are also responsible for any additional training required to maintain competency levels of their personnel. In general, the contractor should follow the same basic principles of safety training as described in this document.

All contractors and subcontractors'' personnel shall be required to attend a health, safety and environmental induction training carried out by a representative of the industrial gases company prior to receiving authorisation to enter the site or commencing work.

Please refer to EIGA Doc 118, *Safe Management of Contractors* [3].

10 References

Unless otherwise stated the latest edition shall apply.

[1] Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work. European Union OJ L 183, 29.6.1989, p.1.

[2] EIGA Info TS 03 *Training: Induction and Refresher Training of Drivers, Management and Other Transport Function Personnel,* www.eiga.eu

[3] EIGA Doc 118 *Safe Management of Contractors,* www.eiga.eu

[4] EIGA Info HF 02 *Individual: Training and Competence,* www.eiga.eu

Appendix 1 – Training programme selection matrix

Training Topics **(in alphabetical order)** **R = recommended** **C = conditional** **(depending on the specific position)**	**ASU Operators**	**Cylinder Operators**	**Speciality Gases Filling Operators**	**Acetylene Operators**	**LPG / LNG Operators**	**HyCo Operators**	**N2O Production Operators**	**ASU plant Maintenance**	**Cylinder Plant Maintenance**	**C02 plant Ops and Maintenance**	**Acetylene plant Maintenance**	**Transport - Bulk**	**Transport Cylinders**	**Cylinder Handling**	**Cylinder Testing + painting**	**Customer Engineering Tech**	**Plant Construction**	**Customer Installations**	**Homecare Personnel**	**office**	**Sales Force**	**Long term site service (external)**
Accident Reporting & Investigation basics	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Acetylene Operations			C	R							R											
ASU Operations	R							C														
Behaviour Safety incl. Dynamic Risk Assessment	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Chemicals	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C		C		R
Confined Space	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	
Construction Safety Overview								C	C	C	C					R	R	R				
Contractor Management	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			C
Control of Legionella	R	C		C				R	C		C				R			C		C		R
Crane Operations	R			C				R		C	R					R	R	C				
Crisis Management, Employee Awareness	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Critical safety systems – alarm & tripping devices	R	R	R	R	R	R	R	R	R	R	R	R	R		R			C				
Cryogenic Bulk Storage	R	R	R	C	R	R	R	R	R	R	C	R				C		C	R			
Cryogenic Liquid Containers	R	R	R	R	R	R	R	R	R	R	R	R	R	R				C	C			
Cylinders Acetylene		R	R	R				R	R	R	R		R	R	R	R	R	R				
Cylinders for compressed gases.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
Cylinder Filling		R	R		R	C	C		R	R									R			

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Cylinder Loading and Transportation		R	C		C	C	C						R	C	R				C			
Cylinders and their Handling and Storage	R	R	R	R	C	C	C	R	R	R	R		R	R	R	R	R	C	C			
Defensive Driving												R	R				C	C	C	R	R	
Driving Risks Distraction + Fatigue												R	R				C	C	C	R	R	
Dewar Handling		R							R				R						C			
EH&S Management System	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Electrical Safety - Basic Electricity	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R		R
Electricity High Voltage	C							R	C		C						C	C				
Emergency Preparedness	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Energy Isolation, Lockout/Tagout (LOTO)	R	R	R	R	R	R	R	R	R	C	R	C	C	R	R	R	R	R	R	C		C
Environmental + Waste Awareness, General	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Fall Protection	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	R	R	R			
Fire Fighting + Protection	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
First Aid	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Forklift Driving	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C				
Forklift Safety Awareness	C	R	C	R	C	C	C	C	R	C	R		R	R	C		C	C	R		C	
Gases - Acetylene	C	R	R	R	C	C		R	R	C	R	C	R	R	R	R	R	R		C	C	
Gases - Argon	R	R	R	R	C	C		R	R	R	R	R	R	R	R	R	R	R		C	C	

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Gases - Carbon dioxide	R	R	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R		C	C	R
Gases - Helium	R	R	R		C	R		R	R	C	C	R	R	R	R	R	R	R		C	R	R
Gases - Hydrogen	R	R	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R		C	R	C
Gases - Nitrogen	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		C	R	C
Gases - Oxygen	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	R	C
Gases - LPG/LNG		R	R		R	C			R			C	R	R	R	R	R	R			R	C
Gases - toxic/corrosive	R	R	R	R	R	R	C	R	R	R	R	R	R	R	R	C	C	R			R	
Hand Arm Vibration Awa	C	C	C	C	C	C	C	R	R	C	R				R		R	R				
Hand Safety	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			R
Hearing Protection + Noise Risk Awareness	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	C	C	R
Hearing Protection Awareness	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	C	C	R
Heat Related Illness Prevention	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			C	R
HyCo Operations						R																
Ladder Safety	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Life-Saving Rules	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C
Liquid Tanker Loading/Unloading	R				R	R	R					R										
Lone worker	C	C	C	C	C	C	C	C	C	C	C	R	R	C	C	C	C	C	C		C	C
LPG/LNG Operations					R																	

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Management of Change	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Manual Handling + Ergonomics		R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R	C			R
Office Ergonomics + office risks	C	C	C	C	C	C		C	C	C	C						C	C	R	R	R	C
Oxygen Compatibility	R	R	R	R				R	R			R	R		R	R	R	R	C			
Personal Protective Equipment (PPE)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	R	R
Portable Atmosphere Monitors	R	R	R	R	R	R	C	R	R	R	R	C	C	R	R	R	R	R			C	
Portable Tools	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			C	R
Pressure Hazards	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R				
Process Safety Management	R	R	R	R	R	R	R	R	R	R	R					R						
Properties /Classification of Gases + Liquids	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	C	
Respirators Programme	C	C	C	C	C	C	R	C	C	C	C			C	C	C	C	C	C			
Safety Data Sheets		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Safety Work Permit	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Scaffold Safety	C							R									R					
Special Gases Operations		C	R																			
Slips, Trips & Falls	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	C	R	R	R
Site Security Awareness	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R				R	
Storage, Hazardous Substances	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			C	

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Storage, Underground Tanks (Awareness)	C	C	C	C	C	C		C	C	C	C			C	C	C	C	C				
Tool Safety	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				
Traffic Risks & Controls (sites)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R		
Transport of Dangerous Goods	C	C	C	C	C	C	C					R	R		C	C	C	R	R	C		
Travel Risks	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	R	C	R	C
Vehicle Rollover Training												R	R						C			
Welding Safety	C	C		C			C	R	R	C	R					R	R	R			C	
Whole Body Vibration Awareness	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	R			
Working at Heights	C	C	C	C	C	C		C	C	C	C			C	C	R	R	C	C			
Workplace Risk Assessment	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Appendix 2 – References to EIGA Publications and Safety Training Leaflets

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Accident Reporting and Investigation Basics	Doc.90 Incident/Accident Investigation and Analysis Info HF 03 Organisation - "Human Factors in Incident Investigation" Info TS 06 Vehicle Incident Investigation Management	
Acetylene Operations	Doc. 26 Permissible Charge / Filling Conditions for Acetylene Cylinders, Bundles, Battery Vehicles Doc. 123 Code of Practice - Acetylene	Safety Training Leaflet 8: Acetylene, Calcium Carbide, Lime Sludge and Purifying Materials – Safety Training Leaflet 10: Acetylene Cylinders
ASU Operations	Doc. 65 Safe Operation of Reboilers/Condensers in Air Separation Units Doc. 147 Safe Practices Guide for Cryogenic Air Separation Plants	
Behaviour Safety incl. Dynamic Risk Assessment	Doc. 201 Near-Consumer Use – Risk Assessment Methodology Doc. 51 Management of Change	
Chemicals	-	Safety Training Leaflet 21: Chemicals
Confined Space	-	
Construction Safety Overview	NL 78 Asphyxiation fatalities on a construction site / Asphyxiation near-miss accident in open air / etc	
Contractor Management	Doc. 118 Safe Management of Contractors Info TS 04 Transport of Gases - Contractor Management Doc. 40 Work Permit Systems	
Control of Legionella	ENL 04 Legionella	
Crane Operations	Info 25 Crane Transport of Cylinder Packages	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Crisis Management, Employee Awareness	Doc. 923 Guidelines for Crisis Management	
Critical safety systems – alarm & tripping devices	NL 69 Pallets / Safety critical instruments Info HF 08 Task - "Alarm Handling"	Safety Training Leaflet 14: Critical Safety Systems - Alarm & Tripping Devices
Cryogenic Bulk Storage	Doc. 24 Vacuum insulated cryogenic storage tank systems pressure protection devices Doc. 114 Operation of static cryogenic vessels Doc. 115 Storage of Cryogenic Air Gases at Users' Premises Doc. 119 Periodic inspection of static cryogenic vessels Doc. 133 Cryogenic Vaporisation Systems - Prevention of Brittle Fracture of Equipment and Piping TB 11 Recommendations for the Prevention of Brittle Failure of the Outer Jacket of Vacuum Insulated Cryogenic Storage Tanks	Safety Training Leaflet 12: Cryogenic Liquids, Spills and Vapour Clouds
Cryogenic Liquid Containers	Doc. 93 Safety features of portable cryogenic liquid containers for industrial and medical gases Doc. 151 Prevention of Excessive Pressure during Filling of Cryogenic Vessels Doc. 168 Calculation Method for Analysis and Prevention of Overpressure during Refilling of Cryogenic Tanks with Rupture Disks	Safety Training Leaflet 12: Cryogenic Liquids, Spills and Vapour Clouds
Cylinders Acetylene	Doc. 26 Permissible Charge / Filling Conditions for Acetylene Cylinders, Bundles, Battery Vehicles SL 04 The Safe Transport, Use and Storage of Acetylene Cylinders	Safety Training Leaflet 10: Acetylene Cylinders

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Cylinders for compressed gases.	Doc. 36 Catalogue of Control Marks on Cylinders Doc. 57 Recommendations for Avoidance of Sustained Load Cracking of Aluminium Alloy Cylinders Doc. 61 Safe Use of Gas Cylinders in Marine Service Doc. 62 Methods to Avoid and Detect Internal Gas Cylinder Corrosion Doc. 86 Gas Cylinders and Valves with Restricted Use in the EU Info 02 Handling of Gas Cylinders during and after Exposure to Heat or Fire Doc. 124 300 Bar High Strength Seamless Steel Gas Cylinders Doc. 161 Gas compatibility with Aluminium alloy cylinders Doc. 177 Medical Gas Cylinders Colour Coding Doc. 182 Pre-fill Inspection of Customer Owned Cylinders PP 18 Transfilling of Industrial Gas Cylinders SA 05 Disguised transportable gas cylinders	Safety Training Leaflet 9: Cylinders for Compressed Gases
Cylinder Filling	Doc. 02 Job motivation and safe operations in cylinder filling stations Doc. 83 Recommendations for safe filling of CO2 cylinders and bundles PP 18 Transfilling of Industrial Gas Cylinders SA 16 Fatal accident in an oxygen cylinder filling station NL 74 Fire in a ball valve / Filling connector for cyl. valves / Adiabatic compression in filling hoses – NL 87 Typical Oxygen Filling Incidents – Oxygen Incidents in Cylinder Filling Stations	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Cylinder Loading and Transportation	Doc. 173 ADR Transport Security Guidelines SA 05 Disguised transportable gas cylinders Info 25 Crane Transport of Cylinder Packages Category: Transport Safety Information - (Info TS 01 to 08) TP 43 ADR 2015 - Main changes linked to Class 2 transport SL 08 Safe Transport of Gases TP 52 Transporting Customers' Gases More Safely - Retail Staff	Safety Training Leaflet 11: Loading and Transporting Cylinders
Cylinders and their Handling and Storage	Doc. 189 The Calculation of Harm and No-harm Distances for the Storage and Use of Toxic Gases in Transportable Containers Doc. 176 Safe Practices for Storage and Handling of Nitrous Oxide Doc. 199 Safe Handling of Electronic Specialty Gases Info 02 Handling of Gas Cylinders during and after Exposure to Heat or Fire	Safety Training Leaflet 2: Basic Rules for Safety and Good Housekeeping
Defensive Driving	TP 28 Safe Driving in Bad Weather Conditions Info TS 03 Training: Induction and Refresher Training of Drivers, Management & Other Transport Function Personnel	
Driving Risks Distraction + Fatigue	Info TS 02 Vehicle Rollover and Other Serious Vehicle Incident Prevention Info TS 07 Human Behaviour within Transport Operations	
Dewar Handling	-	Safety Training Leaflet 12: Cryogenic Liquids, Spills and Vapour Clouds
EH&S Management System	Doc. 107 Guidelines on Environmental Management Systems	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Electrical Safety - Basic Electricity	Info 30 Electrical Safety	Safety Training Leaflet 19: Portable Electric Tools Safety Training Leaflet 16: Electricity
Electricity High Voltage	Info 30 Electrical Safety	Safety Training Leaflet 16: Electricity
Emergency Preparedness	Info HF 06 Organisation - "Site Emergency Response" Doc. 81 Road vehicle emergency and recovery	
Energy Isolation, Lockout/Tagout (LOTO)	-	Safety Training Leaflet 23: Work Permit
Environmental + Waste Awareness, General	TP 01 Introduction to Environmental Issues in the Industrial Gases Industry TP 02 ASU Plants Environmental Issues TP 03 Acetylene Plants Environmental Issues TP 04 Cylinder Plant Environmental Issues	
Fall Protection	TP 09 Slips, Trips and Falls Info 36 Working at Height – the Hazard of Suspension Trauma when using Fall Arrest Systems	
Fire Fighting + Protection	-	Safety Training Leaflet 17: Fire
First Aid	-	
Forklift Driving	Doc. 165 Safe Operation with Fork Lift Trucks	Safety Training Leaflet 13: Fork Lift Trucks

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Forklift Safety Awareness	NL 81 Safety Recommendations for use of Fork Lift Trucks / Increasing the field of vision of a Fork Lift Truck driver	Safety Training Leaflet 13: Fork Lift Trucks
Gases - Acetylene	BN 10 Dissolved Acetylene: a Substance, not a Mixture!	Safety Training Leaflet 8: Acetylene, Calcium Carbide, Lime Sludge and Purifying Materials Safety Training Leaflet 9: Acetylene Cylinders
Gases - Argon	Doc. 44 Hazards of Oxygen-Deficient Atmospheres	Safety Training Leaflet 5: Inert Gases (Nitrogen & Argon)
Gases - Carbon dioxide	Info 24 Carbon Dioxide Physiological Hazards -“Not just an Asphyxiant!”	Safety Training Leaflet 6: Carbon Dioxide
Gases - Helium	Doc. 44 Hazards of Oxygen-Deficient Atmospheres	
Gases - Hydrogen	Doc. 6 Safety in Storage, Handling and Distribution of Liquid Hydrogen Doc. 15 Gaseous Hydrogen Stations	Safety Training Leaflet 7: Hydrogen
Gases - Nitrogen	Doc. 44 Hazards of Oxygen-Deficient Atmospheres	Safety Training Leaflet 5: Inert Gases (Nitrogen & Argon)
Gases - Oxygen	Doc. 04 Fire Hazards of Oxygen and Oxygen Enriched Atmospheres	Safety Training Leaflet 3: Oxygen
Gases - LPG/LNG	-	
Gases - toxic/corrosive	Doc. 130 Principles for the Safe Handling and Distribution of Highly Toxic Gases and Mixtures	
Hand Arm Vibration Awareness	-	
Hand Safety	Doc. 136 Selection of Personal Protective Equipment	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Hearing Protection + Noise Risk Awareness	Doc. 85 Noise Management for the Industrial Gases Industry ENL 26 Noise	
Hearing Protection Awareness	Doc. 85 Noise Management for the Industrial Gases Industry ENL 26 Noise	
Heat Related Illness Prevention	Doc. 136 Selection of Personal Protective Equipment	
HyCo Operations	Doc. 155 Best Available Techniques for Hydrogen Production by Steam Methane Reforming Doc. 172 Combustion Safety for Steam Reformer Operation Doc. 185 Safe Start Up and Shutdown Practices for Steam Reformers	
Ladder Safety	-	
Life-Saving Rules	Doc. 924 Life Saving Rules TP 46 Life Saving Rules Presentation SL 06 Life Saving Rules Brochure SL 07 Life Saving Rules Poster	
Liquid Tanker Loading/Unloading	Doc. 179 Liquid Oxygen Nitrogen and Argon Cryogenic Tanker Loading Systems Doc. 909 EIGA Cryogenic Gases Couplings for Tanker Filling SA 03 EIGA Cryogenic Gases Coupling for Tanker filling Info 28 Operation of Carbon Dioxide Road Tankers and Equipment while Loading and Unloading	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Lone worker	-	
LPG/LNG Operations	-	
Management of Change	Doc. 51 Management of Change	
Manual Handling + Ergonomics	-	
Office Ergonomics + office risks	-	
Oxygen Compatibility	NL 75 Compatibility of Gas and Cylinder Material / ASU Cold Box Over-pressurisation Doc. 161 Gas Compatibility with Aluminium Alloy Cylinders	Safety Training Leaflet 3: Oxygen
Personal Protective Equipment (PPE)	Doc. 136 Selection of Personal Protective Equipment	
Portable Atmosphere Monitors	-	
Portable Tools	-	Safety Training Leaflet 19: Portable Electric Tools Safety Training Leaflet 19: Portable Pneumatic Tools Safety Training Leaflet 18: Hand Tools
Pressure Hazards	-	Safety Training Leaflet 15: Gas Pressure
Process Safety Management	-	

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Properties /Classification of Gases + Liquids	Doc. 169 Classification, and Labelling Guide in accordance with EC Regulation 1272/2008 (CLP Regulation) Doc. 906 Classification, Labelling and Safety Data Sheet Guide	
Respirators Programme	-	
Safety Data Sheets		
Safety Work Permit	Doc. 40 Work Permit Systems	Safety Training Leaflet 23: Work Permit
Scaffold Safety		
Spec.Gases Operations	TP 36 Electronic Specialty Gases Near Miss Incidents Doc. 199 Safe Handling of Electronic Specialty Gases	
Slips, Trips & Falls	TP 09 Slips, Trips and Falls	
Site Security Awareness	Doc. 922 Site Security	
Storage, Hazardous Substances	ENL 09 Above Ground Storage Tanks for Substances Harmful to the Environment	
Storage, Underground Tanks (Awareness)	ENL 09 Above Ground Storage Tanks for Substances Harmful to the Environment ENL 02 Environmental Considerations for Underground Storage Tanks (UST) and Associated Pipework Doc. 171 Storage of Hydrogen in Systems Located Underground	
Tool Safety		

Training Topics	Useful EIGA Publications	Safety Training Leaflets
Traffic Risks & Controls (sites)	NL 81 Safety Recommendations for use of Fork Lift Trucks / Increasing the field of vision of a Fork Lift Truck driver	
Transport of Dangerous Goods	Doc. 173 ADR Transport Security Guidelines Transport Safety Information - Info TS 01 to 08	
Travel Risks	TP 28 Safe Driving in Bad Weather Conditions	
Vehicle Rollover Training	Info TS 02 Vehicle Rollover and Other Serious Vehicle Incident prevention	
Welding Safety	-	
Whole Body Vibration Awareness	-	
Working at Heights	Info 36 Working at Height – the Hazard of Suspension Trauma when using Fall Arrest Systems TP 09 Slips, Trips and Falls	
Workplace Risk Assessment	-	

Appendix 3 – Index of EIGA Safety Training Leaflets

Doc. 23.01	Safety Training Leaflet 1	Training for New Employees
Doc. 23.02	Safety Training Leaflet 2	Basic Rules for Safety and Good Housekeeping
Doc. 23.03	Safety Training Leaflet 3	Oxygen
Doc. 23.04	Safety Training Leaflet 4	Nitrous Oxide
Doc. 23.05	Safety Training Leaflet 5	Inert Gases (Nitrogen & Argon)
Doc. 23.06	Safety Training Leaflet 6	Carbon Dioxide
Doc. 23.07	Safety Training Leaflet 7	Hydrogen
Doc. 23.08	Safety Training Leaflet 8	Acetylene, Calcium Carbide, Lime Sludge and Purifying Materials
Doc. 23.09	Safety Training Leaflet 9	Cylinders for Compressed Gases
Doc. 23.10	Safety Training Leaflet 10	Acetylene Cylinders
Doc. 23.11	Safety Training Leaflet 11	Loading and Transporting Cylinders
Doc. 23.12	Safety Training Leaflet 12	Cryogenic Liquids, Spills and Vapour Clouds
Doc. 23.13	Safety Training Leaflet 13	Fork Lift Trucks
Doc. 23.14	Safety Training Leaflet 14	Critical Safety Systems - Alarm & Tripping Devices
Doc. 23.15	Safety Training Leaflet 15	Gas Pressure
Doc. 23.16	Safety Training Leaflet 16	Electricity
Doc. 23.17	Safety Training Leaflet 17	Fire
Doc. 23.18	Safety Training Leaflet 18	Hand Tools
Doc. 23.19	Safety Training Leaflet 19	Portable Electric Tools
Doc. 23.20	Safety Training Leaflet 20	Portable Pneumatic Tools
Doc. 23.21	Safety Training Leaflet 21	Chemicals
Doc. 23.22	Safety Training Leaflet 22	Solvents
Doc. 23.23	Safety Training Leaflet 23	Work Permit
Doc. 23.24	Safety Training Leaflet 24	Lone Workers *(Not yet published)*