

Chemical Distribution Institute 2014 Year Book

www.cdi.org.uk



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Chemical Distribution Institute

St Martins House Business Centre Ockham Road South, East Horsley Surrey KT24 6RX

tel: (44) 1483 281 268 **fax:** (44) 1483 285 474

e-mail: chemdist@cdim.org website: www.cdi.org.uk

THE STICHTING CHEMICAL DISTRIBUTION INSTITUTE

REGISTRY OF THE CHAMBER OF COMMERCE No. 41134185, THE NETHERLANDS REGISTERED IN ENGLAND & WALES COMPANY NO FC018383 BRANCH No. BR002806

REGISTERED OFFICE:

ST MARTINS HOUSE BUSINESS CENTRE,
OCKHAM ROAD SOUTH, EAST HORSLEY, SURREY. KT24 6RX, U.K.



Forward



The Chemical Distribution Institute is a chemical industry organization operating on an international basis and managed by the chemical company members. CDI is responsible for the inspection and audit of the global supply chain for bulk and packaged chemicals. CDI is not a trade association; it is non-profit, non-commercial and free from political influence.

All CDI schemes and protocols are founded on the principles of Responsible Care®, allowing members and participants to demonstrate their commitment to the industry initiative.

This year book introduces the people, the activities and the options for chemical companies and supply chain participants.



Acknowledgements:

Adonai, AGEO-Copape, Akbasoglu Denizcilik Ltd, Algranel, Ancora Investment Trust, AST, Augusta Due Srl, BP, Birlesik Shipping, Bromarine Deni. San Ve Ti, Capital Ship Management Corp, Chemical Logitec, Clipper Marine Services Ltd, Consultores de Navegacion, Cowen Management SA, Deval Transport AS, Dongkuk Marine Co, Dorval Kaiun KK, Dragon Crown, Elmira Tankers Mgmt, Evalend Shipping Tankers, Furtrans Tanker & Ship Mgmt, GE SeaCo, Gold Bridge Shipping, Guangxi Wuzhou Tongzhou, Gulf Stolt Ship Management, Halkidon Shipping Corp, Hanseatic Lloyd, Jo Tankers, Knutsen OAS Shipping, Koun Marine Co Ltd, KSS Line Ltd Korea, Lotus Shipping Co. Ltd, Maersk Line, Mare Maritime Co SA, Mercan Shipping, MRC Denizcilik Ltd, MOL Tank Ship Management Asia, Neri, Odfjell Management AS, Oiltanking, OMCI Ship Management GmbH & Co, Poliport, Q-Shipping, Seatrans AS, Sea Tank, Sener Petrol Denizcilik, Shosei Kisen Co Ltd, Simon Storage, Solventas, Stolt Tank Containers, Sun Technomarine Co, Taeyoung, Takara, TEPSA, TM Ship Management Co Ltd, Trefin Tankers Ltd, VBG Denizcilik San, VLK Traders Singapore, Vopak, Wah Kwong Ship Management, Wappen Reederei GmbH, Wooil Marine Co Ltd., Yangtze Petrochemical, IMTT; Sinochem; Tokyo Yuso Corp; ADPO nv; Bertschi Containers; NewPort Tank Containers; Topsafe Petrochemical Logistics and storage services Co.Ltd; VTG Aktiengesellschaft; Oiltanking.

Introduction to the Chemical Distribution Institute

General

The CDI Foundation is a non-profit making and non-commercial organization funded by the chemical industry. CDI is responsible for the accreditation of inspectors and auditors to provide inspection and audit reports for use in the risk assessment process. CDI online databases provide facility to create, edit and interpolate the inspection and audit reports on a 24/7 global basis.

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CDI is a Dutch foundation operating from offices in the UK; audited accounts are filed annually with Companies House. The Foundation conducts its activities entirely within EU competition and US anti-trust law. The databases are maintained at secure sites in the Port of Rotterdam.

The CDI schemes are each managed by their own Executive Board, made up of individual representatives from the chemical company participants. Reporting to the Executive Boards are the Technical and Accreditation Committees, responsible for the inspection protocols, and the accreditation of inspectors and auditors. The committees are of split representation, their membership being 50% from chemical companies and 50% from supply chain companies. Additionally, there is a Quality Audit Committee and a Finance Committee.

The permanent staffing of CDI consists of 4 persons; reporting to the General Manager are a Technical Manager, an Accounts Administrator and an Accreditation Administrator. The Board of Directors elected from the chemical company membership oversees the overall activity of the Foundation.

Added to the management structure in 2010 is the Asia Pacific Panel (APP). The APP holds the same status as an Executive Board and reports directly to the Board of Directors., the multi-discipline panel engages with regional industry stakeholders and promotes the continued growth of CDI throughout the Far East. The members meet twice per year in a rotation of Far East cities.

There are over 150 inspectors and auditors accredited to conduct CDI inspections and audits around the world. In addition to meeting academic and industry experience criteria, the inspectors and auditors are trained, examined and performance monitored in the field. Training and examination is undertaken by Warsash Maritime Southampton and the Centre for Maritime and Industrial Safety Technology (C-MIST) at Heriot-Watt University Edinburgh.

Accreditation certificates remain the property of CDI and individuals failing to meet the rigorous continuous monitoring standards have their certification revoked.

CDI has close relationships with European Chemical Industry Council (CEFIC), American Chemistry Council (ACC), Association of the Brazilian Chemical Industry (ABIQUIM), Association of International Chemical Manufacturers (AICM), Chemical and Allied Industries' Association (CAIA), Gulf Petrochemical and Chemical Association (GPCA), Indian Chemical Council (ICC), Oil Companies International Marine Forum (OCIMF), International Liquid Terminal Association (ILTA), Bulk Liquids Industry Association Inc. (BLIA),International Container Handling Coordination Association (ICHCA) and the China

Petroleum and Chemical Industry Federation (CPCIF) and INTERMANAGER the international trade association for the ship management industry.

1994, CDI-Marine

CDI-M was created by the chemical industry to improve the safety and quality performance of bulk liquid shipping on chemical tankers. CDI-M now provides annual inspection reports on the world fleet of chemical and liquid petroleum gas tankers, over 830 ship owners with over 4700 ships participating in the scheme. The inspections are conducted by 95 CDI-M Accredited inspectors located in ports around the world. CDI-M is an information provider to EQUASIS, the European Commission's Quality in Shipping Campaign. Via the EQUASIS web site, ship inspection reports are available to the Port State authorities.

1997, CDI-Terminals

The CDI-T scheme was developed in 1997 and similar to the Marine scheme; its purpose is to improve the safety and quality performance of bulk liquid storage terminals. Over 100 major chemical storage terminal companies are participants in the Terminals scheme. Over 50 CDI-T Accredited inspectors carry out the detailed management and technical inspections of liquid storage terminals on most continents of the world, with over 200 terminals inspected around the world.

2002, International Marine Packed Cargo Audit Scheme

The IMPCAS is potentially the largest scheme of its kind in the world, with over 100 auditors based in the major container handling ports. Developed to provide audit reports on each category of service provider involved in the logistic distribution supply chain, the scheme extends to include: Shipping Companies, Ships, Tank Container Operators, Container Freight Stations, Freight Forwarders, Agents, and Container Terminals

Memorandums of Understanding

GPCA and CDI are party to a Memorandum of Agreement which was signed at the GPCA 7th Annual Petrochemical & Chemical Forum held in Dubai during the 26th to 29th November 2012. It sets out future cooperation and mutual collaboration between CDI and GPCA primarily to focus upon the promotion of cost effective systems for risk assessment in the region as well as promotion of the industries Responsible Care initiative and its Code of Distribution Management Practice. It also addresses education/awareness programs aimed at improving safety, security and quality performance of marine chemical transportation and storage for the chemical industry in the Gulf region. It also identifies future close cooperation within the Gulf regions regarding the promotion and the ongoing development of best practice in the chemical marine transportation and storage sector as well as the packed cargo supply chain.

ICC and CDI signed a Memorandum of Understanding in 2010 between the Indian Chemical Council and CDI for mutual cooperation in advancing safe practices in logistics of chemical distribution. The Agreement features eight terms and goals, revolving around education and awareness programs, Responsible Care® in supply chain companies, development of best practice and sharing of information.

ACC and CDI are party to a Memorandum of Agreement to cooperate on matters of mutual interest in promoting high levels of health, safety, environmental and security performance. The alliance between the U.S. Trade Association and Global Inspection & Audit Organization provides ACC Responsible Care® Partner companies the option of using the CDI-T and IMPCAS schemes to meet their Responsible Care certification requirements. Significantly, the collaboration between ACC and CDI extends the use of CDI-T and IMPCAS, already global systems, to North America.

INTERMANAGER and CDI signed an MoU in 2012 setting out cooperation regarding Shipping Key Performance Indicators (KPI's) as part of the CDI IMPCAS Scheme.



Overall Policy Statement



The following statement describes the overall objectives and policies of the Stichting Chemical Distribution Institute (CDI). These are approved by the Board of CDI and signed, on their behalf, by the Chairman. All participants, employees and accredited inspectors are expected to adhere to these at all times in the execution of their work for CDI. The combined statement is prominently displayed within the CDI offices and made known to all participants.

Vision:

Driven by the expertise of the world's leading chemical manufacturers CDI sets out to be the global source for data, information and advice specific to marine transportation and storage of chemical products, whether that be in bulk or packaged form.

Quality Objectives

- To meet customers' requirements for providing high quality data, and information and advice on industry best practice and international legislation for marine transportation and storage of chemical products.
- To improve continuously the way we operate.
- To measure our performance and provide meaningful statistical evidence of our progress.

Quality Policies

- To meet our customers' quality demands consistently.
- To manage CDI in a manner meeting the current ISO 9001:2008 Standard.
- To implement and maintain awareness of and participation in meeting the quality objectives.
- To keep proper records to demonstrate effectiveness of the quality system.

The Business Objectives

- To constantly improve the safety, security and quality performance of marine transportation and storage for the chemical industry.
- Through cooperation with industry and centers of education, drive the development of industry best practice in marine transportation and storage of chemical products.
- To provide information and advice on industry best practice and international legislation for marine transportation and storage of chemical products to customers and stakeholders.
- To monitor current and future international legislation and provide experience, knowledge and advice from the chemical industry to the legislators.
- To provide chemical companies with cost effective systems for risk assessment, thus
- assisting their commitment to Responsible Care and the Code of Distribution Management Practice.
- To provide a single set of reliable and consistent inspection data which chemical companies can use with confidence.
- To provide the chemical industry with an independent organization for:
 - training, qualification and accreditation of inspectors.
 - development and maintenance of databases on which inspection and risk assessment information can be promulgated.

The Business Policies

- CDI will promulgate information and advice specific to safe marine transportation and storage of chemical products.
- Through observance and feedback, CDI will monitor legislation respective to chemical transportation and storage. Representing industry, expertise and knowledge accessible through CDI will be provided to the legislators.
- CDI will ensure that reliable and accurate inspection schemes are maintained. Inspection protocols will be constantly updated in line with legislation, accepted international standards and technology. With user friendliness in mind, CDI will constantly improve the interactive databases for input, extraction and interpolation of data and information.

- Pending compliance with the procedures for accreditation, a sufficient number of inspectors will be maintained to provide a global coverage for ship, terminal and supply chain inspection.
- CDI will operate within the budgetary limits set by the Board.
 Surplus capital will be used to reduce the charges to participants.
- Through evaluation of experience feedback and customer comment,
 CDI will strive for continuous quality improvement.
- Extend the services of CDI beyond the chemical industry wherever assistance and advice may be requested, thus avoiding foreclosure towards any 3rd party.

Safety, Security, Health and Environment Objectives

- To ensure that CDI, it's employees and the inspectors conduct their
 activities in ways that are safe and secure for personnel, ships,
 terminals, warehouses, offices and the environment.
- To ensure that the office administration function contributes to a pollution free environment.

Safety, Security, Health and Environment Policies

- Through inspection protocols, guidelines, training of personnel and industry presentations, CDI will actively promote Safety, Security, Health and a pollution free Environment.
- In carrying out the activities of inspection and administration,
 CDI will ensure that all legislation, industry guidance and recommendations are considered.
- CDI will ensure that all inspectors are provided with photo identification documents and maintain accurate records to provide verification that inspectors are who they claim to be.
- CDI employees and inspectors are expected, at all times, to comply with these Safety, Security, Health and Environment Policies.
- CDI employees and inspectors are expected, at all times, to comply with the Safety, Security, Health and Environment Policies of the ships, terminals, warehouses, and offices they visit.
- CDI will monitor safety performance by recording and reviewing all accidents and incidents involving employees and inspectors.
- CDI will maintain a safe and secure place to work and a healthy working environment for employees.
- CDI will provide information, instruction and supervision to ensure all employees and inspectors avoid hazards likely to be encountered in their daily activities.

Personnel Objective

 To acknowledge that properly trained and qualified personnel are the key elements to the success and quality of the CDI.

Personnel Policies

- CDI will ensure that the right people are employed in the right positions with the right work instructions.
- CDI will ensure that appropriate training is given to all employees to ensure they stay up-to date with changing procedures and modern working practice.
- Within the administration office, CDI will maintain appropriate safety equipment, fire protection, first aid and welfare facilities.

Ethics Policy

- To respect different cultures, religions, traditions and customs and in so doing maintain the highest integrity in its dealings and activities.
- To be honest, straight forward and impartial with participants, stakeholders, third parties and employees.
- To maintain an administrative system which records accurately and honestly its activities and financial situation.
- To prevent any form of incentives being paid to or by employees and inspectors, either in cash or kind in connection with contractual or other business relationships that CDI may have with third parties.
- To ensure that information which is required to be kept confidential is respected by all employees.
- To declare immediately any potential or known conflict of interest that may arise or has arisen.

Competition Law Policy

- It is the policy of the Stichting Chemical Distribution Institute
 ("CDI") that all of its Directors, Officers, Employees, Participants
 and Representatives shall, in carrying out their duties and activities,
 comply with all those antitrust laws which are applicable to CDI's
 activities. Consistent herewith, the CDI Board shall emphasise the
 importance of Competition Law compliance and shall maintain an
 Antitrust Compliance program requiring the Antitrust statement be
 circulated prior to commencement of all Board, Executive Board,
 Committee and Work Group meetings.
- Nobody should assume that CDI's interest ever requires otherwise.
 Moreover, no one in CDI or on behalf of CDI has authority to give any order or direction that would result in a violation of this policy.
- It is recognised that on occasion there may be legitimate doubt as
 to the proper interpretation of the law. In such circumstances, it is
 required that the case will be referred to CDI's legal counsel for an
 opinion.

The People

The CDI Board of Directors

Rob Kiefer (Chairman of CDI)
North America Supply Chain Operations
The Dow Chemical Company

Heleen Hofkens

EMEAF Liquids L&D Manager, ExxonMobil

Capt. Jan Antonsson

Maritime Technical Manager Global Chemicals Shell International Trading and Shipping

Mitch King

Marine & Terminal Operations,

The Dow Chemical Company

Neil Moon

Global Director, Agility Chemicals

Wouter Vermijs

Director, Supply Chain Chemicals Europe SABIC

The CDI-M Executive Board

Neil Moon

Agility Chemicals (Chairman,

Rob Drysdale ExxonMobil

Luc Cassan

James Prazak

Tricon Energy

Jan Antonsson

Shell

Steven Beddegenoodts

SABIC

Doris Lee

The CDI-T Executive Board

Mitch King

Dow Chemical (Chairman)

Paul Lancaster

BP Chemicals

Rene Hallam

Martyn Lyons

Simon Storaae

Sacha Nahmais

TEPS/

Niek Verbree

Vopak

The IMPCAS Executive Board

Rob Kiefe

Dow Chemical (Chairman

Yanny Chan

ExxonMobil

Luc Cassan

Gary Fraze

Dupont-USA

Delia A Del Fierro

Shell

The CDI Team

Capt. Howard N. Snaith F.N.I. Master Mariner General Manager

Capt. Terry Frith. Master Mariner Technical Manager

Elisabeth McAllister

Mandy Howard

Accreditation Administrator

Egbert Horring (Pharox Automatisering B. V.)



Participant Representatives 1st January 2014

Roland Rajappen African Oxygen Limited Andrew Smiley Koch Industries Inc

N.Moon Agility Chemical (Chairman) (Founder Company) Stefano Rocca Kuwait Petroleum Italia Sp

R De Leeuw Akzo Nobel Base Chemicals Sergio Menegazzi Lyondellbassel.

 Dawn Brubaker
 Americas Styrenics LLC
 G. Smith
 Methanex Corporation / Waterfront Shipping

Gerard Langlais Arkema Dennis Patrick Methanol Holdings (Trinidad) Limited

Kevin Cribbin Aughinish Aluminium Adolfo C. Pardo Mexichem Resinas Vinilicas S.A. de C.V.

Luc Cassan BASF Marie-France Rollin Norfalco

Thomas Van De Velde Borealis Eirk Josephsson Nymas

Paul Lancaster BP Chemicals (Founder Company) T. Hosken Orica Australia Pty Ltd

Elton Passaro Braskem SA Anders Broberg Perstorp Oxo, AB

Russell Bunton

Calumet Penreco LLC

Eduardo Ribeiro

Petrobras

Jonathan R. Stoneley

Cargill International SA

Richard Eric Gomez

Petronas

Dennis Melgert Celanese Mohammed S. Gadah Petro Rabigh

P. L. Portato Centrotrade Bryan Blau Potash Corp.

Scott Webb Chevron Judy Pettye Phillips 66

Karen Davis ConocoPhillips F. M. Cordova Escobedo PMI Comercio Internacional SA de CV

Rob Kiefer The Dow Chemical Company (Founder Company)

Klaas Wouterlood DSM Abdulla Al Marri Qatar Vinyl Company Limited (QVC)

Starlene M. Breece DuPont, USA Robyn Martin Qenos Pty Ltd

Waddah S. Ghanem Emirates National Oil Company (ENOC) LLC Paulino Rascado REPSOL Trading S.A

Ali Al-Lugman EQUATE Petroleum Company

Hermann-Josef Fortmann Evonik Services GmbH Hamad Balhareth Sausi Aramco

Rod Drysdale ExxonMobil (Founder Company) Mohammed Al Zuhair SABIC

Michele Pugh Flint Hills Resources, LP Ben Human SASOL Group Services

Nikolai Grigoriev Gazprom Global LNG Limited Dr.ir. J.G.M. Eggels Shell Chemicals (Founder Company)

Patrick Sauge GPN A. J. van Oudheusden Shin-Etsu PVC b.v.

Barbara Leadbetter Greenergy Fuels Ltd Khaled S. Al-Dossary SIPCHEM — Saudi International Petrochemical Company

Jehad Tagi Gulf Petrochemical Industries Company Ann Gerlardi Southern Chemical Corporation

Richard Fletcher Holborn Europa Raffinerie GMBH Philippe Heuchon Solvay SA

 Amy Ark
 Huntsman LLC
 Bob Koaches
 Styron LLC

 Makoto Fujito
 Idemitsu Tanker Co. Ltd.
 Yasser Behiry
 Tasweeq

Martin Schefzick INEOS Germany Mitsura San TonenGeneral

 Katie Collins
 Styrolution America LLC
 James Prazak
 Tricon Energy

 Georgia Stoinski
 Infineum
 Jeronimo Torres
 UBE Chemical Euro.

Paul Brunsman INVISTA Textiles (UK) Ltd Francois Detavernier YARA Switzerland Limited

Claude Chavanne KEM ONE

Associate Members

Bayer

CHWMEG Inc.

DVB Bank

INTERTANKO

Tanker Owners

IPTA

International Parcel Tankers Association

ABIOUIM

Associação Brasileira da Indústria Química

International Tank Container Organization

de Transitaires et Assimilés

Allianz Global Corporate & Specialty

Vopak Singapore

Map Ta Phut Tank Terminal Co., Ltd.

Green Award Foundation

Port State Control Associates

Australian Maritime Authority

Netherlands Shipping Inspectorate

Cyprus PSC Authority

French PSC Authority

German PSC Authority

Italian Coast Guard

Swedish Maritime Authority

MCA UK

Finland PSC

MPA Singapore

MSA New Zealand

AMSA

Brazilian Maritime Authority

Romanian Naval Authority

Paris MoU

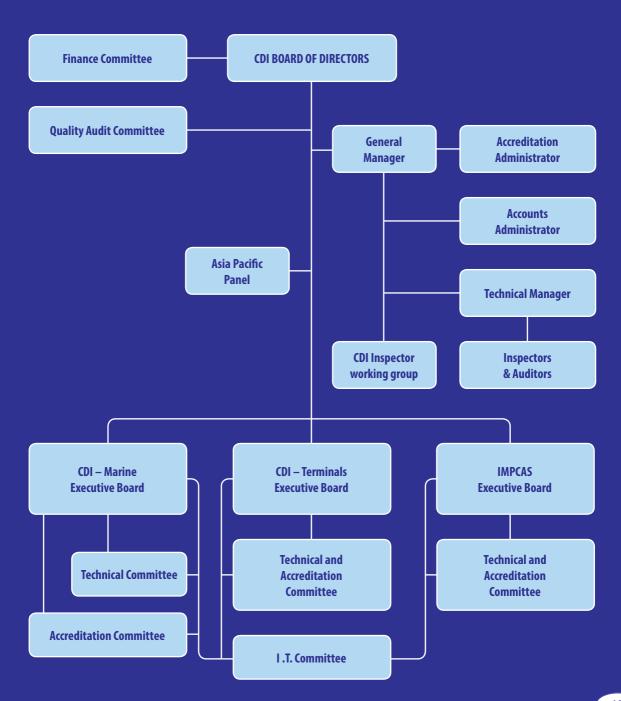
Bulgarian PSC Authority

CDI Inspectors

CDI inspections can only be conducted by CDI Accredited Inspectors. These professional people are independent from supply chain companies and continuously achieve the most rigorous standards of training, examination and performance evaluation. All inspectors carry personal ID cards issued by CDI and are listed on the public website and databases for verification of authenticity.



The Organization



CDI Marine

The Inspection of Chemical and LPG Tankers

It is onerous on the chemical industry as a whole, to constantly improve and maintain the safety and quality performance of bulk shipping. The members of the CDI Marine scheme demonstrate their commitment to this process.

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Despite the excellent operating standards in shipping, ships do have incidents and this is the reason for the practice of ship vetting. If the chartered ship sustains a casualty then all the eyes of the media and the authorities will be on the charterer. Ship vetting involves carrying out risk assessment on the ships offered for charter and avoidance of the deficient ship. If the worst does happen, for whatever reason, and the authorities become involved, the charterer will be required to demonstrate the application of due diligence in selecting the ship. It is the successful demonstration that every step possible was taken to ensure the ship met international regulations and industry best practice that will save the charterer from liability. This is the reason why the chemical companies finance CDI.

CDI Marine provides ship inspection data in an electronic report format to members. The ship is inspected and the report is entered to the database. The ship owner then enters his comments and the report progresses to active status. Once on the active database, the report can be accessed by CDI members and used in their risk assessment process. The database awards a score to the ship for statutory, recommended and desired compliance. More importantly, the database provides full template functionality, which allows the user to run his own templates of selected questions, i.e. their minimum safety criteria for chartering a ship. The database also provides the very latest Port State Control records and casualty information on the ship. Several large users of CDI have direct interfaces with the database, automatically downloading data immediately when the new inspection report arrives.



Today, there are over 4700 chemical and gas ships registered on the database with almost 2000 inspection reports active and available 24 hours per day.

Membership

Chemical company members pay an annual subscription of between \$2500 and \$25,000 which is based on the number of ships they charter:-

1 - 25 \$2500 26 - 50 \$5000 51 - 100 \$10,000 101 - 200 \$15,000 201 - 300 \$20,000 Above 300 \$25,000 (maximum)

For companies joining the scheme, the subscription fee is pro-rata calculated for the remainder of the year. Additionally, members pay \$100 per report they access.

For ship owners participating in the CDI Marine scheme, there are no subscription fees to pay CDI, they must however complete the Annex B document, controlling propriety and distribution of the Ship Inspection Report.



Terminal company members of CDI-T may have access to ship reports to down load Berthing Information Reports (BIR). These concise reports provide all relevant inspection data on aspects of a ship's operation and equipment necessary for the terminal to perform vetting analysis of ships visiting the terminal. The fees are:

- Joining fee, inclusive of 50 reports is \$2500
- Subsequent year subscriptions are based on the previous year accesses, the maximum being \$10,000 and minimum fee of \$1000

Non-chemical companies with a legitimate interest in the operation and technical condition of a ship may apply to be a non-voting associate participant of the Foundation. The participation allows the applicant electronic access to Ship Inspection Reports. The application is subject to verification and pending consultation with the ship owning associations the Executive Board may approve or reject the application. The fees are:

- Annual subscription is \$1000
- Cost of access (per report) is \$100

Ship Inspection

The aim of the Ship Inspection Report (SIR) is to give an accurate assessment of the ship at the time the inspection is carried out. The SIR is essentially a quality assessment of the ship, its operations and personnel which also incorporates essential aspects of safety and environmental protection. The SIR does not attempt to pass or fail the ship.

Compliance with statutory, recommended and desirable items is identified within the SIR. Observations to all negative answers are listed in the Inspection Summary. The Inspector may additionally remark on any answer or section deserving further expansion and on any conditions or occurrences observed during the inspection which were contrary to safe working practices. Inspectors are encouraged to document positive items and best practices that are noted onboard, as well as items that have been corrected prior to completion of the inspection.

Ship Inspectors are automatically appointed by CDI Mechanical Rotation System (MRS) and inspection requests must be made via the website facility at: www.cdi.org.uk

Consecutive inspections of the same ship with the same Inspector are not permitted where the technical management of the vessel has remained unchanged. This includes occasions when an Inspector has carried out a "pre-inspection" on the vessel prior to the vessel undergoing a CDI inspection.

Prior to the inspection taking place, the Ship Owner should enter the ship's HVPQ to the database. HVPQ data need only be entered once and can be periodically updated by the Ship Owner at any time. SIR's of ships having no HVPQ, cannot be accepted onto the "active" database and will remain inaccessible until such time as the HVPQ data is entered. In cases where no HVPQ data has been entered, arrangements can be made through CDI Administration for entry of the data.

The time taken for inspection can be greatly reduced by the state of preparedness of the ship. The latest edition of the SIR should be on board and, as applicable, HVPQ and (self-Inspection (SI) questions should have been completed.

An inspection shall not normally be carried out during the night when the ship's key personnel may be expected to take a period of rest.

The only exception to this is when special arrangements have been made with the Ship Owner and the Master prior to the Inspector boarding the ship.

On a rare occasion, a vessel may be inspected while not conducting cargo operations. In these cases, the validity of the report is limited to 3 months. For the purpose of CDI, inspection operations are defined as: "Transfer of Cargo and Tank Cleaning".

The report is now valid for twelve months, after which it is archived. If at any time within the twelve month period, the technical management of the ship is transferred, the ship operator having the agreement with CDI is required to advise CDI and, subject to verification of the ISM Certification and written confirmation from Class, the report may be prematurely archived.

The full procedures for CDI ship inspection and the Marine Inspection Department are available on the website at: www.cdi.org.uk

Motivated Reasons

Ship Operators are reminded of the "motivated reason" clause in the CDI-Marine operating manual, in particular if a ship operator feels that abusive terms and conditions are being used regarding the cost of a CDI inspection this can be brought to the attention of CDI as a "motivated Reason", prior to agreeing to the inspectors terms and conditions. In situations where the ship operator feels there is a claim for motivated reasons they should contact CDI directly at cdimid@cdim.org.

CDI Marine Crew Matrix Harmonisation Functionality

The "ship operator crew matrix" on both the CDI database and the SIRE database is harmonised. Following close cooperation between CDI and SIRE, a simplified solution to updating the crew matrix was established and is now currently available to all CDI Marine ship operators

The CDI-Ship Inspection Reports

Liquefied Gas Carrier, 7th Edition, Rev CDI 7/11

Chemical Tanker, 7th Edition, Rev CDI 7/11

'Harmonized' Vessel Particulars Questionnaire, 2nd Edition, Rev CDI 6/08

The 8^{th} Edition Ship Inspection Reports are scheduled to be published towards the end of 2014

CDI Terminals

The Inspection of Bulk Liquid Chemical Storage Terminals

Global chemical companies are supporting Sustainable Development and living with the principles of Responsible Care®. It is an initiative to continuously improve their Health, Safety, Environmental and Security (HSE&S) performances ethically and demonstrate the sound management of chemicals. It also takes into account activities beyond the facility fence line to incorporate the entire value chain.

Global chemical companies are supporting Sustainable Development and living with the principles of Responsible Care®. It is an initiative to continuously improve their Health, Safety, Environmental and Security (HSE&S) performances ethically and demonstrate the sound management of chemicals. It also takes into account activities beyond the facility fence line to incorporate the entire value chain.

As businesses explore into new dimensions, the need to store chemical products in third party tank farms and terminals is essential. The reputation of a chemical company is reliant on the HSE management systems and infrastructure of storage tanks and terminals. Hence, the chemical companies worldwide need to ensure HSE&S commitment of their contracted tank farms and terminals which culminates in a pressing need to engage independent third party inspection to meet the mandatory company minimum safety requirement.

CDI-T is the global independent inspection scheme for bulk liquid chemical storage terminals. The inspection protocols were developed and are maintained by a Technical Committee with representatives from the chemical industry and terminal operators. CDI-T provides a systematic inspection system to provide quality, safety, security, health and environmental performance data on bulk liquid chemical storage terminals. The information, which is available in a standardized format, is non—judgmental and can be consulted by member chemical companies on a worldwide basis.

Membership

Chemical Company members pay a single annual subscription fee for unlimited access to the database. The annual fee is calculated on the number of inspected sites with which the company holds storage contracts. For example: in 2014, the unit cost is \$480, therefore for a company storing at 5 inspected sites, the annual fee is \$2,400.

An introductory membership fee for new chemical company members of CDI-T would be an initial annual subscription of \$480 for the first year.

Terminal companies pay a one off joining fee of between \$1000 and \$5000, based on the capacity of chemical storage available. A terminal with less than 100,000 cbm would pay a single joining fee of \$1000 for a lifetime membership as long as the terminal maintains an active report in the CDI-T database, which is valid for 36 months. Terminal companies must complete the Annex B agreement when joining CDI-T, controlling propriety and distribution of the Inspection Report.

Terminal Inspection

The aim of the Terminal Inspection Report (TIR) is to give an accurate assessment of the terminal at the time the inspection is carried out. The TIR is essentially a quality assessment of the terminal, its operations and personnel, which also incorporates essential aspects of safety and environmental protection. The TIR does not attempt to pass or fail the terminal.

The time taken for inspection, is a very variable factor mostly influenced by the size of the facility, the scope of activity, the terminals preparedness for the inspection, however the better prepared a terminal is can greatly reduce the time for the inspection. The latest edition of the TIR should be at the site and, as applicable, TPQ and SI questions should have been completed.



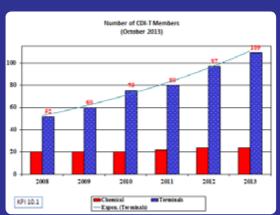


Questions are answered "Yes" or "No", with provision for a "N/A" answer for items which clearly do not apply to the terminal. A "No" answer to a question does not necessarily imply that the terminal is not in compliance. All "No" answers are supported with an observation explaining the reason and/or circumstance that exists.

On completion of the inspection, the Inspector will hold a closing meeting with the Manager. At the closing meeting the Inspector will provide the Manager with a copy of the Report Summary containing the Inspector's observations and remarks. The Inspector shall not make any recommendations for the correction of any items marked as "No" in the report, nor indicate to the Manager, or any other person, the standard of the terminal or the possible eventual outcome of the inspection.

The report is valid for a period of 3 years, after which it is archived. If at any time within the 3 years, the ownership of the terminal changes, the new management is required to provide a written confirmation, committing the terminal company to continued compliance with CDI-T. The confirmation will be reported to the EB; failure to provide such conformation could result in the EB prematurely archiving the report(s).

The Chemical Distribution Institute Terminal inspection scheme continues to expand, with the scheme achieving over 100 Terminal Company participants earlier in 2013; equating to over 200 international CDI-T inspection reports available for CDI chemical companies to access. CDI is delighted with the growth within the terminal inspection scheme; it's a clear demonstration that the foundation is listening to its members requirements and meeting the demands of the chemical industry.



The CDI Terminal Inspection Reports

TIR – Management Questionnaire 5th Edition Rev CDI-T, 1/12

TIR — Technical Questionnaire 5th Edition Rev CDI-T, 1/12

The 6th Edition of the Terminal Inspection Report Questionnaires, supported by a next generation database will be released in 2014.

CDI-T Attestation

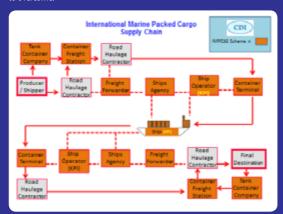
Following completion of a CDI-T inspection the terminal will be issued with a CDI-T Attestation document. These authenticated documents are issued by CDI Administration and serve as verification of the terminal having undertaken the CDI-T inspection.

IMPCAS

International Marine Packed Cargo Audit Scheme

Marine accidents and container inspection results show that the main causes and deficiencies appear to stem from the incorrect actions of the cargo originator. Every element of the supply chain is at risk from careless handling and security breaches outside of their immediate control. Both chemical companies and logistics companies need confidence in the supply chain and assurance that the package will be handled and forwarded correctly and securely throughout the distribution process, and also confidence that the package will not create risk whilst in their custody.

For the chemical industry it is simple logistics of acquiring bulk shipments of feedstock, from which to process and manufacture the end product, which is then packaged in the company brand and shipped to the customers via approved supply chain partners. The problem is that logistics are not the core activity of the chemical industry and correcting the inefficiencies can unintentionally breach the security of the supply chain. Additional to this are the constantly changing patterns in world trade as technology and development moves from West to East, creating new efficiency problems to overcome.



Feedstock products are purchased, stored and shipped in bulk through secure terminals on specialist ships, all dedicated to the trade on behalf of a few. This contrasts sharply with the reality of shipping the end product through a marine packed cargo supply chain of which the chemical industry occupies less than 5%.

International Conventions set the standards for ships and mandate the packaging and labelling of dangerous goods. These International Conventions are supported by national regulations and regional industry schemes aimed at ensuring safe and secure marine shipments, but the significant changes of the custodian in the supply chain bring high risks that must be managed.

Recognising that the logistics of end product distribution is not their core activity, lead some chemical companies to improve performance by streamlining the number of supply chain partners. So from using numerous partners in different global regions, contracts are sought with one or two partners who can offer a 2PL global service. (A typical 2PL would be shipping lines which own, lease or charter their ships; airlines which own, lease or charter their planes and truck companies which own or lease their trucks).

Under the 2PL agreements, partners will arrange to collect, consolidate, package and ship the cargo to the end customer. The risk in this exercise is that few supply chain companies are big enough to undertake global distribution and it requires sub-contracting to fully meet the contractual obligations. The business environment created leads to mergers and acquisitions amongst supply chain companies, all striving to increase market share and provide the elusive truly global service.

The current trend is to completely remove the logistics department from within the chemical company and assign the function to a 3PL partner. (A 3PL provides outsourced or "third party" logistics services to companies for part or sometimes all of their supply chain management function). The 3PL partner will integrate with the production activity of the company to manage the supply chain in entirety, from supply and delivery of production chemicals right through to the distribution of the end product to the customer. The commercial performance of this utopia is entirely reliant on subcontracting.

Whilst improving performance, 2PL and 3PL solutions dramatically increase the level of subcontracting and this can easily compromise the security-efficiency balance of the supply chain. Having achieved the desired performance of the supply chain, the efficiency is now reliant on managing the security of every shipment.

An important, though often overlooked fact is that whilst outsourcing may delegate the activity, in no way does it transfer responsibility or defer liability. The chemical company has a duty of care to ensure systems are in place to manage the security of the supply chain

HSE regimes and ISO registration indicate compliance with the regional HSE schemes and the Quality Standards, but these are often non-specific to dangerous goods. ISO registration provides certification, but not the YES/NO answers necessary for statistical risk analysis. Comprehensive risk assessment requires consistent audit data, but conducting audits calls for considerable investment and often creates an unnecessary burden upon the distribution industry, the solution is a joint industry initiative. What is equally important is to recognise that marine packed cargo is a global activity, it is therefore necessary to have a global standard that can be applied on an international basis.

By utilising an independent report, the cost saving is substantial and the burden of multiple audit is avoided. IMPCAS provides an international standard for consistent data, against which risk assessment processes can be applied to the entire supply chain; measuring not only safety and quality performance, but also compliance with the international regulations.

Security is a major issue for the distribution industry. IMO, US Customs, European Commission and others have either developed or are actively developing security regimes for Ports and Ocean Carriers. Whilst x-ray machines and advance declarations may substantially improve security, the question has to be asked as to who will monitor compliance in the far out regions from where the container originates? Marine packed cargo is a global activity, it is therefore necessary to reach the very depths of the supply chain with an international standard that can be applied on a global basis. Using an international standard to provide consistent data, a verification process can be adopted by all parties and applied to the entire supply chain. IMPCAS protocols contain detailed chapters on security and the combined scheme provides a valuable tool to effectively monitor security across the global supply chain.

Recognizing that marine packed cargo is not limited to the chemical industry, the IMPCAS scheme is therefore open for participation by non-chemical companies. Access to audit reports will be extended to international authorities with a vested interest in verifying cargo security and the audit protocols can be rapidly amended to include new elements.

The IMPCAS Audit Report

The aim of the Audit Report is to give an accurate assessment of the site at the time the audit is carried out. The report is essentially a quality assessment of the site, its operations and personnel, which also incorporates essential aspects of safety and environmental protection. The report does not attempt to pass or fail the ship/site.

Questions are to be answered "Yes" or "No", with provision for a "N/A" answer for items which clearly do not apply to the ship/site. A "No" answer to a question does not necessarily imply that the ship/site is not in compliance. All "No" answers are supported with an observation explaining the reason and/or circumstance that exists.

On completion of the audit, the auditor shall hold a closing meeting with the Manager (or his representative). The auditor will provide the Manager with a copy of the Report Summary. The Manager will be requested to sign the report summary. The auditor shall neither make any recommendations for the correction of any deficiencies nor comment on the condition of the ship/site or the standard of operation.

The report is valid for a period of 3 years after which it is archived. If at any time within the validity period, the Technical Management of the ship or the ownership of the site change, the report will archive.

The Shipping Company KPI Verification Audit Process Explained

This has been developed in cooperation with INTERMANAGER through the KPI Association. The Shipping Company Key Performance Indicators (KPI's) developed by The KPI Association sets out 33 Key Performance Indicators (KPI's).

Full details of all the Key Performance Indicators and how these should be calculated are available from the Shipping KPI Web site at the following link https://www.shipping-kpi.org/

However: CDI's chemical participants only identified "23" of those KPI's for CDI audit purposes, which will enable the CDI members to initiate risk mitigation steps commensurate with the risk associated to the specific cargo they move in ocean containers whilst meeting the chemical industries Responsible Care Requirements.

The KPI's which will only be used for CDI audit purposes are as follows:

KPI001	Ballast water management violations	KP1020	Navigational incidents
KPI004	Cargo related incidents	KPI021	NOx efficiency
KPI005	CO2 efficiency	KP1022	Officer retention rate
KPI006	Condition of class	KP1023	Officers experience rate
KPI007	Contained spills	KP1024	Operational deficiencies
KPI010	Dry docking planning performance	KP1026	Port state control deficiency ratio
KPI011	Environmental deficiencies	KP1027	Port state control detention
KPI012	Failure of critical equipment and systems	KP1028	Releases of substances
KPI013	Fire and Explosions	KP1029	Security deficiencies
KPI014	Port state control performance	KP1030	SOx efficiency
KPI017	Lost Time Injury Frequency	KP1032	Vessel availability

KPI019 Navigational deficiencies

KPI Audit Objective

The CDI KPI verification audit sets out to verify the accuracy of the Ship Operators KPI values and therefore provide the chemical companies with a risk management evaluation tool.

KPI Audit Report Validity:

The validity of a CDI KPI Audit report will be 12 months from the date of completion of the audit, as the audit is based on the previous quarter KPI values.



KPI Audit Process

This new CDI KPI verification audit replaces the CDI "Ship" and "Shipping Company" audit protocols, the CDI KPI audit process utilises the verification of the Shipping Company KPI values to verify the operation of the Shipping Company and the ships in Technical Management. Therefore, the CDI KPI Audit process is an office audit only and will not involve the inspection of the ships in technical Management.

The shipping company to be audited will have submitted its performance data regularly (each quarter) to the Shipping KPI web site (www.shipping-kpi.org). There is no fee to the ship operator to do this.

Requesting a CDI/KPI Audit

CDI has over 70 accredited KPI auditors located globally, the contact details for these CDI accredited inspectors are listed on the CDI web site at www.cdi-mpc.org The Ship Operator wishing to complete a CDI KPI verification audit should contact the CDI inspector of choice. At the request of the Shipping Company to the CDI auditor, the CDI auditor will prepare an audit file by preferably downloading the owners KPI values for the last quarter for the ships in technical management, from the shipping KPI web site, into the CDI KPI Audit Offline client software.

The CDI auditor will then visit the shipping company for the KPI audit at a pre-arranged date and time to verify the accuracy of the Container shipping companies supplied KPI data. The shipping company should be prepared for the audit: On the day of the KPI audit the CDI auditor will randomly select from all those ships in Technical Management either a 10% sample or two ships, whichever is the greater. The CDI Auditor will verify each performance Indicator (P.I.) for the sample vessels. The auditor's software will calculate each data entry and the resulting KPI's either highlighting any differences to the ship operators submitted performance data which was submitted into the Shipping KPI web site or verifying the accuracy of the KPI values.

KPI Audit closing meeting

On completion of the audit, the auditor shall hold a closing meeting with the Ship Operator (or his representative).

Processing the KPI Audit Report

On completion of the KPI audit, the auditor will provide the ship operator with a detailed audit report and enter the KPI audit data, into his computer terminal. The ship operators KPI% values and the audited KPI% values will be uploaded into the CDI IMPCAS KPI database usually within 24 hours in accordance with the procedures governing control of the IMPCAS database system.

Certification

A certificate of attestation will be issued by CDI to the Shipping Company on completion of the CDI KPI Verification Audit.

The benefits of a KPI Audit to a Container Shipping Company

- The establishment within the company of industry recognised and standardised Key Performance Indicators (KPI's)
- The ability to quantify and easily track the KPI values and therefore numerically measure continuous improvement
- The ability to benchmark (anonymously) against other container shipping companies via the KPI association web site
- The ability to be able to numerically demonstrate excellence within the shipping company by virtue of the measurable KPI values
- An independent CDI verification audit of the container shipping companies calculated KPI values, promotes business relationships between the container shipping company and the chemical companies who are shipping their products in container form and who are seeking participation in the CDI IMPCAS (KPI) scheme from the container shipping companies, as part of the chemical companies risk management (Responsible Care) commitment and process.

Membership

Members pay a single subscription fee for access to all the modules of the database. There are three categories of membership:

- 1. Full Voting member (Annual fee: \$10,000)
- 2. Non-Voting member (Annual fee: \$5,000)
- 3. Limited access to a single database module (Annual fee: \$2500)

For supply chain companies participating in IMPCAS, there are no subscription fees to pay CDI, they must however complete the Annex B document, controlling propriety and distribution of the Audit Report.

The IMPCAS Audit Reports:

Container Port Terminal Audit Report 1st Edition CDI IMPCAS 2012 Rev1

Container Freight Station Audit Report 2nd Edition CDI IMPCAS 10-2012 Rev2

Ship Agent Audit Report 2nd Edition CDI IMPCAS 10-2012

Freight Forwarder Audit Report

2nd Edition CDI IMPCAS 10–2012 Rev2

Tank Containers Audit Report
3rd Edition CDI IMPCAS C 11/2010

The 4th edition of the tank container audit report will be released in 2014.

The Services of CDI

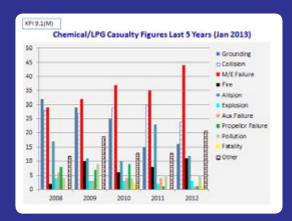
In achieving the vision of being the global source for data, information and advice specific to marine transportation and storage of chemical products, CDI offers accompanying services to all participants.

World Fleet Average Performance

Through the powerful ISIS database, CDI produces the World Fleet Average Performance figures for CDI-M inspections. This allows ship owners to bench mark the performance of their ships against the world fleet average. Via the website facility, tanker owners can access the "Ship Performance Calculator" to bench mark performance for each section and inspection category of the Ship Inspection Report. For 2013, the results can now be printed and saved.

Casualty data and statistics

Casualty data is retained for all chemical, LPG tankers, and container ships. This data is available to members on accessing the ship inspection and audit reports. Annual statistics are produced for the world fleets, as illustrated below. More detailed and specific analysis can be provided on request to CDI Administration.



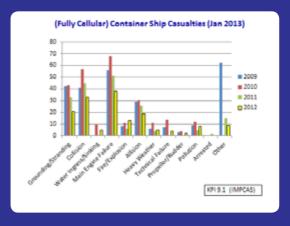
Transport and Storage Consultants

CDI Inspectors and Auditors are professional people, independent from supply chain companies, who achieve the most rigorous of training, examination and performance evaluation. Many of these offer consultancy services on a wide range of supply chain activities. Details can be searched on the website tab: "Consultancy Services".

Training

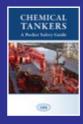
CDI and IMPCAS accreditation training courses are open to all candidates. The courses conducted by Warsash Maritime Southampton and the Centre for Maritime and Industrial Safety Technology (C-MIST) offer unique high level training in dangerous goods operations and inspection techniques. For participants of CDI, both Warsash and C-MIST will construct and deliver specific courses to meet the customers' requirements.

On request, CDI will provide short specific training on the CDI schemes and deliver presentations to seminars and company events for all participants. Only charges for travel and accommodation will be made.





Publications



Chemical Tankers: A Pocket Safety Guide

This pocket sized CDI book covers basic tanker safety practices for crewmembers who are serving or about to serve on chemical tankers. The booklet provides a good introduction and familiarisation to Tanker practice, terminology and standards. It is not intended as a detailed operational guide but is aimed at personnel with little or no experience.

The book costs £15.00 and is available from our publishers (Witherby Seamanship www.witherbyseamanship.com tel: +44 (0) 1506 463 227. (10% discount for CDI chemical company members — use coupon code CD10)



The CDI Bulk Liquid Chemical Handling (BLCH) Guide

This publication is a straightforward, comprehensive and practical guide that ranges from the basic design and layout to the continued safe and efficient operation, maintenance and management of the typical chemical tank terminal This publication is not designed to replace existing standards, but to provide complementary information for anyone involved in or responsible for managing this type of facility. It is designed to be consistent with, but not a substitute for, local or international regulations and requirements.

To order contact the Publishers Witherby Seamanship www.witherbyseamanship.com



Best Management Practices for Protection against Somalia Based Piracy (BMP4)

The purpose of BMP4 is to assist ships to avoid, deter or delay piracy attacks in the designated High Risk Area as defined within BMP4. Adopting BMP guidelines remains the best preparation against piracy for vessels traversing the Gulf of Aden and the Indian Ocean.

BMP4 has wide industry support including the CDI Foundation and can be downloaded free of charge from www.cdi.org.uk



CDI Best Practice regarding the use of Nitrogen

The purpose of this document is to provide the chemical industry best practice recommendation for consideration during the inerting process and future revisions of legislation and industry guidelines. In addition, this document is directed towards any party involved with tank ships carrying chemicals, including, but not limited to, vessel personnel, shore personnel, surveyors, inspectors and charterers.

The booklet can be downloaded free of charge from the CDI web site www.cdi.org.uk



Ship to Ship Transfer Guide

The Guide is aimed at providing advice for Masters, Marine Superintendents and others, such as STS service providers and transfer organisers, who may be involved in the planning and execution of STS operations. Particular attention is given to the effective planning of operations and aspects that include risk assessment, ship compatibility and the management of workloads to minimise fatique.

To order contact the Publishers Witherby Seamanship www.witherbyseamanship.com

Databases provided by Pharox Automatisering B. V.

Pharox is a market leader in web-based database systems for accreditation, inspection, audit, assessment and certification processes.

Pharox has extensive experience in supporting companies, non-governmental organizations and governmental organizations with their assurance processes. Assurance covers all processes that organizations execute to ensure Health & Safety, Quality and Integrity for their company/organization, industry, society or environment.

Typically these processes include accreditation, inspection, audit, assessment and certification. These processes come together in extensive databases that have to communicate with the different stakeholders. Security of data and access management is a critical element to protect the sensitivity of the information.

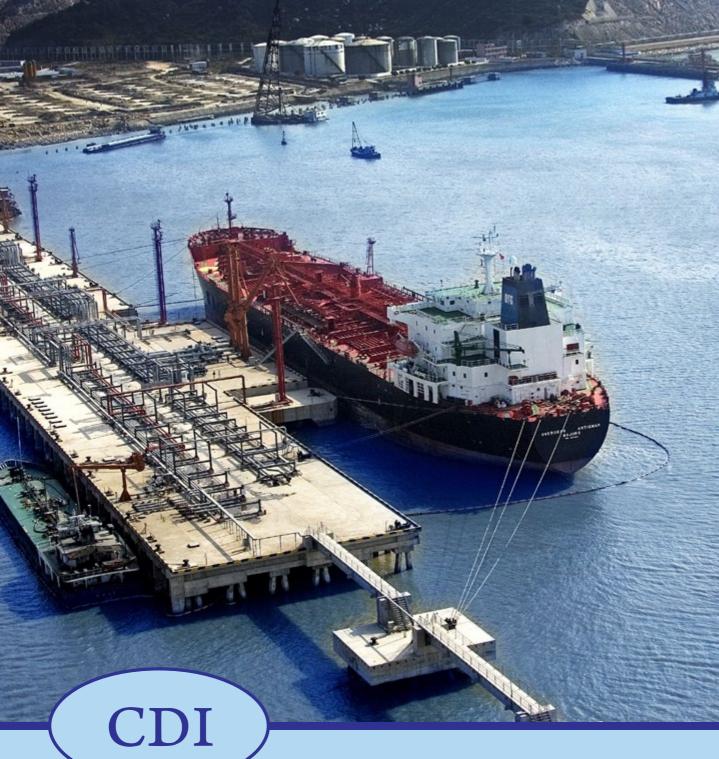
Pharox provides end-to-end database applications and services that enable the described processes. The service includes:

- Consulting
- Database architecture
- Database development
- Communication (e-mail, sms, VPN, internet etc.)
- Client software development
- Hosting services
- Helpdesk services

Bespoke IT solutions







THE STICHTING CHEMICAL DISTRIBUTION INSTITUTE

REGISTRY OF THE CHAMBER OF COMMERCE No. 41134185, THE NETHERLANDS REGISTERED IN ENGLAND & WALES COMPANY NO FC018383 BRANCH No. BR002806

REGISTERED OFFICE:

ST MARTINS HOUSE BUSINESS CENTRE, OCKHAM ROAD SOUTH, EAST HORSLEY, SURREY. KT24 6RX, U.K.

Chemical Distribution Institute

St Martins House Business Centre Ockham Road South, East Horsley Surrey KT24 6RX

tel: (44) 1483 281 268 **fax:** (44) 1483 285 474

e-mail: chemdist@cdim.org **website:** www.cdi.org.uk