

A large green and white chemical tanker ship is shown from a low-angle perspective, sailing on the ocean. The ship's bow is prominent, with two large green cylindrical structures (likely chemical storage tanks) visible. The ship is illuminated by the warm, golden light of a sunset, which reflects on the water and the ship's hull. The sky is a mix of blue and orange, with some clouds. In the background, distant landmasses are visible on the horizon.

CDI

The First 25 Years
Chemical Distribution Institute



CDI The First 25 Years

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CDI

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THE STICHTING CHEMICAL DISTRIBUTION INSTITUTE
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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 Stichting Chemical Distribution Institute is a chemical industry organisation operating on an international basis and managed by its chemical company members. CDI is responsible for the inspection and audit of the global supply chain for the transport and storage of bulk and packaged chemicals. CDI is not a trade association; it is non-profit, non-commercial and free from political influence.

Having being established in 1994 CDI has successfully provided the marine assurance requirements for the chemical industry for over 25 years.

All CDI inspection schemes, audit 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 as well as demonstrates the benefits from participation.



Certificate No.
FM66807

Nothing stops a CDI Inspector: (An inspector battling through snow to an inspection in Vancouver)



Year Book Acknowledgements:

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M & S Logistics; Marflet Marine; Marnavi Spa; M H Simonsen; MSI Shipmgt; Oiltanking Terneuzen; Oman Shipmgt; Pamsa Logistica;
Sener Petrol; Tepsa Spain; Thenamaris LNG; Unigas; V Ships France; Victoria Shipmgt; Vopak Terminals

Chairman Forward

The concept of CDI was established just over 25 years ago by a small group of founding companies including, Agility, BP Chemicals, The Dow Chemical Company, ExxonMobil and Shell Chemicals.

CDI was formally incorporated on the 10th January 1994 and registered with the Dutch Chamber of Commerce as the “Stichting Chemical Distribution Institute”. At a meeting held on the 3rd August 1994, a further 10 companies joined the institute and launched it for marine activities.

CDI’s primary objective was to establish an inspection system which would provide data on chemical and chemical gas carriers, which participating chemical companies could use when making their own individual assessment of a ship’s suitability. To ensure this information was provided in a standardised, un-biased format for chemical companies to use around the world, CDI used its own trained and accredited inspectors.

CDI has since grown into a globally recognised institute consisting of 64 chemical companies and developed additional systems for risk mitigation, including the “CDI-Terminal Inspection Scheme” and the CDI “International Marine Packed Cargo Audit Scheme” (IMPCAS).

CDI has continued to enhance its services across all areas, driven by the needs of the industry and supported by the dedication, skill and expertise of its participants. It is now a leader in providing information on safety, security and quality performance assurance within the field of marine transportation and storage for the chemical and LPG industry. The organisation also contributes significantly to industry safety through its many publications and best practice guides for seafarers, and ship and terminal operators.

A main asset of CDI has always been its willingness to work and cooperate with all stakeholders involving them at all levels within the organisation and in the development of its inspection and audit programs. Recent industry incidents with containerised chemicals causing explosions and fires onboard ships, demonstrate the need for further improvements, and CDI is ready to work with the industry with audit schemes such as IMPCAS.

With its skilled employees and the strong participation from its members, I am confident that the future for CDI is bright.



Capt. Jan Antonsson

Global Maritime Technical Manager Chemicals
Shell International Trading and Shipping Company Limited
(Chairman of the CDI Board of Directors)
(Chairman of the CDI-Marine Executive Board)

The CDI logo consists of the letters "CDI" in a bold, serif font, centered within a light blue oval. The oval is set against a dark blue background that spans the bottom of the page.

CDI

Introduction to the Chemical Distribution Institute

General

CDI is very much a global institute with inspectors located globally and CDI is recognised worldwide.

The CDI Foundation is a non-profit making and non-commercial organisation funded by the chemical industry; CDI's core membership currently consists of 64 international Chemical Companies.

CDI was created by the chemical manufacturing industry, for the chemical industry in 1994 and over the years has gone from strength to strength; at this time CDI has 64 chemical companies using CDI's services. CDI is here to serve the chemical company members of CDI and provide their inspection and audit needs in order to provide them with cost effective systems for risk assessment using the best chemical and LPG knowledge available.

The objectives of CDI are set out in our Quality Policy Document which includes;

- *To constantly improve the safety, security and quality performance of marine transportation and storage for the chemical industry.*
- *Through cooperation with industry and centres 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.*

Over the last few years CDI has produced a number of technical publications drawing upon the wealth of knowledge and expertise from all participating companies including the Chemical Companies, Terminal Operators, Ship Operators and Logistic Service Providers.

These publications include;

- *"Bulk Liquid Chemical Handling Guide"*
- *"Chemical Tankers – A Pocket Safety Guide"*
- *"CDI Guidelines for Liquid Chemical Hose Management"*
- *"CDI Best Practice Regarding the Use of Nitrogen": (An Information paper)*
- *"Chemical Tanker Operations for STCW Advanced Training Course"*
- *"The Carriage of Chemicals by Sea-Risk Mitigation"*

These publications ensure the continuing enhancement of the service provided by the CDI to its chemical company participants and a demonstration of compliance with CDI's objectives.

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 the facility to create, edit and interpolate the inspection and audit reports on a 24/7 global basis.

CDI is a Dutch foundation operating from offices in the UK; 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 Boards, 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, technical publications, and the accreditation of inspectors and auditors. The committees are of split representation, their membership being 50% from chemical companies and 50% from the supply chain participants. Additionally, CDI is monitored by its Quality Audit Committee and a Finance Committee.

There are almost 250 global inspectors/auditors across all of CDI's schemes who are accredited by CDI to conduct CDI inspections and audits around the world. In addition to meeting high academic and industry experience criteria, the inspectors and auditors are trained, examined and performance monitored in the field. Training and examination is undertaken by relevant scheme appropriate training facilities such as "Warsash Maritime Academy" in Southampton or "The Centre for Maritime & Industrial Safety Technology Limited" (C-MIST), in Edinburgh UK.

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

CDI is not a trade association; it is non-profit, non-commercial institute; free from political influence. The CDI Foundation is funded by the chemical industry. CDI online databases provide the facility to create, edit and interpolate the inspection and audit reports on a 24/7 global basis.

The permanent staffing of CDI consists of 5 persons; reporting to the General Manager are a The Technical Manager (Marine); Technical Manager (Logistics), an Accounts Administrator and an Accreditation Administrator. The Board of Directors elected from the chemical company membership oversees the overall activity of the Foundation.



CDI has close relationships with; International Tank Container Association (**ITCO**); American Chemistry Council (**ACC**); Association of the Brazilian Chemical Industry (**ABIQUEM**); Association of International Chemical Manufacturers (**AICM**); Chemical and Allied Industries' Association (**CAIA**); Bulk Liquid Industry Association, (**BLIA**); European Petrochemical Association, (**EPCA**); European Chemical Industry Council (**CEPIC**); China Petroleum and Chemical Industry Federation (**CPCIF**); DA-Desk; European Commissions Quality Shipping Program, (**EQUASIS**); Gulf Petrochemical and Chemical Association, (**GPCA**); Green Award Foundation; Indian Chemical Council (**ICC**); The International Cargo Handling Coordination Association (**ICHCA**); International Liquid Terminal Association (**ILTA**); International Independent Tanker Owners Association (**INTERTANKO**); International Parcel Tankers Association (**IPTA**); International Container Handling Coordination Association (**ICHCA**); Oil Companies International Marine Forum (**OCIMF**); Responsible Packaging Management Association South Africa, (**RPMASA**) and The Society of International Gas Tanker and Terminal Operators, (**SIGTTO**).

Memorandums of Understanding

Gulf Petrochemicals & Chemicals Association (GPCA) and CDI are party to a Memorandum of Agreement; it sets out future co-operation 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 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 on-going development of best practice in the chemical marine transportation and storage sector as well as the packed cargo supply chain.

The Indian Chemical Council (ICC) and CDI are party to a Memorandum of Understanding 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.

The American Chemical Council (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 of CDI 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.

Responsible Packaging Management Association South Africa, (RPMASA); and CDI: are party to a Memorandum of Agreement specifically aimed at continuing to promote **Responsible Care®** in the African region as well mutual cooperation in the fields of safety, security and quality performance of marine transportation and storage for the chemical industry.

DA-Desk and CDI are party to a Memorandum of Agreement to cooperate improving the safety and performance of transportation and storage for the chemical marine logistic supply chain, particularly with regards to the shipping agent.

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 and LPG tankers. CDI-M now provides annual inspection reports on the world fleet of chemical and LPG tankers, with over 1000 ship owners with over 5500 ships participating in the scheme. 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 150 major chemical storage terminal companies are participants in the Terminals scheme with over 250 active terminal reports. Over 50 CDI-T Accredited inspectors carry out the detailed management and technical inspections of liquid storage terminals on all continents of the world.

2002, International Marine Packed Cargo Audit Scheme

IMPCAS is potentially the largest scheme of its kind in the world, with around 150 CDI Accredited auditors covering all elements of the scheme, 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.

With over 70 logistic supply chain, companies participating in the audit scheme this is probably the largest marine, LSP assurance system in the world.

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 9001:2015 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 centres 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, its 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 Stitching Chemical Distribution Institute Statutes

Endorsed by the Board of Directors 3rd December 2013 (Free English Translation)

Name. Seat. Duration.

Article 1.

1.1 The name of the foundation is Chemical Distribution Institute and has its registered office in Rotterdam.

1.2 The foundation lasts for an unlimited period.

Article 2.

2.1 The objective of the foundation is to improve the safety, health and environmental aspects related to the transport, storage and transfer of chemical products.

2.2 The foundation does not aim to make a profit.

2.3 The foundation aims to achieve its objective inter alia by:

- a) identification of critical execution aspects, the training of inspectors/auditors and monitoring their status;
- b) cooperation and consultation with those involved;
- c) conducting and promoting of studies and research;
- d) managing data.

Participants and Associated Participants

Article 3.

The foundation admits participants and associate participants.

Article 4.

Participants can be:

- a) any company which is wholly or partly engaged in manufacturing, supplying, trading, shipping, distributing, storing and receiving of chemical products and which in the framework of its activities uses the services of companies engaged in transport, storage and transfer of chemical products, all in the broadest sense,
- b) any company belonging to a category of companies designated as eligible for participation by the Board.

Article 5.

An associate participant can be any company which is wholly or partly engaged in the transport, storage and transfer of chemical products as well as any institution or company belonging to a category of institutions

or companies designated as such by the Board.

Financial Resources

Article 6.

1. The financial resources of the foundation consist of:

- a) annual contributions of participants and associate participants;
- b) the revenue of the foundation's assets;
- c) what the foundation may obtain (receipts) from donation, inheritance, legacy or in any other manner; and
- d) any other receipts.

2. The contribution due by a participant or an associate participant will be fixed by the Board in conformity with the guidelines to be established by the Board in bylaws.

Rights and Obligations of the (Associate) Participants

Article 7.

Participants and associate participants have the rights and obligations resulting from the Statutes, the bylaws and the decisions taken in accordance therewith.

Termination of (Associate) "Participation"

Article 8.

8.1 "Participation" ends:

- a) through dissolution of the participating company,
- b) through written notice of participant effective a date to be set by participant,
- c) through termination by the Board in the event that a participant fails to comply with the Statutes.

8.2 "Associate participation" ends in the same manner as those in which participation ends.

8.3 In case (associate) participant ends his (associate) participation, he continues to be obliged to pay the contribution due for the year of notice. However, in case notice will be given after the first of December in a year, (associate) participant is

also obliged to pay the contribution which he would have to pay in the following year. A contribution on the basis of this paragraph can never be higher than the latest contribution for the (associate) participant as set prior to his notice.

Board

Article 9.

9.1 The Foundation is managed by a Board of Directors, hereafter referred to as "The Board", consisting of at least seven individuals having come of age. If and as long as the number of board members is less than seven, the remaining board members, or the only remaining board member will nevertheless constitute a legally valid board. As soon as possible the Board will appoint new Directors in order to have at least seven Directors. Board members hereafter also referred to as: Directors. The Board determines the number of Directors.

9.2 The Board appoints at least four (4) of its Directors after an election by the participants of at least one person for each position to be fulfilled. A person who will be nominated as Director must be a representative of a participant holding a senior management position and must have the necessary knowledge about, and experience in, policy making and commitment. The Board will propose a person who can be elected by the participants. The election by the participants will take place by electronic postal ballot of all the participants. The result of the election will be announced to the participants and after the announcement the Board may appoint the person as Director.

Further the Board can appoint as member of the Board each Chairman of an Executive Board as referred to in Article 12.

9.3 The Board, from among its Directors, appoints a Chairman and a Treasurer.

9.4 Directors are appointed for three years and may be re-elected by the Board. The Board has to take into account the election process as mentioned in article 9.2. Membership of the Board ends:

- a) if no re-election occurs after the period of appointment has ended;

- b) by termination in writing by the Director;
- c) by death;
- d) if a Director is put under legal restraint (curatele);
- e) by dismissal by the Board; or
- f) by dismissal by the court.

9.5 The Board may consult the participants regarding the following Board resolutions:

1. Extension of the foundation's activity;
2. Change in the foundation's management structure.

9.6 The Board may, at its discretion, consult with the associate participants and participants from time to time.

Article 10.

10.1 The Board is entrusted with the management of the Foundation as well as of the Foundation's assets and equity (vermogen). The Board is entitled to conclude contracts, to buy, alienate or encumber "registergoederen" (exempli gratia goods for the transfer of which the entry in a public register is required) as well as to conclude contracts, by which the foundation commits itself as surety or as several co-debtor, guarantees for a third party or commits itself for the liabilities of a third party.

10.2 The Board represents the Foundation. The Foundation will also be represented by two jointly acting members of the Board.

10.3 The Board is allowed to delegate certain of its powers to other persons, who may hold the title of General Manager, Secretary or any other title as long as there is no confusion with the titles of the members of the Board. A holder of a power of attorney may represent the Foundation with due observance of the restrictions on this authority.

10.4 Only a holder of a power of attorney with the title General Manager may also be delegated powers to act as secretary of the Board. This proxy holder is not a member of the Board.

Article 11.

11.1 Meetings of the Board will be held as often as the Chairman or at least two Directors deem it to be necessary.

11.2 The convocation of the Directors for the meeting will be taken care of by a Director or by a proxy holder, on a notice of at least fourteen days, the day of the convocation and that of the meeting excluded.

11.3 The convocation includes the agenda of the meeting.

11.4 Each Director has the right to have him/herself being represented by another Director at the meeting by written proxy.

11.5 Each Director is entitled to one vote in meetings of the Board.

11.6 Insofar these statutes do not state a larger majority, all decisions can be taken by absolute majority of votes cast.

11.7 Board decisions can - instead of during Board meetings - also be taken in writing, including but not limited to e-mail if:

- a) all Directors have been informed timely and in sufficient detail re the decision to be taken; and
- b) at least four fifths of the Directors have expressed themselves in writing in favour or against the decision to be taken.

Executive Boards

Article 12.

As part of its business the Foundation shall operate a number of schemes, each of which will have its own daily board ("Executive Board"). Members of the Executive Boards will have the title Executive Board Member. The Chairman of each Executive Board will be eligible to be appointed as a member of the Board. The Executive Boards will conduct the day-to-day operation of each relevant scheme within the Foundation. The Board shall adopt regulations in which the tasks of the Executive Boards and formalities regarding the operations of the Executive Boards and their schemes will be elaborated.

Finances Management

Article 13.

13.1 The property of the Foundation is invested as solidly as possible.

13.2 The financial year coincides with the calendar year.

13.4 The Board may appoint a Finance Committee of at least three persons. The Treasurer will be the chairman of the Finance Committee. Each member of the Finance Committee will serve for a period of three years. Only the Treasurer can be re-elected by the Board. The Finance Committee will monitor the financial management on a quarterly basis and report financial status to the Board.

13.5 The Treasurer, within four months after the end of a financial

year, renders account to the Board under forwarding a written statement of the Financial Committee. The approval thereof by the Board discharges the Treasurer for his/her management during the preceding financial year.

13.6 The annual financial statements will be available upon request to each participant.

Bylaws

Article 14.

14.1 All subjects, not being specifically provided for in these Statutes, may be dealt with by the Board in bylaws.

14.2 Such bylaws may not contain clauses which are in conflict with these Statutes and the law.

Amendment of Statutes

Article 15.

The Board may decide to amend the Statutes. The decision to amend the Statutes can be taken by the Board with at least a four fifth (4/5) majority of votes casted in a meeting in which at least four fifth (4/5) of the Board members or their representatives are present or represented. The amendment of the Statutes will be effected by notarial deed. Each Board member is entitled to execute the deed amending the Statutes.

Dissolution and Liquidation

Article 16.

The Board may decide to dissolve the foundation. The decision to dissolve can be taken by the Board with a majority of at least four fifth (4/5) of the votes casted in a meeting in which at least four fifths (4/5) of the Board members are present or represented. The liquidation shall be effected by the Board, unless by the decision to liquidate the foundation one or more legal entity/ies/person(s) is/are appointed. The Board determines the destination of a possible positive balance. This destination has to be as much as possible in accordance with the objective of the foundation.

Concluding Article

Article 17.

The Board decides in all cases not provided for in these Statutes.

Meetings of the Chemical Distribution Institute

Anti-Trust Statement

To insure compliance with anti-trust laws and associated regulations, all participants in any CDI meeting must abide by the guidelines listed below. These guidelines are meant to supplement the anti-trust commitment that is already present in our CDI operating rules. We must stress that these guidelines do not only apply in our meeting, but will apply at any time, whether it is during your evening events, meal times, breaks, or on your way home after the meeting. So, as stated, these guidelines apply to all social gatherings incidental to any CDI meeting. The issues mentioned are a number of examples, and should not be construed as an exhaustive list.

We must all ensure strict performance in areas of oversight and supervision. Any and all anti-trust questions related to any CDI meeting will be brought to the attention of the CDI attorney. During our meetings, we will plan to limit our meeting discussions to the agenda topics, unless the meeting elects to add additional topics during the course of the meeting. A copy of these anti-trust guidelines will be made available to each participant and visitor to any CDI meeting and a copy will be recorded in the minutes of the meeting. We will also endeavor to maintain accurate records of our meetings, and will utilize our agenda to stay on focus, and record minutes and accurately reflect the matters, which occur. Also, prior to any discussions about and/or

presentations by work groups and or committees, we will first describe the purpose and authorities of that particular group. We ask that everyone attending the meetings be vigilant to protest against any discussion or meeting activities which appear to violate this checklist, and ask that you dissociate yourself from any such discussion or activities, and leave any meeting or discussion, whether formal or social, in which they occur.

To further ensure compliance with anti-trust requirements, we insist that you do not, in fact or appearance, discuss or exchange information on prices, production, transportation rates, or market procedures.

Examples of pricing issues that must be avoided include discussions on individual company prices, price changes, price differentials, markups, discounts, allowances, credit terms, and the like. It could also include individual company data on costs, production, capacity, inventories, and sales, as well as industry pricing policies, price levels, price changes, and differentials. Production issues that are off limits include plans of individual companies concerning the design, distribution, or marketing of particular products, including proposed territories and customers, as well as changes in industry production, capacity, or inventories. Discussions on transportation rates must be avoided as well, including discussions of rates or rate policies for individual shipments.

Finally, do not discuss or exchange information on market procedures, including company bids on contracts for particular products and/or services, as well as company procedures for responding to bid invitations. Also avoid matters relating to actual or potential individual suppliers or customers that might have the effect of excluding them from any market or influencing the business conduct of firms towards them.

It is not our purpose to put fear into your minds, but, as CDI is based on a partnership approach between shippers, supply chain service providers and inspectors, we must insure that we abide by the appropriate rules and regulations in order to maintain the total integrity of our organization, as well as to safeguard our finances from the potential liability that could result from the violation of these rules.

As mentioned in the beginning, we ask that each of you remain vigilant, and if you see anyone straying into prohibited areas of discussion, make it a point to stop the conversation, and if unsuccessful excuse yourself from the conversation. As a final note, these are simply examples, and are not intended to serve as an exhaustive listing. If you have any particular concerns or issues, please feel free to take them up with any members of the Board of Directors or the appropriate Executive Board, or with the General Manager of CDI.

CDI The First 25 Year Milestones

Year	Event
1993	CDI established for “CDI Marine” (CDI-M) inspections
1993	1st Edition CDI-Marine Ship Inspection Report published
1994	CDI formally incorporated in Rotterdam Holland as “The Stichting Chemical Distribution Institute” to inspect Chemical and Gas ships.
1994	CDI-Marine was notified to the European Commission, DG IV, by letter dated August 10th 1994
1994	By letter dated September 28th, 1994 XD/10193 the Commission issued a “Comfort Letter” to CDI confirming compliance with competition Law.
1997	2nd Edition CDI-Marine Ship Inspection Report published
1997	“CDI-Terminal scheme” (CDI-T) launched
1997	1st Edition CDI-T Terminal Inspection Report published
1998	3rd Edition CDI-Marine Ship Inspection Report published
2000	4th Edition CDI-Marine Ship Inspection Report published
2000	CDI becomes a data provider to EQUASIS
2000	2nd Edition CDI-T Terminal Inspection Report published
2001	CDI attains ISO 9001-2000 certification
2002	CDI “International Marine Packed Cargo Audit Scheme” (IMPCAS) launched
2002	1st Edition CDI IMPCAS Container Ship Audit Report published
2003	5th Edition CDI-Marine Ship Inspection Report published
2004	1st Edition CDI IMPCAS Tank Container operator audit report published
2004	1st Edition CDI IMPCAS Ship Agent audit report published
2004	2nd Edition CDI IMPCAS Container Ship Audit Report published
2004	3rd Edition CDI-T Terminal Inspection Report published
2005	CDI & “American Chemistry Council” (ACC) enter into MoA for Responsible Care
2006	1st Edition CDI IMPCAS Container Freight Station Audit report published (RCMS)
2006	1st Edition CDI IMPCAS Freight Forwarder Audit report published (RCMS)
2006	CDI introduces “Mechanical Rotating System (MRS) for CDI-Marine inspector nominations
2007	6th Edition CDI-Marine Ship Inspection Report published
2007	CDI launches web based database (ISISWeb7)
2007	4th Edition CDI-T Terminal Inspection Report published
2007	CDI introduces casualty data into CDI-Marine database
2007	CDI-Marine introduces 3 month active reports for “Idle” inspections
2007	2nd Edition CDI IMPCAS Tank Container Operator audit report published (RCMS)
2008	CDI/SIRE Launch Harmonised Vessel Particulars Questionnaire (HVPQ)
2009	3rd Edition CDI IMPCAS Container Ship Audit Report published
2009	CDI attains ISO 9001-2008 ISO Certification
2009	CDI Marine provides direct links to National Oceanic and Atmospheric Administration’s (NOAA) CAMEO Chemicals database
2009	CDI Marine introduces tiered inspection program for Chinese coastal domestic shipping
2010	CDI-Marine casualty database linked to CDI-Marine database
2010	CDI & Indian Chemical Council enter into MoA
2011	7th Edition CDI-Marine Ship Inspection Report published
2011	CDI-IMPCAS launches KPI Office audit for container companies
2011	CDI Launches new ISIS-XI database to support CDI-T
2011	Crew Matrix facility introduced into CDI-Marine
2012	5th Edition Terminal Inspection Report published
2012	CDI-Marine online Crew Matrix harmonised with SIRE Crew matrix with import/export facility
2012	1st Edition CDI IMPCAS Container Port Terminal audit report published (RCMS & C-TPAT)

Year	Event
2012	2nd Edition CDI IMPCAS Container Freight Station Audit report published (RCMS)
2012	2nd Edition CDI IMPCAS Ship Agent audit report published
2012	2nd Edition CDI IMPCAS Freight Forwarder Audit report published (RCMS)
2012	CDI publishes “Best Practice regarding the use of Nitrogen”
2012	CDI-Marine active report period reduced from 13 months to 12 months
2012	Multiple active SIR's for one ship introduced in CDI-Marine
2012	CDI Publishes “Bulk Liquid Chemical Handling Guide for Plants, Terminals, Storage and Distribution Depots” (BLCH)
2012	CDI & “Gulf Petrochemicals & Chemicals Association” (GPCA) enter into MoA
2013	CDI publishes “Chemical Tankers a Pocket Guide”
2013	CDI & “China Petroleum & Chemical Federation” (CPCIF) enter into MoA for Responsible Care
2013	CDI-Marine launches email alert for charterers indicating when a report is prematurely archived; new additions to ship or document files, crew matrix updated, or when a new report becomes active
2013	CDI endorses “Best Management Practices for Protection against Somalia Based Piracy”
2013	OCIMF, CDI, SIGTTO & ICS publish “Ship to Ship Transfer Guide for Petroleum, Chemicals & Liquefied Gases”
2014	CDI publishes “Guidelines for Liquid Chemical Hose Management”
2014	CDI & “American Chemistry Council” (ACC) update their MoA for Responsible Care
2014	HVPQ 5 launched
2015	8th Edition CDI-Marine Ship Inspection Report published
2015	6th Edition CDI-T Terminal Inspection Report published
2015	CDI-Marine launches import capability of XML “Self Inspection Document” (SID) for ship operators
2016	CDI amends night time inspection procedures
2016	CDI & “Responsible Packaging Management Association of Southern Africa” (RPMASA) enter into MoA
2016	CDI & “DA-Desk” enter into MoA regarding IMPCAS audit information
2017	CDI Attains ISO 9001-2015 Certification
2017	CDI-Marine launches enhanced benchmarking for ship operators linked directly to the ISIS database
2017	CDI-IMPCAS Launched in African continent
2017	CDI-T launches “Sustainability” screening capabilities for chemical companies
2017	CDI-Marine ceases conducting pre-delivery inspections
2017	OCIMF & CDI publish “Recommendations for Oil & Chemical Tanker Manifolds”
2018	CDI publishes “Chemical Tanker Operations for STCW Advanced Course”
2018	CDI introduces new SIR status for “Terminated” Inspections
2018	CDI becomes GDPR compliant
2018	CDI-Marine launches real time benchmarking facility for chemical companies
2018	CDI endorses “Best Management Practices to Deter Piracy and Enhance Maritime Security in the Red Sea, Gulf of Aden, Indian Ocean and Arabian Sea (BMP5)”
2018	CDI endorses “Global Counter Piracy Guidance for Companies, Masters and Seafarers”
2018	CDI-Marine introduces Crew Matrix audit trail
2018	CDI-Marine launches editable fleet list in Annex B ship operator agreement
2019	9th Edition CDI-Marine Ship Inspection Report published
2019	7th Edition CDI-T Terminal Inspection Report published
2019	CDI publishes “Packaged Chemicals by Sea – Risk Mitigation”
2019	CDI-Marine launches charterers email alert for a “Terminated inspection”
2019	CDI transitions CDI-M & CDI-T inspector software to a web based service
2019	CDI-T launches real time benchmarking facility for terminal operators and chemical company participants
2019	CDI-T launches digitalised (voluntary) Sustainability self-inspection capability for terminals and chemical companies

The Chairmen of CDI

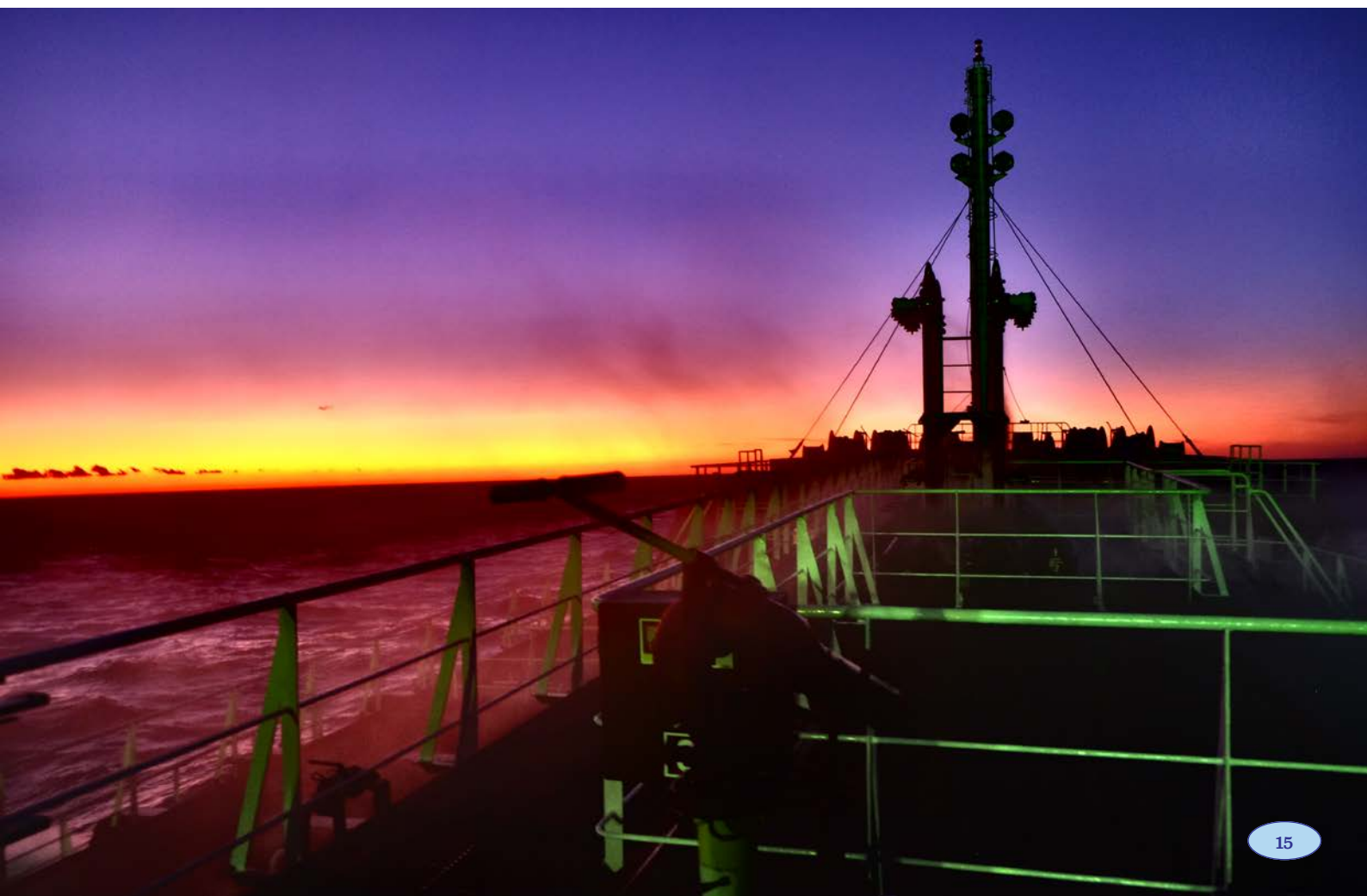
Name	Company	From	To
Paul Evertse	Exxon Chemical	1993	1997
Paul Gooch	DOW	1997	1999
Phil Browitt	ICI C&P	1999	2013
Rob Keifer	DOW	2013	2017
Mitch King	DOW	2017	2019
Capt. Jan Antonsson	Shell	2019	To Date

The General Managers of CDI

Name	Position	From	To
Capt. Ian Walker	General Manager	1993	1997
Vin Bessant	General Manager	1997	1999
Capt. Martin Whittle	General Manager	1999	2011
Capt. Howard Snaith	General Manager	2011	To Date

The Staff of CDI

Name	Position	From	To
Tricia Cannon-Wailes	Office Manager	1995	2007
Capt. Peter Derbyshire	Technical Manager	2001	2003
Amanda Howard	Quality & Accreditation Administrator	2002	To Date
Elisabeth McAllister	Accounting Administrator	2007	2016
Capt. Terry Frith	Technical Manager	2001	To Date
Lorraine Wyithe	Accounting Administrator	2016	To Date
Capt. Mike Banon	Technical Manager	2016	To Date



The People of CDI

The CDI Board of Directors

Capt. Jan Antonsson

(Chairman of the Board of Directors)

(Chairman CDI-Marine Executive Board)

Global Maritime Technical Manager Chemicals,
Shell International Trading and Shipping Company Ltd

Peter Marshall

(Chairman of CDI-T Executive Board)

Director of Logistics for Europe, Middle East,
Africa & India, The Dow Chemical Company

Erik Kessels

Manager Supply Chain Liquids Europe,
Petrochemicals SABIC

Wiebe Schipper

(Chairman CDI Finance Committee)

Associate Director Land Transport & Logistics Operations
Supply Chain Europe, LyondellBasell

Armando Pirone

EMEAF Liquids L&D Manager, ExxonMobil

The CDI-M Executive Board

CDI-Marine Executive Board Members

Name	Company
Jan Antonsson (Chairman)	Shell International Trading and Shipping Company Ltd
Galen Locke	ExxonMobil
Gerhard Bruss	BASF
James Prazak	Tricon Energy
Steven Beddegenoodts	SABIC
Lance Nunez	DOW

The role of the CDI Marine Executive Board

The CDI Marine Executive Board is established to conduct the day-to-day operation and management of the CDI-Marine scheme including CDI's "International Marine Packed Cargo Audit Scheme" (IMPCAS). On

behalf of the Board of Directors, the Executive Board initiates and stewards all necessary steps to ensure the CDI Marine scheme fulfils the prime objectives as defined in the CDI Statutes and the CDI Marine Operating

Procedures of the Stichting Chemical Distribution Institute. In discharging its role, the Executive Board is assisted by the CDI General Manager and the Committees as established by them.

The CDI-T Executive Board

CDI-Terminal Executive Board Members

Name	Company
Peter Marshall (Chairman)	Dow (C)
Stuart Greenhill	BP Chemicals (C)
TBA	SASOL (C)
Philippe Verbakel	ExxonMobil Petroleum & Chemicals (C)
Keith Jackson	Inter Terminals (T)
Sacha Nahmais	TEPSA (T)
Niek Verbree	Vopak (T)
Andrew Drayton	OilTanking (T)

The role of the CDI Terminal Executive Board

The CDI Terminal Executive Board is established to conduct the day-to-day operation and management of the CDI-Terminal scheme. On behalf of the Board of Directors, the Executive

Board initiates and stewards all necessary steps to ensure the CDI Terminal scheme fulfils the prime objectives as defined in the CDI Statutes and the CDI Marine Operating

Procedures of the Stichting Chemical Distribution Institute. In discharging its role, the Executive Board is assisted by the CDI General Manager and the Committees as established by them.

CDI-Marine Technical Committee

CDI-Marine Technical Committee Members

Name	Chemical Company
James Prazak (Chairman)	Tricon Energy
Hans Joachim Dunemann	Dow
Anne-France Barry	Shell
John Gipson	SABIC
TBA	TBA
Pavel Tomanek	BASF
Tony Caldwell	ExxonMobil
Ship Operator	
Capt Ajit Balwant Natu	Fleet Management Ltd
Martin Hislop	IPTA (MOL Chemical Tankers)
Amit Jain	INTERTANKO (Unixline)
Ajay Furtado	Stolt Nielsen
Capt. JanOve Ødegård	Odfjell
Jan van Benten	Unigas
Cherian Oommen	SIGTTO

The role of the CDI-Marine Technical Documentation Committee

The Marine Executive Board has established the Technical and Documentation Committee, which consists of an equal number of appointees from chemical company participants and associate participants to recommend to the Executive Board amendments to documents

for their approval, including the inspection questionnaires and technical publications produced by CDI or jointly with other associations. To achieve this objective the committee meets regularly to review the system's documentation with the objective to discuss and agree

amendments to accommodate changes in legislation and improvements in industry practices.

CDI-Marine Accreditation Committee

Chairman Mike Banon. CDI Technical Manager (Marine)

Name	Chemical Company
Shaikh.A.Rahim.	ExxonMobil
Anne-France Barry	Shell
Maayke van Noort	DOW
Pavel Tomanek	BASF
Ship Operator	
Capt Andrey Moiseev	Bernhard Shulte (INTERTANKO)
Jan van Benten	Unigas

The role of the CDI-Marine Accreditation Committee

Members of the Accreditation Committee act independently and objectively in the assessment of candidates seeking CDI Marine accreditation. The Accreditation Committee;

- assesses the results of the candidate's interview
- assesses the results of a candidate's written exam following the training course
- assesses the reports of a candidate's supervised inspections

If found to meet CDI's rigorous standards the Accreditation Committee will recommend to the CDI-M Executive Board, that an individual candidate should be accredited as an inspector capable of conducting inspections of chemical and gas ships or chemical ships only or gas ships only in accordance with the CDI-M inspection format if the candidate has:-

- i) Demonstrated at the interview, that he has the requisite qualifications and experience; and;

- ii) Satisfactorily attended a CDI-M approved training course; and
- iii) Passed the written examination following completion of a CDI-M approved training course; and
- iv) Satisfactorily completed two supervised inspections of chemical and/or gas ships in accordance with the CDI-M inspection format.

CDI-Terminal Technical and Accreditation Committee

Chairman Howard Snaith. General Manager CDI

Name	Chemical Company
TBA	TBA (C)
Jane Monk	BP Chemicals (C)
Raf Thierens	BASF (C)
Tom Feichtinger	Dow (C)
Hugo van der Boom	Lyondellbasell (C)
Terminal Operator	
Ivan Lopez	TEPSA (T)
David Carter	Vopak (T)
Marc Tesselaar	Oiltanking (T)
Observers	
Victor Trapani	CEFIC
Dan Rocznik	ACC

The role of the CDI-Terminal Technical and Accreditation Committee

The Terminal Executive Board has established the Technical Documentation and Accreditation Committee, which consists of an equal number of appointees from Chemical company participants and Terminal company participants to recommend to the Executive Board amendments to documents for their approval, including the terminal inspection questionnaires and any technical publications produced by CDI or jointly with other associations. To achieve this objective the committee meets regularly to review the system's documentation with the objective to discuss and agree amendments to accommodate changes in legislation and improvements in industry practices.

The committee also acts independently and objectively in the assessment of candidates seeking CDI Terminal accreditation. The Accreditation Committee;

- assesses the results of the candidate's interview
- assesses the results of a candidate's written exam following the training course
- assesses the reports of a candidate's supervised inspections

If found to meet CDI's rigorous standards the Accreditation Committee recommends to the CDI-T Executive Board, that an individual candidate should be accredited as an inspector capable of conducting

inspections on behalf of CDI-T only in accordance with the CDI-T inspection format if the candidate has:-

- Demonstrated at the interview, that he has the requisite qualifications and experience; and;*
- Satisfactorily attended a CDI-T approved training course; and*
- Passed the written examination following completion of a CDI-T approved training course; and*
- Satisfactorily completed one supervised inspections of a terminal in accordance with the CDI-T Inspection format.*



IMPCAS Technical and Accreditation Committee

Chairman Terry Frith, CDI Technical Manager (Logistics)

Name	Chemical Company
James Prazak	Tricon Energy
Hans Joachim Dunemann	Dow
Pavel Tomanek	BASF
Georgia Stoinski	Infinium
Logistic Service Providers	
Uffe Ernst-Frederiksen	Maersk Line
Dirke Vande Velde	MSC
James Rawlinson	M&S
Arthur Scott	Vopak Agencies
John Mitchell	Casper Shipping Ltd
Observers	
Victor Trapani	CEFIC
Industry Associations	
Colin Rubery	ITCO
John Williams	FONASBA

The role of the IMPCAS Technical Documentation and Accreditation Committee

The CDI Marine Executive Board has established the IMPCAS Technical Documentation and Accreditation Committee, which consists of an equal number of appointees from Chemical Company Participants and Logistic Service Providers, to recommend to the Executive Board amendments to IMPCAS documents for their approval, including all IMPCAS audit questionnaires and any technical publications produced by CDI or jointly with other associations. To achieve this objective the committee meets regularly to review the system's documentation with the objective to discuss and agree amendments to accommodate

changes in legislation and improvements in industry practices.

The committee also acts independently and objectively in the assessment of candidates seeking CDI IMPCAS accreditation. The Accreditation Committee;

- assesses the results of the candidate's interview
- assesses the results of a candidate's written exam following the training course
- assesses the reports of a candidate's supervised audits

If found to meet CDI's rigorous standards the Accreditation Committee recommends to the

CDI-Marine Executive Board, that an individual candidate should be accredited as an auditor capable of conducting audits on behalf of IMPCAS only in accordance with the IMPCAS format if the candidate has:-

- Demonstrated at the interview, that he has the requisite qualifications and experience; and;*
- Satisfactorily attended an IMPCAS approved training course; and*
- Passed the written examination following completion of an IMPCAS approved training course.*

CDI Finance Committee

Name	Chemical Company
Wiebe Schipper (Chairman)	Lyondellbasell
Margaret O'Donnell	Aughinish
Stuart Greenhill	BP Acetyls Europe

The role of the Finance Committee

The General Manager provides a financial report to the Finance Committee each quarter throughout each financial year for approval. The

Finance committee also reviews and approves CDI's Annual Accounts, following assessment by CDI's external Accounting Company,

before presentation to the Board of Directors for review and approval.

CDI Quality Audit Committee (QAC)

Name	Chemical Company
Fintan Cullen	SABIC
Lizzie Lumb	Agility Chemical
Ship Operator	Aughinish
Steve Hardy	INTERTANKO (NYK Group)

The role of the Quality Audit Committee

CDI is externally audited each year by the British Standards Institute (BSI) and certified to the requirements of ISO 9 001/2015. In addition, in

a unique and transparent manner via the members of the QAC, CDI's Management, Operating and Accreditation procedures are

fully audited on an annual basis also in accordance with ISO 9001-2015, effectively undertaking the role of internal auditors.

CDI Information Technology Steering Committee

Name	Company/Organisation
Howard Snaith (Chairman)	CDI
Egbert Horring	Pharox
Tony Caldwell	ExxonMobil
Elsa Martina	DOW

The roles, aims and objectives of the Information Technology Steering Committee (ITSC)

Underpinning all the database and web site related development and maintenance work across CDI, the aim of the ITSC Committee is to oversee and coordinate the development of CDI's software applications for the storage, support, processing and exchange of CDI

inspection and audit reports in a safe and secure manner.

With user friendliness in mind and taking into account the evaluation of experience, feedback and customer comment the ITSC committee strives to constantly improve the interactive

databases for input, extraction and interpolation of data and information.

The objective is to provide the chemical company participants with cost effective systems for risk assessment, thus assisting their commitment to Responsible Care®

CDI Inspector Working Group

Name	Representing
Howard Snaith	General Manager CDI (Chairman of IWG)
Mike Banon	CDI Technical Manager (Marine)
Terry Frith	CDI Technical Manager (Logistics)
Kaare Hjelle	Regional Elected CDI Inspector Representative (Europe)
Ian Mann	Regional Elected Inspector Representative (Asia)
Asim Siddique	Regional Elected Inspector Representative (S. America)
Naudy Javier	Regional Elected Inspector Representative (N. America)
David Brant	Regional Elected Inspector Representative (Middle East)

The roles, aims and objectives of Inspector Working Group (IWG)

The aim of CDI's Inspector Working Group is to foster the interests and development of CDI and continue to provide enhanced communication flow between CDI and all accredited CDI Inspectors regarding CDI related matters. The objective is to enable a formal two-way communication process for:

- i. the continuous development of the CDI schemes
- ii. enabling a platform to review issues of concern considering matters directly affecting the efficiency of the CDI inspection/audit process; reviewing, discussing and

providing proposals regarding developments of the CDI schemes as appropriate for consideration by the Board of Directors.

The CDI Team

Capt. Howard N. Snaith **F.N.I. Master Mariner**

General Manager



A UK Qualified Class 1 Master Mariner, with DCE's for Petroleum and Chemicals, he sailed for 17 years in all ranks up to and including Master on IMO Type 2 Chemical

Tankers. He was elected a Fellow of the Nautical Institute in 2008, was sworn in as a Younger Brother of Trinity House in 2010 and is an IRQA qualified Lead Auditor. Howard served as one of the Merchant Navy Liaison Officers on part time secondment throughout all of 2009 at The Maritime Security Centre Horn of Africa, (MSCHOA) as part of the EU Naval Force Operation ATALANTA and was awarded the EU "Common Security & Defence" Service Medal in 2010.

Since coming ashore, he has undertaken a variety of roles including team leader with the UK Marine Pollution Control Unit (MPCU), A CDI Inspector; chemical tanker superintendent and fleet manager and worked as a marine consultant in numerous roles.

Howard was appointed General Manager by the CDI Board of Directors in September 2011 and is registered as CDI's company secretary.

Capt. Terry Frith **Master Mariner**

Technical Manager (Logistics)



Captain Terry Frith served at sea for over 34 years, as an Indentured Apprentice in dry bulk vessels from 1966 to 1969, and from 1970 to late 1971 he sailed onboard VLCC in the capacity as Second Officer.

In the advent of the, then "new" generation of chemical tankers, Terry rose through the ranks onboard all classes of chemical vessels and was promoted Master in 1979. Following 18 years in Command, including a period on LPG tankers, he was seconded ashore in 1995 to assist in coordinating the Safety Management System (SMS) and later appointed to join the System Management Department in shipping offices based in Norway and The Netherlands.

It was in 2001 that he joined CDI as Technical Manager responsible for the industry's global marine transportation and storage inspection schemes.

He holds a UK Class 1 Master Mariner certificate, with DCE's for Oil, Chemicals, LPG.

Capt. Mike Banon **Master Mariner**

Technical Manager (Marine)



Mike Banon joined CDI as Technical Manager (Marine), in 2016, due to ongoing growth and expansion of CDI. Mike joined CDI from MOL Tankship Management (Europe)

Ltd, where he held the position of Fleet Superintendent (Operations). Mike has 30 plus years of extensive experience in chemical tanker operations; holds an Irish Class 1 Master Mariner Certificate with DCE for Chemicals and Oils; and 7 years' command experience on IMO Type 2 Chemical parcel Tankers. He is also a QMI qualified and experienced Lead Auditor.

Mandy Howard

Accreditation Administrator



Mandy joined CDI in 2002 as CDI's Accreditation Administrator. Mandy's role involves the co-managing of day to day operations of the CDI head

office, but primarily the maintenance and administration of CDI inspector performance records including a continuous review of each inspector's accreditation status, their accreditation certificates, I.D. cards and all inspection attestation certification. Mandy is CDI's qualified First Aider and she also provides support to the Accounting Administrator.

Lorraine Wytke

Accounting Administrator



Lorraine joined CDI in 2016 as CDI's Accounting Administrator. Lorraine's role involves the co-managing of day to day operations of the CDI head

office, but primarily issuing CDI's annual invoices, fees and subscriptions, all banking and book keeping requirements. Ledger entries, VAT receipts as well as payment of incoming invoices. Lorraine also provides support to the Accreditation Administrator. Lorraine is an Associated Accounting Technician Qualified Book keeper (AATQB); and a Member of Associated Accounting Technicians (MAAT).

Egbert Horring **(Pharox Assurance)**

CDI Senior Program Manager



Egbert Horring, Manager Development and Operations at Pharox Assurance. Pharox is market leader in assurance and vetting IT solutions for the (petro)chemical

industry. Pharox provides reliable end-to-end IT solutions: from designing, developing and implementing tailor-made platforms to hosting, maintenance and support. Pharox has its headquarters in Rotterdam (The Netherlands) and is part of the Connixium Group, a group of IT companies working together to increase efficiency, availability, quality of service and customer satisfaction.

Egbert is since 2002 with CDI as Senior Program Manager. He has a professional background in Business Information Science with over 20 years of experience in the management of new software developments and leading development and support teams in the day to day operations.

Egbert's role involves the management of all activities with regard to the development, hosting, maintenance and support of the CDI database systems, software applications and websites.

In addition, he is deeply involved in the management of other chemical industry IT projects for various member-driven organizations related to CDI, such as European Chemical Industry Council (Cefic), European Barge Inspection Scheme (EBIS) and various other multinational customers in the chemical industry like BASF, BP and Shell.

The Chemical Company Participants of CDI 2019

1)	Maurice Muris	AnQore BV
2)	Gill Watson	Agility Chemical (Founder Company)
3)	R De Leeuw	Akzo Nobel Base Chemicals
4)	Bill Griebel	Americas Styrenics LLC
5)	Hermant Berry	AMPOL Management Services Pte Ltd
6)	Gerard Langlais	Arkema
7)	Kazuto Miyamoto	Asahi Kasei Chemicals Corporation
8)	Kenneth Rieger	Atlantic Methanol (AMPCO)
9)	Deborah Ronan	Aughinish Aluminium
10)	Gerhard Bruss	BASF
11)	Shantel Williams	Blue Cube Operations
12)	Thomas Van De Velde	Borealis
13)	Jonathon Garlick	BP Chemicals (Founder Company)
14)	Elton Passaro	Braskem
15)	Lile Juravle	Cargill International SA
16)	Karen Davies	ConocoPhillips
17)	Cody Reyes	Corteva Agriscience
18)	Luc Renier	The Dow Chemical Company (Founder Company)
19)	Greg Allen	Eastman Chemical Company
20)	Waddah S. Ghanem	Emirates National Oil Company (ENOC) LLC
21)	Ali Al-Luqman	EQUATE Petroleum Company
22)	Peter Wernicke	Evonik Services GmbH
23)	Armando Pirone	ExxonMobil (Founder Company)
24)	David Smith	Flint Hills Resources, LP
25)	Nikolai Grigoriev	Gazprom Global LNG Limited
26)	Barbara Leadbetter	Greenergy Fuels Ltd
27)	Dirk Hillmar	Holborn Europa Raffinerie GMBH
28)	Makoto Fujito	Idemitsu Tanker Co. Ltd.
29)	Jeffrey Patcher	Infineum
30)	Robert Thomas	INVISTA S.a.r.l.
31)	Foued Bahri	KEM ONE
32)	Andrew Smiley	Koch Shipping Pte
33)	Slav Ostrowicki	Koch Fertilisers LLC
34)	Stefano Rocca	Kuwait Petroleum Italia Spa
35)	Folkert Bloembergen	Lyondellbasell
36)	Ringo Leung	MEGLOBAL International FZE
37)	Fahad S Al Nawfal	MAADEN
38)	Diego Jaramillo	Methanex Corporation /Waterfront Shipping
39)	Dennis Patrick	Methanol Holdings (Trinidad) Limited
40)	Adolfo C. Pardo	Mexichem Resinas Vinilicas S.A. de C.V.
41)	James Lough	MUNTAJAT
42)	Isa Lampinen	NESTE Oyj
43)	Kris Flanagan	Nynas
44)	T. Hosken	IXOM
45)	Caroline Ask	Perstorp Oxo, AB
46)	Paulo Afonso	Petrobras
47)	Bryan Blau	Potash Corp.
48)	John DeRose	Phillips 66
49)	F. M. Cordova Escobedo	PMI Comercio Internacional SA de CV
50)	Yasser Behiry	QPSP
51)	Robyn Martin	Qenos Pty Ltd
52)	Jorge Garcia Zas	REPSOL Trading S.A
53)	Mohammed Al Zuhair	SABIC
54)	Ben Human	SASOL Group Services
55)	Jan Antonsson	Shell Chemicals Founder Company)
56)	Amanda Vermeul	Shin-Etsu PVC b.v.
57)	Mater Al-Dhafeeriossary	SIPCHEM – Sahara International Petrochemical Company
58)	Ann Gerlardi	Southern Chemical Corporation
59)	Philippe Heuchon	Solvay SA
60)	Bruce Fraser	Trinseo
61)	James Prazak	Tricon Energy
62)	Jeronimo Torres	UBE Corporation Europe
63)	Ingvald Worren	YARA Switzerland Limited
64)	Rob Murray	Viverto Fuels Ltd

Associate Members

Bayer

BLIA: Bulk Liquids Industry Association

CHWMEG Inc.

Green Award Foundation

DVB Bank

INTERTANKO: International Association of Independent Tanker Owners

IPTA: International Parcel Tankers Association

ABIQUM: Associação Brasileira da Indústria Química

ITCO: International Tank Container Organization

FIATA: Fédération Internationale des Associations de Transitaires et Assimilés

CEPIC: European Chemical Industry Council

Allianz Global Corporate & Specialty

Vopak Singapore

Map Ta Phut Tank Terminal Co., Ltd.

Oiltanking Singapore

SIGTTO: The Society of International Gas Tanker and Terminal Operators

RPMASA: Responsible Packaging Management Association South Africa.

Port State Control Associates

Australian Maritime Authority (AMSA)

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

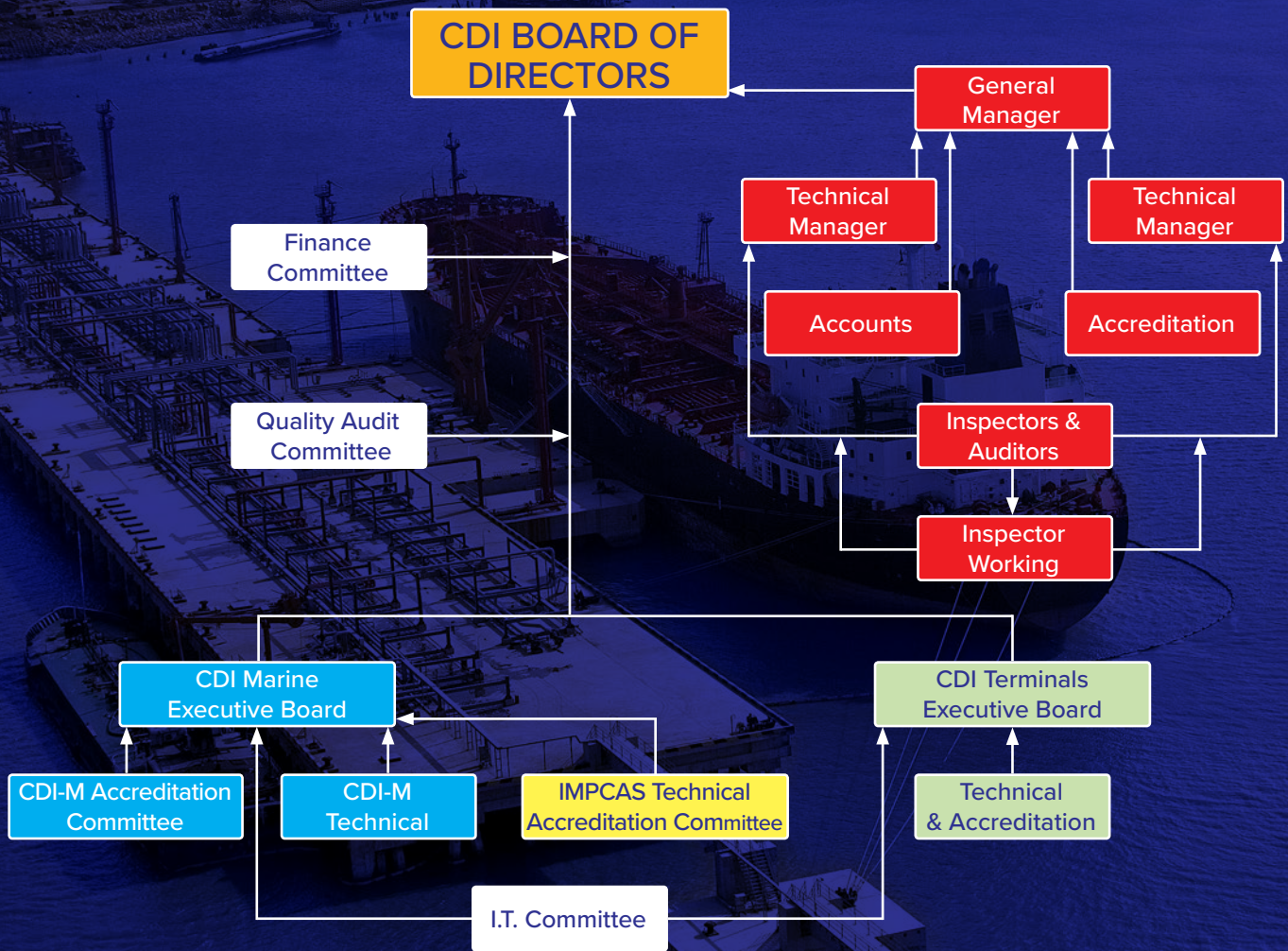
Bulgarian PSC Authority

CDI Inspectors

CDI inspections or audits can only be conducted by CDI Accredited Inspectors/Auditors. These professional people are independent from all supply chain companies and continuously achieve the most rigorous CDI 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.

www.cdi.org.uk

The Organisation of CDI



The Benefits of CDI Participation

Working Systems Reducing the Burden of Industry Inspections.

- CDI works closely with other industry partners to minimise duplicity in inspections, such as the American Chemical Council, Together for Sustainability and CEFIC.
- CDI Chemical companies will not individually inspect your ships if you have an active report in the CDI database.
- As a Marine Logistic Service Provider (LSP) you can arrange a CDI inspection or audit for any time or at any place to suit your own requirements.
- Terminal companies can access active CDI-Marine ship inspection reports and screen ships before they arrive at their terminals, avoiding the need to inspect on arrival.
- Port State Control can access the statutory information in active CDI Marine Ship Inspection Reports and maximise their resources.
- Marine Banks can access active CDI Marine Ship Inspection reports, enabling them to protect their investments and mortgages.
- Insurance Companies and P&I clubs can access active CDI Marine Ship Inspection reports, enabling them to mitigate their risk and assess premiums.
- Environmental bodies can access the statutory information in active CDI Marine Ship Inspection Reports enabling them to reduce the time of their own inspections.
- The entity being inspected will always retain control of the access rights to the report.

Promotion

As a Logistic Service Provider (LSP);

- Having your CDI report available in the database enables you to demonstrate your compliance levels to potentially 64 new customers through CDI's chemical manufacturing companies.

As a Chemical company;

- Using CDI reports enables you to visibly demonstrate your commitment to Responsible Care®.

Quality

- CDI operates to ISO standard 9001-2015.
- CDI reports are in a standardised format

- The reports are closely monitored for consistent quality and technical accuracy
- User friendly reports can be customised to suit a Chemical Companies own template requirements.

Cost Effective Systems for Chemical Companies

- The costs to use CDI's systems are set by the chemical company participants, these are the minimum operational costs and CDI strives to always ensure these are the minimal feasible, whilst enabling CDI to continuously improve.
- Compared to undertaking your own global inspections and audits; the CDI user fees are minimal.
- Access to the CDI database from any part of the world 24 hours a day, 7 days a week and obtain quality standardised inspection or audit reports compiled by professionals.

Risk Mitigation

- If you are serious about risk mitigation regarding the carriage or storage of chemicals or LPG in your company; then you should use systems provided by the collective expertise from within the chemical/LPG industry.
- CDI is often emulated but our knowledge and experience in this sector is never surpassed.
- CDI's Inspection systems are developed by Chemical & LPG experts from the collective Chemical and LPG industry.
- CDI strongly embraces the process of continuous improvement to provide you with the best up to date risk evaluation tools in the industry.
- CDI's focus is on the Chemical and LPG sector of the industry. CDI understands that nowhere else does such unparalleled knowledge and expertise lie; drawing upon the combined strength from all of CDI's stakeholders including the Chemical Manufacturing Companies, the entire chemical marine supply chain; Chemical Parcel Tanker Operators, LPG Tanker Operators, Bulk Liquid Terminal Operators, Shipping Agents, Container Port Terminals, Tank Container Operating Companies, Freight Forwarders

and Container Freight Stations, Manufactures and suppliers - CDI is able to provide the perfect tools for the job.

How much will an Accident cost?

If we consider the cost of an accident these can be astronomical and include visible as well as many hidden financial implications.

i. The Visible implications of an Accident;

- Product loss/damage
- Vessel/Storage repair costs
- Dry-dock fees
- Tugs fees.
- Pilotage fees,
- Port fees
- Personal injury costs
- Medical costs
- Loss of revenue
- Increased administrative costs
- Insurance premium increases
- Pollution clean-up costs
- Fines

ii. The invisible implications of an accident;

- Loss of clients or customers
- Compensation payments
- Lost time injury
- Lost time
- Cost to hire or replace workers
- Re-training of staff
- Loss of personal property
- Damaged equipment downtime
- Accelerated depreciation of damaged equipment
- Accident reporting
- Implementing corrective actions
- Evaluating the effectiveness of implementing corrective actions
- Medical costs
- Adverse publicity
- Increased public relations costs
- Increase travel costs

It's impossible to put a single price on the cost of accident for many reasons, but it's certain that the smallest accident can have huge implications.

CDI's systems can help mitigate these risks in a cost effective manner.

Contact CDI today for an application form: info@cdi.org.uk



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 liquid shipping. The members of the CDI Marine scheme demonstrate their commitment to this process.

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 64 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 almost 5800 chemical and gas ships registered on the database with over 2100 inspection reports active submitted by almost 1000 ship operators whose Ship Inspection Reports (SIR) are available 24 hours per day.

Membership Fees

Chemical company members pay an annual subscription of between \$2,500 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 download 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 the 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 "Harmonised Vessel Particulars Questionnaire" (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.

The report is active in the database 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.

CDI-Marine Benchmarking

CDI has enhanced its benchmarking capabilities within the CDI-M database for both participating ship operators and chemical companies.

CDI has for many years provided participating ship operators of CDI-Marine with a benchmarking tool, which ship operators have been able to use to compare their own (Chemical or LPG) ships or their own fleet, against the CDI world fleet average of CDI inspection reports as contained in the CDI-Marine database.

In 2017 CDI greatly enhanced the provision of this functionality giving ship operators access to real time data in the CDI Marine database. This provided the following two main advantages:

- 1. The benchmarking comparison will be made against real-time data from the CDI database, instead of an outdated snapshot of the data which was previously updated annually.*
- 2. The ship operator no longer has to manually enter his own ship or own fleet data, since this data is already available in the CDI-Marine database, from the collective active CDI-Marine Ship Inspection Reports for that operator's individual ships as registered with CDI.*

In 2018 CDI expanded this facility to participating chemical company of CDI-Marine, but provided some tools to ensure the ship operator could continue to control who could access to their inspection report(s) and also control if a chemical company can benchmark their SIR, (or not), by using

the current "grant and revoke" access function within CDI-Marine.

The collective benchmarking continues to be anonymous such that no other ship operator's ships or fleet can be identified in the benchmarking system, other than the ship or fleet selected by the chemical company.

The benchmarking facility is made available in the "View Inspection Report" screen for the chemical company.

The chemical company cannot have access to the fleet analysis tools where only a single ship inspection report has been purchased.

A "Non Max User Chemical company" (i.e. a Chemical company who has only purchased individual ship inspection reports), will only get access to the option to benchmark that specific ship report purchased; against the world fleet average. (In other words, the fleet benchmarking option will be removed).

Chemical companies who are classed as "Max Users" (i.e. who have bought access to the entire database), will additionally have access to the fleet benchmarking option but only when the ship operator's fleet consists of at least 4 (or more) different ships, each with 1 (or more) active inspection reports. (This will minimise the potential to identify other ships in the fleet if one report is blocked) e.g. in the case where a ship operator with two ships has blocked access to benchmarking for one ship).

The CDI-Ship Inspection Reports

Liquefied Gas Carrier, 9th Edition, Rev CDI 8/19

Chemical Tanker, 9th Edition, Rev CDI 8/19

'Harmonized' Vessel Particulars Questionnaire, 5th Edition.

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.

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&S 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 the CDI-T Technical Committee with representatives from the chemical industry and terminal operators. CDI-T provides a systematic inspection program 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 2019, 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 \$1,000 and \$5,000, based on their capacity of chemical storage available. A terminal with less than 100,000 cbm would pay a single joining fee of \$1,000 for a lifetime membership as long as the terminal maintains an active report in the CDI-T database, which is active in the database 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 pass or fail the terminal. The judgment of the terminal rests with the chemical company screening that report.

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, "Terminal Particular Questions" (TPQ) and "Self Inspection" (SI) questions should have been completed.

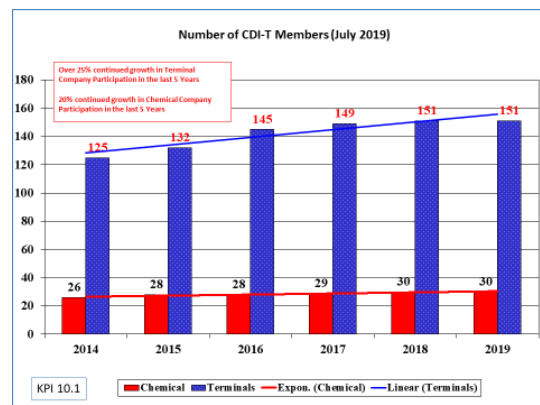
Questions are answered "Yes" or "No", with provision for a "N/A" answer for items which clearly do not apply to the terminal. A "No" answer to a question does not necessarily imply that the terminal is not in compliance. All "No" answers are supported with an observation explaining the reason and/or 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 150 Terminal Company participants in the scheme; 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
7th Edition Rev. CDI-T, 9/19

TIR – Technical Questionnaire
7th Edition Rev. CDI-T, 9/19

The 7th Edition of the Terminal Inspection Report Questionnaires, supported by a next generation database will be released in 2019.

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. The Attestation certificate is not an indication that the terminal has passed or failed.

CDI-T Sustainability

In 2017 CDI-T introduced an additional element to assist those chemical companies and terminal companies with an interest “Sustainability Assurance”. Whilst providing this capability for the CDI-T Chemical Companies, the objective is to minimise the impact of additional inspection requirements upon terminal companies.

In 2019 this element has been further enhanced in the 7th edition TIR in two ways;

- i. both by utilising existing questions in the TIR that relate to sustainability,*
- ii. and using a voluntary digitalized “Sustainability Addendum” that can be imported into the TIR questionnaire of additional sustainability related questions in order to provide a total sustainability assessment capability for those users that require it.*

A functionality allows users to either select;

- *“All SUS Answers” – a template function where all answers to all sustainability questions can then be viewed*
- *“Negative SUS answers” – a template facility where only negative answers to all sustainability question be viewed*

Conceptually, if a chemical company desires the terminal to answer the additional sustainability questions that are set out in the “voluntary electronic sustainability addendum” the chemical will request the terminal to complete these additional SI questions and import the addendum into that terminals TIR in the database.

If the terminal is not asked to complete the Sustainability Addendum by the chemical company, there is no need to complete these additional questions during the CDI-T inspection.

CDI-T Benchmarking

In 2019 CDI also introduced a new benchmarking facility for terminal company and chemical company participants.

This allows a CDI Terminal company to analyse their own terminal, and a CDI-T chemical company (subject to agreement by that terminal company), to analyse any active terminal report in the database, against the anonymous collective data of all other terminal reports available in the CDI-T database.

- *The benchmarking facility will have access to all the real-time data in the CDI-T database.*
- *The reports used in CDI-T benchmarking will be based on the same TIR questionnaire revisions, but the benchmarking will be able to work with different TIR questionnaire versions (in separate benchmarking calculations).*
- *The terminal member company users will open the report with their own report number and security code combination.*
- *The chemical company users will access the database with their company login information and will search for a specific TIR with the “Search reports” functionality.*

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 service providers (LSP) 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 shipping end products and 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.

- *The Ship Agent*
- *The Freight Forwarder*
- *The Tank Containers Operator*
- *The Container Ship*
- *The Container Ship Operator*

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

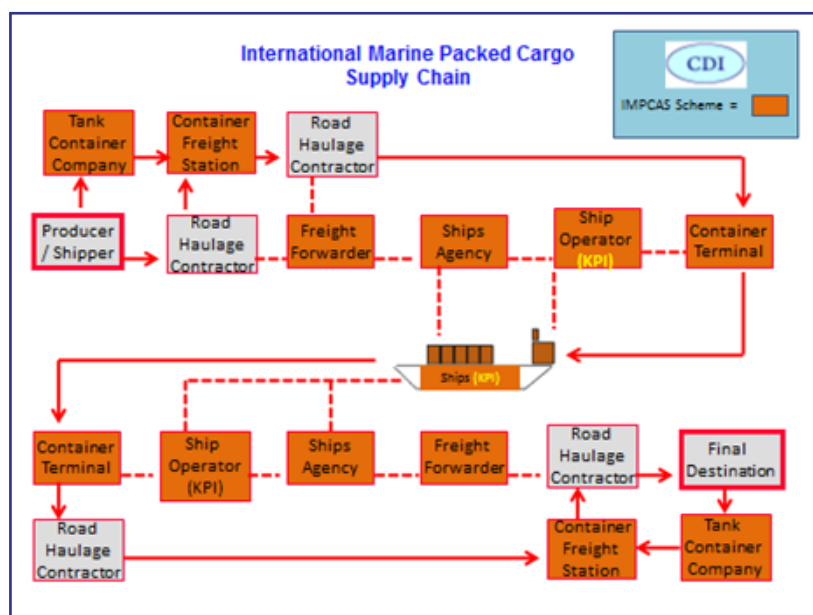
Under the 2PL agreements, partners will arrange to collect, consolidate, package and ship the cargo to the end customer. The risk in this exercise is that few supply chain companies are big enough to undertake global distribution and it requires sub-contracting to fully meet the contractual obligations. 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



IMPCAS extends to include all Marine supply elements, including:

- *The Container Port Terminal.*
- *The Container Freight Station*

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).



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 audits is avoided. IMPCAS provides an international standard for consistent data, against which risk assessment processes can be applied to the entire marine 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 marine 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.

Recognising 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 was initially 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
KPI004	Cargo related incidents
KPI005	CO2 efficiency
KPI006	Condition of class
KPI007	Contained spills
KPI010	Dry docking planning performance
KPI011	Environmental deficiencies
KPI012	Failure of critical equipment and systems
KPI013	Fire and Explosions
KPI014	Port state control performance
KPI017	Lost Time Injury Frequency
KPI019	Navigational deficiencies
KPI020	Navigational incidents
KPI021	NOx efficiency
KPI022	Officer retention rate
KPI023	Officers experience rate
KPI024	Operational deficiencies
KPI026	Port state control deficiency ratio
KPI027	Port state control detention
KPI028	Releases of substances
KPI029	Security deficiencies
KPI030	SOx efficiency
KPI032	Vessel availability

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 replaced 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 company's risk management (Responsible Care) commitment and process.*

Membership

There are no additional subscription fees to Chemical companies who also subscribe to CDI-Marine Scheme. Chemical companies only pay an access fee of USD 50 per active IMPCAS report accessed, although access to Ship Agent reports are free to registered chemical companies and registered CDI-Marine Ship Operators.

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

CDI – Inspector Code of Conduct

1. Introduction

This document provides guidelines regarding the standards of integrity, professionalism and transparency that the Chemical Distribution Foundation expects of all its accredited inspectors.

CDI may amend the code of conduct from time to time as appropriate.

The Chemical Distribution was created in 1994 by the chemical industry to improve the safety and quality performance of bulk liquid shipping. CDI inspections and audits are conducted globally in ports and terminals around the world.

2. CDI Foundation Objectives

- *To constantly improve the safety, security and quality performance of marine transportation and storage for the chemical industry.*
- *Through cooperation with * and centres 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.*

3. The objective of this code of Conduct

The object of this Code of conduct is to assist CDI inspectors conduct their inspections to the highest professional level. CDI Inspectors are expected to act within the law, and in a fair, honest, open, impartial and consistent manner.

4. Fundamental Principles of the Code

The Code of Good Practice encompasses three fundamental principles against which a CDI Inspector will be judged: integrity, professionalism and transparency. These are defined as follows:

- i) Integrity is the state of moral soundness, honesty and freedom from corrupting influences or motives.
- ii) Professionalism is applying accepted professional standards of conduct and technical knowledge.
- iii) Transparency implies openness and accountability.

Nothing in the Code shall absolve the CDI Inspector or auditor from complying with applicable national laws.

Annex 1 The CDI Inspector Code of Conduct

1. The highest standards of ethical behaviour are expected from CDI Inspectors.
2. The findings presented in the CDI inspection or audit report are to be regarded as confidential and the property of the Ship Operator; Terminal Operator or IMPCAS audited Supply Company and on no account shall the Inspector discuss the contents of the report with any third party.
3. The Inspector should be an observer only and should not interfere or become involved in the operation of the ship, terminal or plant or be a party in any discussion between the ship, terminal, plant and port or shore authorities etc.

4. The Inspector shall not operate any equipment or give advice on any operational or constructional matters or give any advice on how a particular non-compliance or observation may be corrected.
5. The Inspector may request equipment to be run or operated under test.
6. A courteous and considerate approach is expected of the Inspector in all dealings with all staff being inspected or audited whether it is senior management or their delegates or any other representative.
7. The Inspector should take care to ensure that his actions do not in any way delay or interfere with the normal operation of the ship, terminal or plant been audited or inspected.
8. The Inspector is expected to set a good example in all respects, including safety, during the period of the audit or inspection.
9. The Inspector must produce proper identification when requested and wear CDI insignia as provided by the Foundation. In addition, as appropriate for the location, utilise protective clothing and equipment including boiler suit, safety helmet, safety shoes, safety gloves, ear protectors and goggles / safety glasses.
10. The ship, terminal or plants safety procedures and displayed notices must be followed by the Inspector.
11. The Inspector shall not enter restricted areas without senior management permission been obtained and any relevant permits / checklists have been completed correctly.
12. An Inspector shall not enter an enclosed space unless the appropriate industry enclosed space entry procedures are fully complied with.
13. The inspector will not provide any indication of the ship, terminal or plants acceptability or non-acceptability at any time during his attendance as this is outside the remit of the inspector.

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.

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

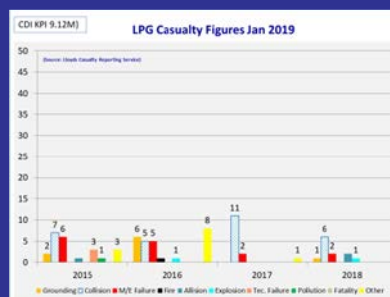
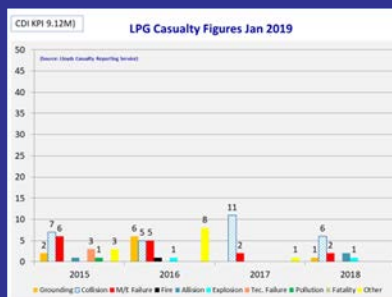
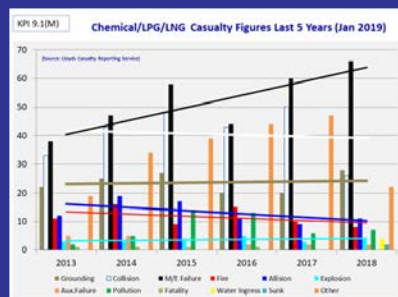
CDI Inspectors and Auditors are professional people, independent from supply chain companies, who achieve the most rigorous of training, examination and performance evaluation. Many of these offer consultancy services on a wide range of supply chain activities. Details can be searched on the website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

Training

CDI and IMPCAS accreditation training courses are open to all candidates. The CDI-Marine courses are conducted by Warsash Maritime Southampton and for CDI-Terminal by the Centre for Maritime and

Industrial Safety Technology (C-MIST). Both 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' own 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.



CDI Publications

"Packaged Chemicals by Sea: Risk Mitigation"

The commercial success of all companies is built on reputation. With the lightning speed and ferocity of modern media, a good public image in the international market place remains intact until the moment of an incident. Association, even suggested involvement with an accident or incident can destroy reputation, collapse share price and ultimately result in the demise of the company. This CDI book provides insight into the entire, marine logistic distribution supply chain and the responsibilities of chemical manufacturers and their service providers. The book also includes supplements of each CDI IMPCAS Audit questionnaire. The book is written as a practical sequential prompt, an aide-memoire for managers, employees and contractors, and as a consolidated informative guide for those persons new to the logistics industry.

The book outlines the procedures for health and safety, environmental performance, security and emergency response, the practices described support Corporate Social Responsibility within a company and the long-term sustainability of the supply chain, as well as helping to ensure the long term environmental protection of the seas and the environment.

The book costs £125.00 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)

"Chemical Tanker Operations for STCW Advanced Course"

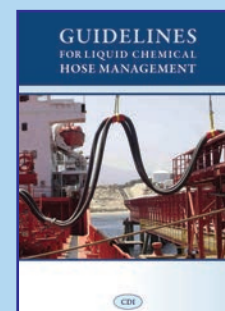
This publication is a comprehensive guide to chemical tanker cargo operations. It is an essential reference point for serving officers and managers, as well as those undertaking advanced training as required by the STCW Convention. Fully illustrated throughout with colour photographs and annotated diagrams, it covers topics such as international regulations, cargo handling and hazards, environmental protection, emergency response, safety management, tank cleaning and ship design and equipment. The book clearly explains every aspect of a chemical tankers complex operation.

The student E-Book version costs £75, (whilst there is a corporate hard back version available at £225) 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)

"Guidelines For Liquid Chemical Hose Management"

The purpose of this publication is to give an overview of the various types of hoses used in production, transportation and storage of liquid chemicals. While the main focus is on the hoses used for the transfer of chemical products, the essential and frequently used range of service hoses are also covered. Detail is given as to the options, the appropriate use and the safe management of chemical hoses.

The book costs £75 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)



“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.

**The book costs £275 and is available to order 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)**

“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

Joint Publications with other industry associations

“OCIMF, SIGTTO, ICS & CDI: “Ship to Ship Transfer Guide for Petroleum, Chemicals and Liquefied Gases”

This book builds on the previous recommendations and recognises experience gained in the industry of STS transfer operations, including transferring chemical (MARPOL Annex II) and liquefied natural gas (LNG) cargoes. The guide is applicable to transfers involving all bulk liquid cargoes, but where specific recommendations relate to a particular cargo type these can be found in the appendices.

This book supersedes:

- *Ship to Ship Transfer Guide (Petroleum) 4th Edition published in 2005*
- *Ship to Ship Transfer Guide (Liquefied Gas) 2nd Edition published in 1995*
- *LNG Ship to Ship Transfer Guidelines published in 2011*

The guide is aimed at providing advice to Masters, Marine Superintendents and others including STS service operators and transfer organisers, who may be involved in planning and executing STS operations. Attention is also given to the effective planning of operations and areas that involve risk assessment.

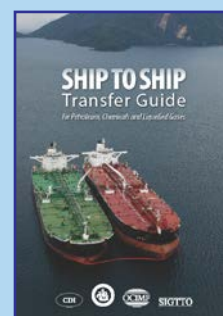
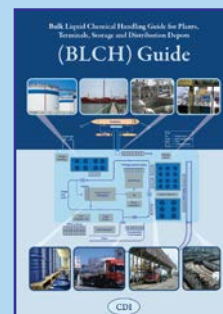
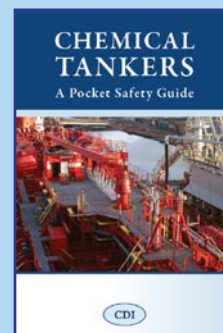
**To order contact the Publishers Witherby Seamanship www.witherbyseamanship.com
Tel: +44 (0) 1506 463 227. (10% discount for CDI chemical company members – use coupon code CD10)**

“OCIMF & CDI: “Recommendations for Oil and Chemical Tanker Manifolds & Associated Equipment” (ROCTMAE)”

The first edition of this publication which supersedes the earlier titles. It takes account of the many years of industry experience with the previous guidance and builds on the earlier recommendations. The following summarises the more significant changes that have been introduced:

- *This is now a joint publication with CDI, who have provided valuable input to support the development of recommendations for chemical tankers.*
- *Guidance has been expanded to include chemical tankers and dual classed oil/chemical tankers with the aim of achieving improved compatibility with shore facilities, particularly when these vessels trade to oil terminals.*
- *The four tonnage categories in the fourth edition of Recommendations for Oil Tanker Manifolds and Associated Equipment have been increased to seven.*

**The books costs £225 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)**



CDI's Databases are provided by Pharox Assurance
Pharox Assurance is market leader in assurance and vetting IT solutions for the (petro)chemical industry. Pharox provides reliable end-to-end IT solutions: from designing, developing and implementing tailor-made platforms to hosting, maintenance and support.

As a provider of end-to-end IT solutions, Pharox helps clients ensure the safety, sustainability and security of the logistical chain. The solutions are made to measure, can be integrated with existing, proprietary systems and include interfaces with external databases and mobile applications. Together with their clients, Pharox develops secure, user-friendly solutions for all stakeholders in the logistical chain, including chemical companies, distributors, inspected parties and inspectors.

The IT solutions include:

Assurance database solutions

Complete database solutions for industry associations and stakeholders in the quality assurance process. Including accreditation, inspections, audits, assessments, incident reporting and certification

Vetting database solutions

Integrated database solutions ensure that all logistic services employed meet the company, client and supplier requirements and standards.

Inspection solutions

User-friendly software to support the inspection process and give inspectors mobile access to databases.

Interfacing solutions

Streamline the vetting process by automatically collecting data from various industry assurance databases, such as EBIS, CDI-Marine, CDI-Terminals, OCIMF SIRE and OCIMF TMSA.

Pharox is part of the Conxillium Group and has its headquarters in Rotterdam (The Netherlands);



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sales@pharox.nl
www.pharox.nl



Pharox assurance is part of the Conxillium Group BV. Conxillium's subsidiary companies are all software and IT related, having their own key expertise yet working together wherever possible to increase efficiency, availability, quality of service and customer satisfaction.



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