Hazcheck Systems®

HAZCHECK DETECT

DETECT: Undeclared & Misdeclared Cargo

EXIS TECHNOLOGIES
NCB GROUP

A cargo screening tool for undeclared and misdeclared dangerous goods in container shipping

THE CURRENT LANDSCAPE

Around 10% of containerised shipments include declared dangerous goods. Shipping lines are therefore keen to ensure that dangerous goods are properly classified, packaged, packed and declared throughout the supply chain. However, mistakes can be made due to lack of competence or, unfortunately in some cases, by deliberately incorrectly declaring cargo to save cost or time. In other cases, the cargo may have been properly declared, but mistakes are made with packing and stowing the cargo in the container. All of these issues can lead to ship fires. Unless the container is physically opened and inspected, there is no way of knowing whether the cargo is safe for transport.

In a White Paper published by New York based container inspection company National Cargo Bureau in July 2020, they reported that a recent Container Inspection Safety Initiative (CISI) they had carried out revealed an alarming number of containers carried by sea include misdeclared dangerous cargoes that represent a serious safety risk to crew, vessel and the environment. The inspection of 500 carriers from participating carriers showed that 55% of containers were non-compliant with 43% failing to secure dangerous goods correctly within the container itself. Approximately 6.5% of containers carrying dangerous cargoes had been misdeclared.

The 'Holistic Approach' white paper is calling for industry to adopt a comprehensive, holistic and coordinated approach to address this worrying trend with 12 recommendations ranging from embracing a safety culture for dangerous goods compliance to practical measures for container and vessel inspections and monitoring. One of the white paper recommendations is the incorporation of integrated digital tools that automate critical compliance functions, like Hazcheck Detect.

NATIONAL CARGO BUREAU

A comprehensive holistic approach to enhance safety and address the carriage of undeclared, misdeclared and other non-compliant dangerous goods

A white paper by National Cargo Bureau

SAFETY OF LIFE AND CARGO AT SEA

Hazcheck® **DETECT**

www.existec.com

BENEFITS

- Handles both misdeclared and undeclared data
- Industry keywords can be shared amongst lines
- Database of misdeclared rules and keywords constantly increasing (over 4,500 mis-declared and 10,000 undeclared rules already available)
- Rules are continually enhanced and will evolve using machine learning and AI techniques.
- Data and service always updated with current regulations

> *We are delighted to be working with our Group company Exis on this ground-breaking project. Ship fires are an ongoing problem and we hope this new service will help to stop misdeclared and undeclared goods making it onto the ships in the first place."*
>
> **IAN LENNARD**
> **NCB President**

The Ultra Large Container Carrier (ULCC) Maersk Honam with a capacity of 15,266 TEU caught fire on 6 March 2018. 27 crew were on board and 7,860 containers were stowed. Tragically, five crew members lost their lives. The cause of the fire has not been determined, but it is suspected that undeclared or misdeclared DG cargo was involved. According to TT Club data on average a containership is involved in a major fire every 60 days

FEATURES

National Cargo Bureau (NCB) and Exis Technologies developed Hazcheck Detect®, a new cargo screening solution which scans all booking details for keywords, validates against rules and highlight suspicious bookings to identify misdeclared and undeclared dangerous goods (DG) and prevent them being loaded into containerised shipments. To avoid undeclared bookings being picked up by partner lines, information between lines can be shared.

Undeclared DG: These checks focus on cargo that is not declared as DG, looking for suspicious items that perhaps should be declared as DG.

Misdeclared DG: These checks focus on cargo which is declared as DG, but perhaps may not have been declared as the correct DG.
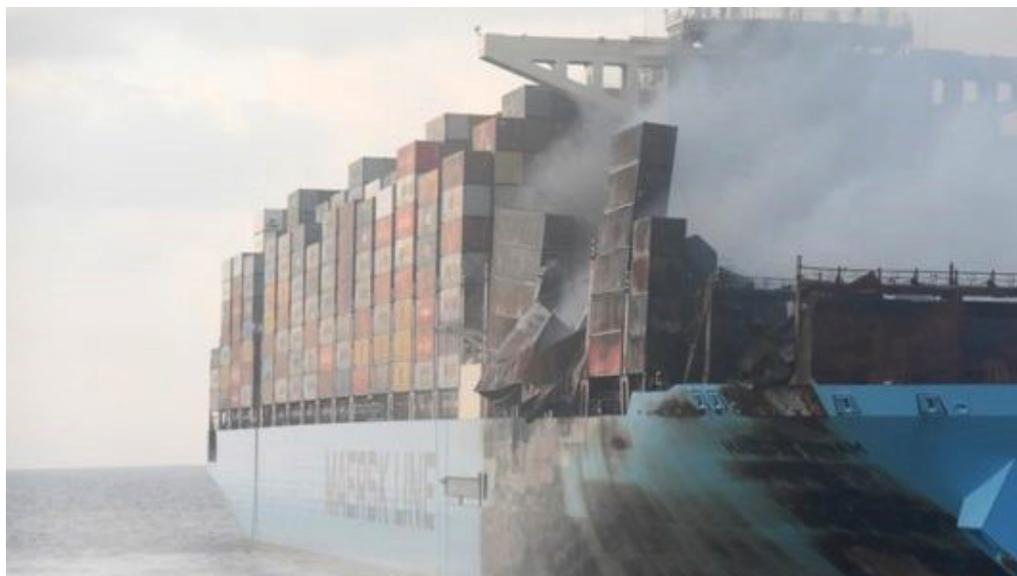
Complex Queries: Most queries should be viable using the query syntax, but some may have additional complexity, or may require the ability to lookup external data, such as DG info, substance indexes, etc.

Data: The following Data will be held in a standard library to be updated and maintained by Exis – all other Libraries to be updated and supplied by users (Customer data)

Industry group can agree to share standard libraries with common terms.

- Proper shipping names
- Substance variants
- Substance index names
- Limited set of technical names organic peroxides / self-reacting substance data

Hazcheck Detect is delivered as a software-as-a-service solution, hosted and maintained by Exis Technologies. It includes a web user interface so that users can enter and maintain data search terms/keyword/rules.
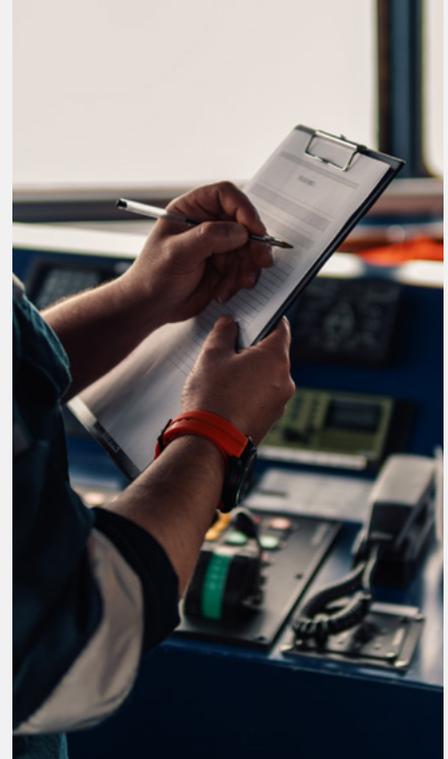
Estimated scope of containers carrying DG declared, misdeclared and undeclared. Based on industry data.

Circa 60 million packed containers each year (10% containing dangerous goods)
6,000,000 declared containers being shipped globally, but there may be more.

If the cargo is properly declared as dangerous goods, shipping lines can use tools such as Exis Technologies' Hazcheck Systems to verify that the declared cargo complies with the IMDG Code and other local rules and restrictions. More than 400,000 validations are made with Hazcheck per month for the top 10 lines representing 80% of the world's DG container traffic. Around 4,000 rejections are picked up each month with the software for declared dangerous goods.

Hazcheck® DETECT

Screen for **Undeclared** or **Misdeclared DG** cargo at time of booking - 600,000 containers each month.

Hazcheck® SYSTEMS

For **Declared** dangerous goods - 400,000 validations each month which picks up 4,000 rejections (1%).

Hazcheck® INSPECTIONS

Physical container inspection with failure rates of 9%. Minimum of 500,000 per month potential rejections for **Declared DG.**

CUSTOMER PROFILE

Container line **Maersk** are the first customer signed to the Hazcheck Detect solution. **Henrik Lauritsen,** Director at Maersk, says,

"Exis Technologies has developed a solution that could be used industry wide and allows easy sharing of keywords and rules between industry partners. This is very important so that container lines know that partner lines are searching using the same criteria. The service went into live operation in February 2020 and we are finding an average of 40 containers a week which are stopped, undeclared DG or re-declared as DG. In the past these containers would have been loaded on board as non DG cargo or misdeclared. Critically we get the search hits returned from Hazcheck Detect within seconds so that we can follow up quickly to ensure that suspicious cargo is not loaded on to the vessels. We are delighted to be the first shipping line to start using Hazcheck Detect and we encourage more lines to come on board."

MORE EXIS PRODUCTS

HAZCHECK WEB SERVICE
Dangerous goods data packages and routines for incorporation into cargo booking, handling and planning systems accessed via a web service hosted by Exis.

HAZCHECK INSPECTIONS
Web-based database and access portal for Inspection companies to plan and enter details of cargo inspections completed on behalf of container or vessel operators.

IMDG CODE E-LEARNING
Web-based IMDG Code training for shore side staff involved in the handling and transport of dangerous goods by sea. Developed in collaboration with IMO. Function specific, advanced, refresher and multimodal general awareness courses available.

HAZCHECK DGL LITE
Free mobile app for quick and easy access to information in the IMDG Code Dangerous Goods List. Available for iPhone and Android devices

EXAMPLES OF COMMON UNDECLARED DANGEROUS GOODS

According to the U.S. Department of Transportation, commonly shipped undeclared hazardous materials include, but are not limited to:

- Agricultural: ammonium nitrate fertilizers, pesticides
- Air conditioning: Refrigerant gases
- Automotive: Lead-acid batteries, air bag inflators, seatbelt pretensioners, fuel injector cleaners, gasoline, diesel fuel
- Camping and outdoors equipment: fuel gels, propane "tanks", matches, flares, scuba "tanks"
- Construction: adhesives, sealants, tars
- Fire-fighting equipment: fire extinguishers
- Household goods: aerosol spray cans, perfumes, fireworks, oil based paint related materials, adhesives, lighters, drain cleaners, pepper sprays
- Medical: Oxygen "tanks"
- Motorized vehicles, tools, and equipment: cars, boats, generators, engines, lawnmowers
- Pool maintenance: chlorinating tablets or granules

MORE INFORMATION

Visit www.hazcheck.com
or email sales@existec.com

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