COLLABORATION, SHARING, AND STRIVING FOR ZERO INCIDENTS

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INTRODUCTION SPEAKERS

• Bert Van Campenhout – DEME
  • Prevention Officer
  • Experience: Civil Engineering, Marine Construction, Dredging

• Arjan Jager – Van Oord
  • QHSE coordinator
  • Experience: Dredging and Marine
In November 2013, a group of QHSE experts from IADC member companies were nominated and the IADC Safety Committee was established.

- Mr. Christophe Leroy – Jan De Nul
- Mrs. Ilse Quirynen – DEME
- Mr. Jan-Willem Ottevanger – Royal Boskalis Westminster N.V
- Mr. Ton van de Minkelis – Van Oord
- Mr. René Kolman – IADC (Secretary General)
IADC HEALTH AND SAFETY CHARTER

IADC is aware of the risk of the activities in the dredging industry and recognises the will of its members to safeguard their employees and involved parties. IADC therefore has established a safety committee that enables sharing of best practices amongst its members and active communication thereof.

By maintaining a high level of health and safety IADC' members commit themselves to:
- Create a safe and healthy working environment for their employees;
- Comply with all applicable safety and occupational health laws, regulation standards, codes of practice in all countries in which they operate;
- Keep risks to personnel, equipment and the environment at a level as low as reasonably practicable;
- Stimulate a culture of safety awareness and continuous improvement.

The above mentioned commitments aim to reduce the number of accidents and incidents to zero.

On behalf of all IADC members,


Mr. P de Ridder,
President of the Board of IADC
DRIVING SAFETY

• Nowadays the approach of dredging companies has shifted to:
  • Being proactive
  • Incorporate safety within the tender and in the operations
  • No blame culture
  • Stop Work Authority
  • Behavioural programmes
IMAGINE
THINK
ACT

how to better plan your work
and discuss with your colleagues to improve your plan
and react when needed

Van Oord
Marine ingenuity

DJN
Jan De Nul
GROUP

NINA
NO INJURIES
NO ACCIDENTS

Boskalis

TOGETHER FOR
DNA SAFETY!

INTERNATIONAL ASSOCIATION OF DREDGING COMPANIES
SUEZ, AN EXAMPLE

The Suez Canal Project saw the largest number of vessels ever deployed for dredging operations and yet despite the number of dredgers and despite the logistical challenges the project was completed in time.
H$_2$S IN DREDGING
CHARACTERISTICS OF H$_2$S

- Highly toxic, colourless and flammable
- Heavier than air
- Solubility in water
- Very reactive and corrosive gas
RELEASE AND RECOGNIZING H$_2$S

H$_2$S release during dredging:

- Long-term, low-level exposure:
  - fatigue, loss of appetite, headaches, irritability, poor memory and dizziness.

- Short-term, high-level exposure:
  - immediate collapse, with loss of breathing and a high probability of death.
PREVENTION

Limiting $\text{H}_2\text{S}$ release:
- Closed hopper
- Covering the hopper
- Limiting turbulence in the hopper

Avoiding entrance of $\text{H}_2\text{S}$ into the interior spaces of the vessel:
- Diverting the A/C intakes
- Filtering the A/C intakes (active carbon)
MONITORING AND AWARENESS

Monitoring H$_2$S:
• Personal detectors
• Fixed detection
• Data logging

Awareness:
• Crew need to be trained in preventive measures including use of specific personal protective equipment
SAFETY IN MOORING
SAFETY IN MOORING

- Mooring is a frequently recurring action in the dredging business
  - Hopper barges are regularly moored alongside grab dredgers during loading
- Dangers associated with these operations
  - Parting lines and snap back zone
  - Insufficiently trained crew
  - Insufficient supervision
- Innovations in mooring
PARTING LINES

- Parting lines and snap back zone
  - Mooring imposes enormous strains and major forces are involved
  - Deterioration of mooring line conditions are significant factors in mooring line failure

Source: Mooring do it safely - A guide to prevent accidents while mooring
PARTING LINES

- Parting lines and snap back zone
  - Mooring ropes can have complex snap-back zones
  - When a mooring line parts it snaps back and can cause serious injury

Source: Mooring do it safely - A guide to prevent accidents while mooring
CREW TRAINING

Factors that can play a role:

• Lack of knowledge about the hazards of the job
• Unclear instructions
• Lack of information
• Small, untrained deck crew
• Ineffective on-board mooring training
SUPERVISION

Active and dedicated supervision during mooring operations

- The person supervising the works should not be involved in other operations
TSHD Charles Darwin mooring with Cavotec Moormaster system
Jan De Nul
INNOVATION

Automatic mooring is being utilised (magnetic and vacuum mooring)

- Advantages
  - No need for mooring ropes
  - Limited amount of personnel required

- Disadvantages
  - High costs
  - Increased maintenance
UNEXPLODED ORDNANCES (UXO)

UXO are munitions that did not explode when they were employed and still pose a risk of detonation. All over the world dredgers have encountered UXO during their operations.

Awareness has been increasing about the prevalence of the presence of UXO and the extreme safety risk they cause which should and must be taken into account during the preparations of dredging operations.
Available publications

- A Common Sense Approach for H$_2$S Release During Dredging (Terra et Aqua number 139 | June 2015)
- Dealing with UXO (Unexploded Ordnance): Detection, Identification, Disposal and Awareness (Terra et Aqua number 142 | December 2015)
- Safety in Mooring (Terra et Aqua number 142 | June 2016)

Upcoming publications

- Separation Man and Machine
WORKING ALONE TOGETHER

As dredging companies frequently work in joint ventures, a harmonisation of specific safety instructions is an important goal and will contribute to a safer working environment.
CONCLUSIONS

The safety committee comprises individuals responsible for QHSE within the major dredging contractors.

It aims to share information and knowledge among the IADC members through the Terra et Aqua journal and IADC’s website.
Through these efforts, the Safety Committee wants to emphasize to all stakeholders that safety is a top priority and can contribute to effective and efficient execution of maritime infrastructure projects.

The exchange of information and learning from each other will raise new opportunities to continue to improve the safety of all personnel and vessels.
QUESTIONS AND ANSWERS

BERT VAN CAMPENHOUT
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INTERNATIONAL ASSOCIATION OF DREDGING COMPANIES
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