



SAFETY MATTERS



SAFETY BULLETIN OF **Boskalis**

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MAKE THE DIFFERENCE

If something can be made safer then, together, we make that happen. This ambition to improve things has led to wide-ranging innovations in the field of technology, procedures and behaviour. You will find several inspiring examples in this edition of Safety Matters.

The fact that all these innovations again led to a reduction, in 2017 and 2018, of the number of accidents resulting in injury is something we can all be proud of. Providing a safer work environment is our collective responsibility, as the stories in this Safety Matters illustrate. However different these stories may be, they all have one thing in common: these colleagues' tremendous commitment, drive and will to improve. Working together to improve safety starts with taking responsibility for your own actions and taking action. We encourage and support this attitude through the NINA program: urging for good leadership with regard to safety, continuing to reflect on leading by example and creating an open atmosphere where dilemmas can be discussed. The YES scan is consistent with this. Take action if you think something is unsafe. If in doubt, speak out.

It is not that simple in practice, of course. The differences between theoretical training and day-to-day practice are often considerable and that, together with pressure of time and ever-changing circumstances can lead to safety dilemmas. So we cannot sit back. Stay alert and do everything within your power to make the workplace safer. Let these colleagues' stories inspire you and pass it on!

Annette Panajoti,
NINA Program Manager ■



The STOP procedure:

SAFE TRANSFER OF PERSONNEL

WHAT IS STOP?

Jeroen de Reus had gained experience with the STOP procedure in Australia and introduced this to the IGD-E project. “We immediately had several standard-bearers on site who had also experienced STOP when working on Gorgon”, says the then Works Manager Pieter Dijkstra. “So it was widely supported from the start.” “The idea behind STOP is to enable people to transfer on the same level whenever possible”, Jeroen explains.

“You start by identifying every possible combination of equipment and subsequently make any adjustments necessary to enable as safe a transfer as possible. Consider such things as landing and transfer platforms at different heights, extra railings and handles, alternative methods of approach. On the IGD-E project we also replaced the crew boat. STOP also entails clear rules, such as wearing the correct PPE, no jumping, waiting for a sign from the deck assist.

“‘STOP’ is interwoven in the basis of NINA Values and Rules: aiming to continuously improve.”

Rules which we repeatedly conveyed during the inductions and in toolboxes.

INTERWOVEN IN NINA VALUES AND RULES

The effect was a more controlled crew transfer and a wider window of feasibility. But there was more, says Jeroen: “It also created an atmosphere in which people were invited to contribute input and to improve the (safety) conditions. And that is exactly

what happened: staff and crew suggested ideas on how to improve safety on board and implemented improvements themselves. People were really enthusiastic and that reflected on the whole project. ‘STOP’ is interwoven in the basis of NINA Values and Rules: aiming to continuously improve ensures that if things can be made safer and more controllable, they are.” Jan van der Kwast feels the same: “STOP demonstrates that much can

be achieved by preparing well and making appropriate modifications. This is now evident on the Giant 7 for example: where Subsea Cables are carefully examining the landing height and which crew boat we can best use.”

Safe Transfer working group:

WORKING TOWARDS A UNIFORM APPROACH

The multidisciplinary Safe Transfer working group was set up in mid-2017. The working group is examining the possibilities of developing establishing a company-wide safe transfer standard.



| Safe transfer from Incheape 19 to TSHD Crestway

Set up following the example of the IGD-E project, the working group comprises experts from all disciplines: André van der Wiel (Manager Operations Department I&I), Frans Oosterwijk (Deputy Director Fleet Dredging), Wim Hokken (Fleet Manager Backhoes), Rick Maliepaard (Director Fleet Captive Assets Offshore), Albert Prado (Fleet Manager Subsea Cables) and Joost Wijnands (Manager Central Fleet Support).

Their different viewpoints are important, André van der Wiel observes: “We work with different ranges of equipment, different countries, each with their own rules and laws, different customers, each with their own regulations and expectations and different cultures within our own company. All these factors, which vary per project, make it impossible to implement a single technical standard. The ‘standard’ we

seek to achieve is a uniform approach, at a set stage in the preparation of each separate project, to determine the safest ways to transfer personnel.

CONSIDER THE WHOLE CYCLE

In the field, there is increasing focus on safe transfer. At International Association for Dredging Companies (IADC) level, safe transfer is on the agenda and is increasingly important to customers. That can lead to dilemmas, however, as André explains: “Customers do impose specific requirements but, due to their unfamiliarity with dredging, many are often unable to assess what is and isn’t safe. A boat landing is often a requirement in the wind industry, for example, but is by no means always the safest solution for us. It is important that the project management is aware of that. We want them to consider the entire work cycle: to establish where your people are 24/7, where they have to go and how they can get there safely. And: identify your weakest link. That will often be your crew boat. Transferring people back and forth most frequently, that is where the risk is greatest. So it is important to carefully consider, in advance, which ships and support ships are most suitable for your project.”

KNOWLEDGE SHARING

“As working group, we aim to provide the projects with the maximum facilities and assistance to ensure the safe transfer of personnel. So if your people need help or would like to share their ideas and knowledge, do let us know.”

Call or mail André van der Wiel: andre.vd.wiel@boskalis.com.



| An idea that already has made it from drawing board to practice. The ‘square tyres’ are now officially called Stair Fender

Subcontractors on the Boskalis Nederland safety agenda

WORKING TOGETHER TO IMPROVE SAFETY



| Example of a NINA meeting

Last year Boskalis Nederland (BKN) organised eight NINA meetings for regular subcontractors and suppliers. This led to more mutual understanding as well as practical improvements.

Many BKN projects involve multiple subcontractors, says Walter van de Reep (BKN SHE-Q Manager). "We organise meetings to familiarise them with NINA and discuss safety at our projects, spending a half-day session on each specialisation. We explain the NINA programme, what we expect of the subcontractors and suppliers and ask their opinion: what works well and what could be improved?"

STRENGTHEN EACH OTHER

Geo van Tintelen, Chief Foreman of BKN Civil, co-organised such a meeting. "We had invited our key subcontractors, such as steel benders, pile driving and carpenter companies. The atmosphere was very open. All the participants saw it as an opportunity to share experiences and move forward together. A safety expert from a pile driving company, for instance, said that he always had to watch our introduction film but that he would also like there to be a toolbox in which he could explain the issues they encounter. We invited him to come and talk to us in the hut. You gain more insight into each other's work, which results in better understanding and better collaboration.

PRACTICAL

The meeting also produced practical solutions, such as: a safer working environment by slightly modifying the reinforcement. Geo: "The tips of the steel reinforcement bars usually stick out. For safety reasons, we then cover them with a plastic cap. This mitigates the risk but also takes time and discipline to fit the caps and to leave them there. When this was mentioned, steel bender Diepstraten suggested bending the reinforcement bars in such a way that the sharp ends point downwards and covering is no longer needed. So even if you have been working together for years, these meetings can prove very useful. We do not ask our subcontractors often enough whether they perhaps have a better idea, and this encourages dialogue."

ANNUAL SAFETY EVENT

The idea is to develop this into an annual safety event, during which we would discuss the outcome of the previous session and examine what safety improvements are still required. Geo van Tintelen would like to take it one step further, not only inviting the management and chief foremen to participate, but also letting people on the work floor join in the discussion. "The guiding principle remains: how can we help each other?"

"More insight into each other's work, which results in better understanding and better collaboration."



| Example of a result of a NINA meeting. The ends of the reinforcement bars have been bent

Teamwork for a good cause at the Offshore Energy Division, Singapore

CLEANING UP THE SMIT BORNEO TOGETHER

In Singapore, the whole team put their back into getting the Smit Borneo shipshape again. Good for safety, good for involvement and good for business.

"We are surprised that Safety Matters chose our clean-up activity as an example of 'best practice'", says Singapore Operations Manager Thomas Jonkers at the beginning of our conversation. "The reason behind it is actually quite embarrassing: whenever we showed potential customers round the crane barge they were quite appalled by how it looked. There was junk everywhere, from televisions to radios, from old boots to overalls." It can't be excused but can be explained, Thomas goes on: "The Smit Borneo is over forty years old and deployed on a project basis. There is no regular crew so nobody really feels responsible for the ship. Which is reflected by the way people treat it: once a project has ended, anything they don't need is simply left behind. We decided to draw attention to the problem by launching a team activity: the whole office staff would really 'clear the decks' and thoroughly clean the whole ship. Step two, subsequently, was to invest in new floors, mattresses and suchlike so that the ship would be hired more readily. And sure enough, the Smit Borneo was hired again not long afterwards."

BROAD INVOLVEMENT

It was a useful experience for office staff, according to Razif Thahir, from Operations & Logistics. "Some of them had never even boarded a ship before. That is why we started the day with a toolbox and risk assessment. This gave them a much better idea of the work involved and made them more aware of the risks." "What struck me was the enthusiasm," Thomas added. "Nobody refused to join in, they still wear the T-shirt they were given that day and even ask when we're going to organise

another team day. In short: this was very much a win-win activity in terms of involvement. Not only did the ship undergo a makeover; the team day also boosted the team spirit. This clearly reflected the NINA spirit: everyone, from top to bottom, rolling up their sleeves to get the job done."

NINA RULES

A clean and tidy ship that is back at work. More engagement for the field from office staff. Increased safety awareness. That's killing three birds with one stone. In that respect, this activity is a good example of a 'best

practice', Thomas admits, and fitting for a learning organisation. "Good housekeeping is part of NINA in my opinion; I consider it as a basic risk with regards to a safe workplace. Moreover, this is my responsibility too so it feels good to do something about it. It is fantastic that we also managed to get other colleagues on board. It is the foundation of our work. A dirty kitchen tells me more about people's attitudes than a whole pile of documents. Because working in a safe environment is not only safer, it is also your calling card, the impression you give the outside world."



| Joint clean-up activity on board of the Smit Borneo

IMPROVED ELECTRICAL SAFETY ON MOBILE GENERATORS

Subsea Cables & Flexibles installed better protection on the portable generators that riggers on top of wind turbines use to generate their own electricity.

During the construction of wind turbines, small electric winches are used to hoist the equipment needed to install the cables up on to the turbines. Last year, when these electric winches were due for replacement, we and the SHE-Q department examined the legislation and regulations of our main market: the United Kingdom, to establish the continual use of the 230 V or whether to switch to 110 V supply? A question which not only affected the winches but also the generators used.

When the wind turbines are not connected to the grid, the tower teams carry their own power supply with them. There is one problem: it is impossible to physically earth these portable generators because the yellow 'transition pieces' are fully coated to ensure they will last 25 years in a salty marine environment. Consequently, the standard earth leakage

device does not work satisfactorily which, in the event of a double fault, could lead to dangerous situations for both the user and the equipment connected. "A peak current would sometimes cause the generator to trip, leaving the load suspended between the platform and the crew boat. In such situations it is vital to be able to re-start the generator as quickly as possible and to hoist the load safely to the platform," former Tower Team Foreman Bart Wenning explains.

SMART BOX

During the study it emerged that the reason for using 110 V was that, in the event of an electrical fault or short-circuit, the user would be exposed to a lower current. The inadequate function of the earth leakage device was also identified and the problem was addressed: on all generators the earth leakage device was replaced by a line insulation monitor. This continuously monitors the insulation resistance in the electrical circuit and breaks the circuit if there is any threat of an electrical fault or short circuit. This 'smart box' separates danger and work: So this system responds proactively, whereas the original earth leakage

device does not intervene until AFTER an earthing fault has occurred i.e. reactively. In short: a wonderful innovation, which enhances both safety and quality and complies with current regulations. The only question is: why has it taken up to now to tackle this problem, why not years earlier? "Quite simply because we didn't know about it," says Equipment Maintenance Manager Pieter Hotke. "It wasn't until we were examining the entire system in relation to British regulations, that this problem came to light."

LEARNING POINT

"A learning point deduced is that searches for information must be carried out thoroughly ourselves" Equipment Maintenance Manager Thijs Franken concludes in this respect. The revised generators have been in use as of this season. Pim de Zoete, Rigger Foreman, is pleased with them: "A fine innovation. Effective instructions are provided with the generators ensuring that the use of this safety device is clear to everyone. Full marks for safety!"



| Modified generators

NO ONE IN THE LINE OF FIRE ANY MORE

The Floating Line Connecting System enables floating lines to be connected without using any manpower. All it takes is two hands to operate the remote control. The system was developed in house and successfully tested on the DUQM project in Oman last year.

Connecting floating lines is an operation involving many risks: the risk of hands and fingers getting caught in the ropes, the risk of falling off the pontoons, the risk of getting hit by a line in a snap-back zone. All risks that were apparently part of the job and the weather was the only factor on which you could base a decision: 'the wind is too strong, we'll wait, it's not safe'. All that is about to change, because the Floating Line Connecting System (FLCS) mechanises the connecting operation. This is a revolutionary innovation.

"We are continuously looking for ways of reducing physical labour and minimising risks", says dredging expert Daan van de Zande, explaining the reason behind this development. "Since

the introduction of NINA, people are more likely to say 'This really is the limit'. We are all less prepared to accept the label 'accepted risk'. We take responsibility for our own safety, but we also come into action if any unsafe situations arise."

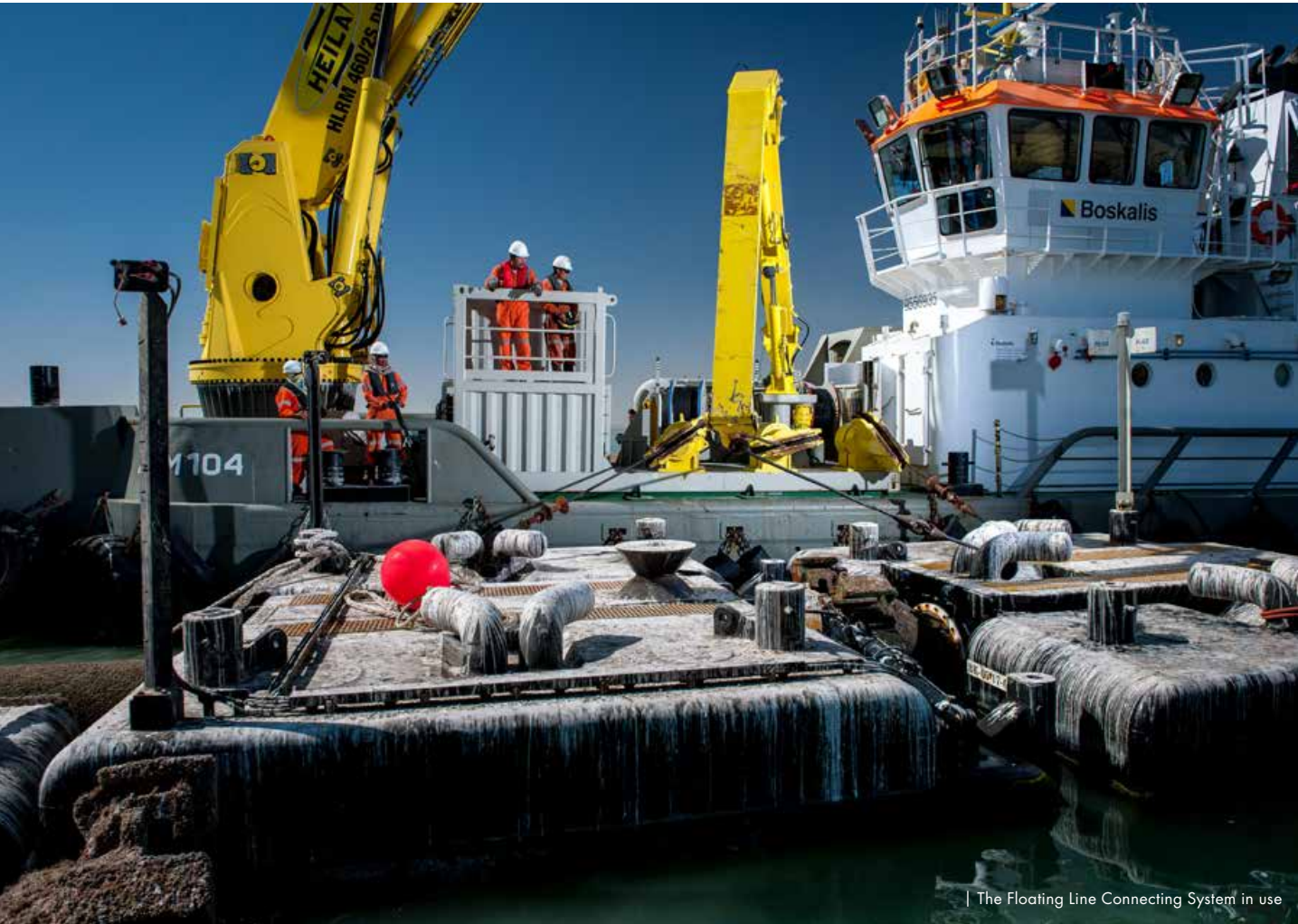
FOUR CRITERIA

Daan has been involved in the development of the system from day one. The first step was to develop self-floating lines suitable for pumping sharp material. Due to the large bending angle, these lines could be made using 100 metre sections rather than the 20 metre sections usually used for steel lines. This specifically meant that far fewer lines needed connecting. While this reduced the risks

considerably, the actual connecting still had to be done by people, using the cranes and the multicat.

Seeking to devise a method to mechanise this, various brainstorm sessions were held with people in the field. Daan: "This produced four design criteria: no one in the line of fire, no manual operations, no crew transfer, equally or more feasible than the conventional method. We made various designs based on these criteria but it always became too complex. Until, one day, Bas Veenstra and I sat discussing the 'mooring activator' he had co-designed and the possibility of using it to connect floating lines. And it rolled on from there."

>> Continue reading on page 8.



| The Floating Line Connecting System in use

PATENT

Using the ball, the ‘cow horns’ and the radiographic controls from the mooring activator, we have developed a three-winch system that draws the lines together and connects them hydraulically. “The strength of the system lies in its simplicity”, says Pieter Verbiest, Fleet Manager Auxiliary Equipment and member of the working group. “It meets all four of the criteria we had set. And if

“It meets all four of the criteria we had set. And if the system fails, you can always fall back on the old working method, meaning continuity is guaranteed.”

the system fails, you can always fall back on the old working method, meaning continuity is guaranteed.” A patent for the system is pending.

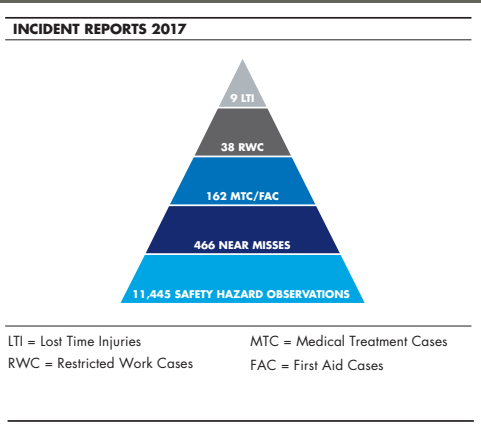
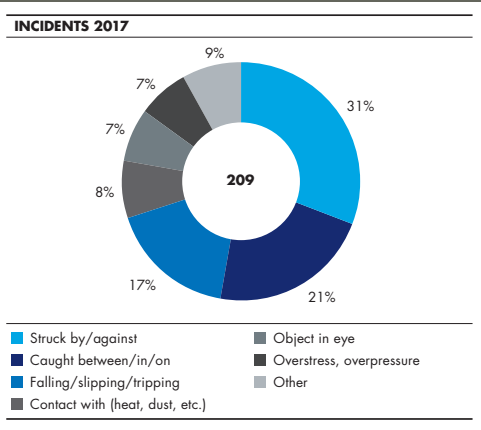
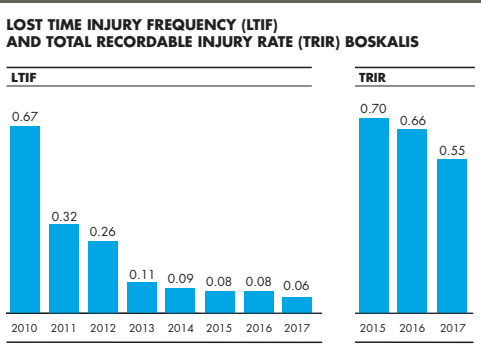
NEVER GIVE UP

Ten years is a long time to spend on research but it was more than worth it, says Richard Vermeeren, Chief Skipper of the Taurus and, as water boss, involved in testing the system. “No more people on the pontoons, no more working with ropes, that really is progress in terms of safety. The new method is easily learned, the guys are very skilful. Now it is a matter of further optimising the system. I went to Papendrecht to share my experiences as a user and to discuss possible improvements. I favour this approach as it enables us to optimise the system and achieve the best possible result. We will start working on the system again this autumn, with the same people. This way of working and learning helps us to improve continuity and increase engagement.”

The plan is that once the system meets all functional requirements, it will be rolled out across the fleet. ■



STATISTICS 2017



CREDITS

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