

#### **ABSTRACT**

Although in the last decade safety incidents at Boskalis had been reduced by 70 percent, injuries and accidents still happened. After a two-year study including a safety survey amongst the workforce and clients, the company recently launched NINA – No Injuries, No Accidents – a new safety awareness programme that moves away from a culture of Instructions and Procedures to a culture of Values. A culture where each employee, from management to crewmembers, takes responsibility for ensuring that risks are minimised and people are stimulated to address risky situations.

#### INTRODUCTION

On July 15 2010, the new Boskalis safety programme NINA – No Injuries, No Accidents – was launched: Peter Berdowski introduced NINA to the staff at the head office and a special NINA site (www.boskalis-nina.com) went online. The site clearly explains the NINA goals and philosophy, and in several brief interviews the Boskalis Management Team members describe their commitment to the safety programme. Simultaneously, the entire workforce throughout the world received information describing the background, content and

implementation of the programme. This ambitious approach to the safety campaign demonstrates a new course for safety and an even deeper commitment to fulfilling the role of a safe maritime engineering contractor.

#### TAKING SAFETY ONE STEP FURTHER

For all major dredging contractors, safety is an essential issue and all have safety systems in place. Despite best intentions the Boskalis directors found that accidents were still occurring. Although in the last decade safety incidents at Boskalis had been reduced by 70 percent, injuries and accidents still happened. To get beyond this impasse, management decided to take a critical look at the accepted safety culture.

In 2009, Boskalis carried out a safety survey amongst the entire workforce and numerous clients. The main conclusion was: Most safety programmes focus on procedures and instructions. Do this, don't do that. To achieve the shared objective of a work floor free of incidents and accidents, something else was necessary. People's attitudes and conduct had to change, their values had to change.

Above: The commitment to NINA – the No Injuries/
No Accidents safety programme – from the very highest echelons was clear as CEO Peter Berdowski introduced
NINA to the staff at the head office.

To actually be in a position to work safely, the development of a culture based on values is indispensable. And in that culture, people need to promote safety actively and talk to one another about safety problems. They need to trust their fellow workers and management and be able to speak up and speak honestly if they believe a situation is dangerous. The conclusion was that a culture of "these are the rules. I must obey," is not sufficient. A culture of "I want to work safely and have the back up of an organisation which supports that". To achieve this, the top management had to commit to it; and to win trust they had to act with transparency and encourage people to speak up.



# IADC 2010 ANNUAL SAFETY AWARD

## **AVOIDING THE USE OF A BANKS- OR FLAGPERSON DURING DRY PLANT OPERATIONS**

Each year the International Association of Dredging Companies (IADC) singles out a specific project or programme amongst its members as an example of excellence in safety. This year the IADC Board is happy to announce that the 2010 Safety Award has been presented to Royal Boskalis Westminster NV. In 2009 Royal Boskalis Westminster conducted a comprehensive study on the possibilities of safer work methods for 'heavy dry plant equipment.' Several superior work methods were developed.

## Challenges and risk factors

Common practice in the Middle East has been to use a banksand/or flagperson to guide dry plant operations. These activities are dumping/backfilling and reclamation with heavy dry plant equipment such as dumpers, trucks, wheel-loaders and bulldozers. This has result in a few serious accidents over the last years during dry plant operations.

Consequently, in 2009 Boskalis decided to investigate the root causes aiming to prevent reoccurrence. After review, several improvements such as use of a traffic plan and instructions to subcontractors have been implemented. In the preparation phase, the risk of dry plant operations is now included in the Risk Assessment of projects. And during the Execution phase, Project HSE induction is given to all employees. Especially risks during dry plant operations and with heavy dry plant equipment such as dumpers, trucks, wheel loaders and bulldozers are explained to operations and to the involved employees.



IADC President Jac.G. van Oord (right) presenting the award to Mr. P. van der Linde of Royal Boskalis Westminster NV.



Before: Persons can be hit by heavy equipment during dry plant operations. Use of bankspeople giving signals – a hazadarous situation for obvious reasons.



After: Bulldozer operator on machinery giving signals. Not hazardous.

Also a practical solution was introduced to ban the use of a banksor flagperson during backfilling operations. This eliminated the root cause of the accidents which occurred.

A system was implemented whereby the operators of the wheel loader and/or bulldozer signal to the dumper drivers as to where to dump. The operators and divers receive a simple training and induction on site how to handle these activities. The implementation of this idea resulted in improved traffic control and segregation of work activities so that no employees are in the vicinity of heavy equipment and thus cannot be hit by such.

So far, good experiences have resulted on projects. No banks- or flagpeople have been appointed and no further accidents have occurred. Safety statistics have from 2000 through 2009 have indicated a steady decline in Lost Time Injury Frequency (LTIF).



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graduated from the College of Advanced Education – Environmentology in 1991, and received a university degree in 1995 in Environmental protection. He did a postgraduate study on Safety in 2002 at the College of Advanced Education. From 1995 to 1999, he worked at the Department of Public Works Management South-Holland; from 1999 to 2005 in the glass production industry; in 2004-2005 he initiated, developed and set up a European Environmental Organisation. In 2006 he joined Boskalis and is presently Corporate QA/HSE Manager and process manager for the large-scale NINA campaign.



Figure 1. To launch the NINA programme, Peter Berdowski is shown signing the poster listing the five core values of the programme.

The NINA programme addresses these issues by setting out unequivocal standards and explaining clearly the expectations for staff and sub-contractors regarding safety conduct. The basis for the NINA safety programme is a Vision Statement, which is based on five core values and five rules.

#### **VALUES & RULES**

The five core values tell people what we expect from one another in terms of safety. Each value starts with the word "I" to emphasise individual commitment and responsibility (Figure 2). The fundamental value is that each person is responsible for his or her own safety, but also for the safety of colleagues. So adhering to the Values means taking action when unsafe situations are observed and talking to others if we think they are at risk.

These actions must be taken regardless of rank or position: No one on any level of the organisation should be angry or insulted if a colleague makes a suggestion that prevents an accident or saves a life. Each and every employee must always be open to feedback from other people about their safety conduct.

One of the main focuses of the launch was to gain the trust of all employees and convince them that everyone in the organisation, including (top) management, will work on the basis of these values and encourage others to do the same.

The five rules constitute a set of useful tools that support the values and put them into hands-on practice. To establish a healthy and safe working environment, one must be aware of the associated risks. Health and safety risks vary from project to project, and from place to place. Having the right tools on hand for assessing risks, taking the right action and informing everybody involved

are essential steps in the implementation process. The objective is to discuss which initiatives to take and which instruments and tools to use to make the values and rules a success on each specific project, vessel or work location. Every project has its own specific size, activities and local conditions so instruments can be used flexibly.



# **VALUES**

I AM RESPONSIBLE FOR MY OWN SAFETY
I APPROACH OTHERS ABOUT WORKING SAFELY

I TAKE ACTION IN CASE OF UNSAFE OPERATIONS IF NECESSARY, I WILL STOP THE WORK

I ACCEPT FEEDBACK ABOUT MY SAFETY BEHAVIOUR REGARDLESS OF RANK AND POSITION

I REPORT ALL INCIDENTS, INCLUDING NEAR-MISSES, TO INFORM OTHERS AND BUILD ON LESSONS LEARNED

## RULES

PREPARE A RISK ASSESSMENT FOR EACH PROJECT, VESSEL OR LOCATION

OBTAIN A PERMIT TO WORK FOR DEFINED HIGH-RISK ACTIVITIES

MAKE A JOB HAZARD ANALYSIS FOR HAZARDOUS NON-ROUTINE ACTIVITIES

BE INFORMED ABOUT RISK & CONTROL

BE FIT FOR DUTY AND WEAR THE PPE

Figure 2. The poster with the five core values and five rules.



Figure 3. A group discussion during a training session.

The idea behind NINA is to help achieve the shared goal of an injury/accident-free workplace. Injuries and accidents can only be avoided if everyone is equally committed to the programme.

### **COMPONENTS OF THE PROCESS**

Extensive weekly training sessions and workshop programmes must be conducted. The first took place in the Netherlands in late August. Now 40 to 50 workshops on all layers of the company are taking place every week. From September onwards, the global NINA start-up meetings in Boskalis' home markets

on international projects and on the fleet are underway (Figures 3 and 4).

A new Q-Aid quality management system was released in August 2010, incorporating the NINA principles, and the NINA site www.boskalis-nina.com was launched.

The training and workshop programme is tailormade and focuses on several levels of training:

- Senior Management Training
- Management Training
- Do-it Training for Supervisors
- Do-it Workshop for Operational Personnel

#### CONCLUSIONS

The global introduction to NINA is now in full swing. NINA is backed up by an extensive training and workshop programme that gives all employees an understanding of the NINA principles and shows them how to put the principles into practice. The introduction process will continue over the next few months. During that time, NINA will be presented through training sessions, start-up meetings and site visits. The important aim of this training programme is to win the trust of all employees and convince them that addressing issues to improve safety and notifying someone when a situation seems unsafe is in everybody's best interest.

In addition, the dedicated site www.boskalisnina.com clearly sets out the NINA goals and philosophy. The NINA site keeps everybody informed of the latest developments and also makes it possible to send feedback about NINA and safety problems in general.



Figure 4. Studying "My NINA Implementation Plan".