LIEVEN DURT

IADC 2012 SAFETY AWARD: CHILD – "COLLEAGUES, HELP INJURIES TO LEAVE DEME"

ABSTRACT

CHILD is an ambitious safety and prevention project, aiming to increase awareness for dangerous situations and safe behaviour at the workplace; to incite personal responsibility, action and initiative; and to radically change the mindset and corporate safety culture. The unique approach is that top management takes the lead and that the safety department and other corporate divisions have a supportive role to play. The message is threefold: Safety is personal. Safety determines the reputation and future of the company. And safety and efficiency go hand in hand. Unfortunately, a tragic incident on one of the project sites was at the origin of the CHILD programme. Hard lessons were learned before there was healing. The CHILD campaign is the successful answer to some old questions: How to reach over 4,000 individuals in a large corporate structure, and how to get every single person to take responsibility and initiative for their own safety and for the safety of their colleagues.

INTRODUCTION

Simão Macanda was a trainee tugboat deckhand at DEME's Soyo site in northern Angola, where he was involved in a project for landfall and cofferdam construction, and trenching operations for three near- and offshore gas pipelines. At Soyo, DEME was a subcontractor for two French companies, Acergy and Spiecapag, which were working for the client Angola LNG – a consortium of Chevron, Sonangol, BP and Total.

Simão Macanda was 53 years old and the father of eight children. He was fatally injured when towing operations turned bad and he passed away in a Luanda hospital. He had been working with DEME for just five days. Apart from the personal grief, the accident sent a shock wave through the company. Work on-site was stopped immediately, and both management and external investigators were flown in from overseas. It took 22 days after the accident happened before activity on all vessels could resume – and not before corrective actions had been implemented and other gaps discovered during the gap analysis were closed.

Above: During sand replenishment in the rough waters of the North Sea, a worker is in full PPE gear while working onboard a trailing suction hopper dredger. The need for strict adherence to safety rules and prevention of accidents became extremely apparent after a fatal accident on the job in Africa. Shortly thereafter, a new policy called CHILD was put in place.

The final close-out report concluded with a concurrence of circumstances and responsibilities, identified as serious shortcomings in the field of equipment, training, procedures, and organisation. But first and foremost was the lack of leadership and accountability. The scathing findings were very confrontational. Although blame was deliberately avoided, the ultimate judgment was rather humiliating. A cruel lesson was learnt. A company-wide soul searching followed. It was obvious that a profound change of safety culture was needed – a change in the way the entire company sees safety. This new mindset required an increased awareness in the first place from top management all the way through to site operators. That was how CHILD was born: an appeal to "Colleagues, Help Injuries to Leave DEME".

CHILD: THE FIRST STEPS

As soon as corrective action had been taken on the Angola project and activity was resumed, DEME management began facing the broader picture. Why had this turned so bad and what should be done in terms of company policy, organisation, responsibility and long-term measures? We did have a safety policy, didn't we? We did have an operational safety department, toolboxes, "take-5"moments, even cultural and

Figure 1. The new logo: blue, falling dominoes at the right side represent dangerous situations. The bold letters underscore strength. CHILD seeks to be a dam: The dominoes lean against it, but do not fall.

CHILD

COLLEAGUES, HELP INJURIES TO LEAVE DEME

HAZARD TOP 10

This is a classification of the most frequently reported incidents during the year 2010 (until July)

1. Slipping, tripping, hitting
2. Lifting operations
3. Falling/dropping objects
4. Wires, slings, ropes
5. Dust, sparks,... in eyes
6. Working with hand tools
7. Jammed fingers
8. Working on floating pipelines, pontoons, buoys,...
9. Working with earthmoving equipment
10. Lifting of heavy weights manually

SPEND MORE TIME ON WORK PREPARATION, TO ANTICIPATE IS BETTER THAN TO CORRECT!
AND BEFORE YOU START: TAKE 5 !

	near miss (WF = 1)	first aid (WF = 2)	medical treatment case (WF = 3)	restricted work case (WF = 6)	lost-time incident maximum 5 days (WF = 5)	lost-time incident more than 5 days (WF = 6)	% of all reported incidents	total score (Occurrence x WF)
1. slipping, tripping, hitting	1	18	14	8	1	9	21,8	170
2. lifting operations	11	0	5	3	0	2	9,0	90
3. falling/dropping objects	2	2	6	1	0	3	6,0	68
4. wires, slings, ropes	2	6	3	1	0	3	6,4	45
5. dust, sparks,... in eyes	6	6	5	1	1	1	6,0	42
6. working with hand tools	0	2	3	1	2	2	4,3	39
7. jammed fingers	0	1	2	1	1	3	3,8	35
8. working on floating pipelines, pontoons, buoys	10	2	3	0	0	2	7,1	35
9. working with earthmoving equipment	6	5	5	0	0	0	6,8	31
10. lifting of heavy weights manually	0	0	3	1	0	2	2,6	25
Total	32	42	47	19	5	27	73,5	

Figure 2. "Hazard Top 10" list points out the most frequently reported on-the-job incidents in the first half of 2010.

behavioural campaigns. We did distribute safety leaflets and special safety issues of our company magazine, or so we thought? We had after all hammered for years on wearing personal protective equipment, RIGHT?

Top management intervened at this point, firmly putting an end to self-pity and self-justification. It was humiliating enough that outsiders had exposed our weaknesses and shortcomings. The way we dealt with safety was sub-standard indeed – and we had to face it. That message came out loud and clear.

As a start, a working group was set up with the mission to come up with proposals and a blueprint for short- and long-term actions. The members were chosen from within the very top of the organisation and from different backgrounds in the company – including men, women, engineers, technical and administrative staff – in order to get fresh ideas and a new approach.

Brainstorming began late 2009. A survey was conducted amongst all levels of the company – on site, on board vessels, at offices. Less than five months later, this resulted in 69 "action points". Information and statistics were prioritised in risk classes. Based on weight factors for categories such as "near misses", "first aid", "medical treatment", "restricted work" and LTI, a DEME Hazard Top 10 list identified "slipping, tripping, hitting" as the most frequently reported incident during 2010 – responsible for no less than 27 percent of all incidents. Planning, time schedule and proposals for a dedicated safety campaign were submitted, discussed and approved. By early summer 2010, ideas had sufficiently matured for the formal kick-off.

CHILD CAMPAIGN LAUNCHED

The CHILD project, an acronym for Colleagues, Help Injuries to Leave DEME, was born. The

Lieven Durt (left), Dredging International area director Africa, accepts the IADC Safety Award on behalf of DEME from Koos van Oord, president of IADC.

very name of the project of course made a strong association with caring, fostering, shielding, protecting. You do not want to find yourself or your colleague in a situation you would not wish for your own child.

A project manager was appointed, and he was formally given "full authority and support to implement and to co-ordinate the actions generated by CHILD". A dedicated email address was distributed amongst all crew and staff for CHILD-related actions, questions, remarks and suggestions.

A telling logo (Figure 1) was designed: the blue, falling dominoes at the right side represent dangerous situations and behaviour. Or they can be interpreted as someone in danger, losing control, unsteady, in need of support. They may also be seen as one unsteady person making others become unstable. CHILD seeks to be a dam: The dominoes lean against it, but do not fall. The bold letters underscore the idea of strength. The dam will get stronger if each and every one sticks closely together for the same objective.

Top management gave the starting shot. A letter from the CEO Alain Bernard was distributed worldwide amongst head office, area directors, project managers, site offices, regional desks, vessels, staff and crew. It was dated June 10, 2010, less than six months after the Angola incident. The message presented the new CHILD initiative and focussed on three points:

1. CHILD aims to make safety a personal issue. We take safety in our own hands, as a matter of priority. First we think about our own and others' risks; then we start working safely. This must become a personal, spontaneous drill and not the result of enforcement.
2. CHILD wants to point out that poor safety statistics reflect badly on the reputation of the company and will eventually jeopardise the future of our organisation.
3. CHILD wants to confirm the fact that safety goes hand in hand with efficiency; a well-prepared and thought-out project is a safe project and will generate a profitable outcome.

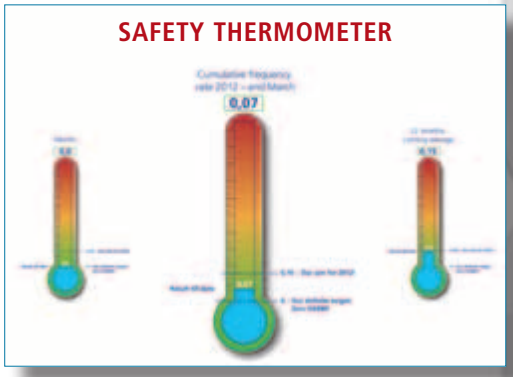
To achieve increased safety awareness, CHILD action points will focus on our people, the organisation, the equipment and the procedures.

CHILD GROWING UP

As the CHILD action programme was fine-tuned, the focus was narrowed on six priority issues:

1. Safety will always and everywhere come in the first place. Applications of this principle were identified during work execution; work preparation; meetings; internal and external communications; and in the incorporation of risk assessment in the method statements.
2. More focus is put on safe work preparation and safe work planning. This was made concrete by stressing "Take-5"; Risk Inventory and Evaluation (RI&E) and Job Safety Analysis (JSA); complementing Standard Operating Procedures (SOPs); and by organising an increasing number of toolboxes.
3. Safety is everyone's concern. Every employee has the task to report and to correct unsafe behaviour and situations. Everyone gets the opportunity to propose improvements and new ideas. "Stop-work" authority was explained and promoted by no one less than the CEO. A new Incident Notification and Analysis Form was introduced; Safety Hazard Observation and Suggestion Cards (SHOC) were distributed; and safety was emphasised during the annual feedback talk with crew and staff.
4. A more supportive, documented approach towards safety issues was set up in the company. This includes an overview of the DEME "Hazard Top-10" (Figure 2) more profound safety education; site instruction with regard to health, travel, local legislation, and so forth.
5. DEME management staff is giving the correct example. Seminars for top management, area managers and project managers will be organised; the Project Management Manual (PMM) will be reviewed; safety-related training sessions for staff are to be improved.
6. Clear definition and communication of DEME standards with regard to personal protective equipment (PPE) (Figure 3); point of interests during execution of heavy lifts; how to construct a proper jetty; correct handling and storage of compressed gas cylinders; correct transport and storage of fuel, oil, chemicals, paint and other things; alcohol and drugs policy; towing; explanation about Permit-To-Work (PTW) and Lock-Out-Tag-Out (LOTO) systems; the use of Material Safety Data Sheets (MSDS); minimum requirements for oil spill equipment, and so on.

Figure 3. All workers are required to wear the appropriate PPE (personal protective equipment) at all times.



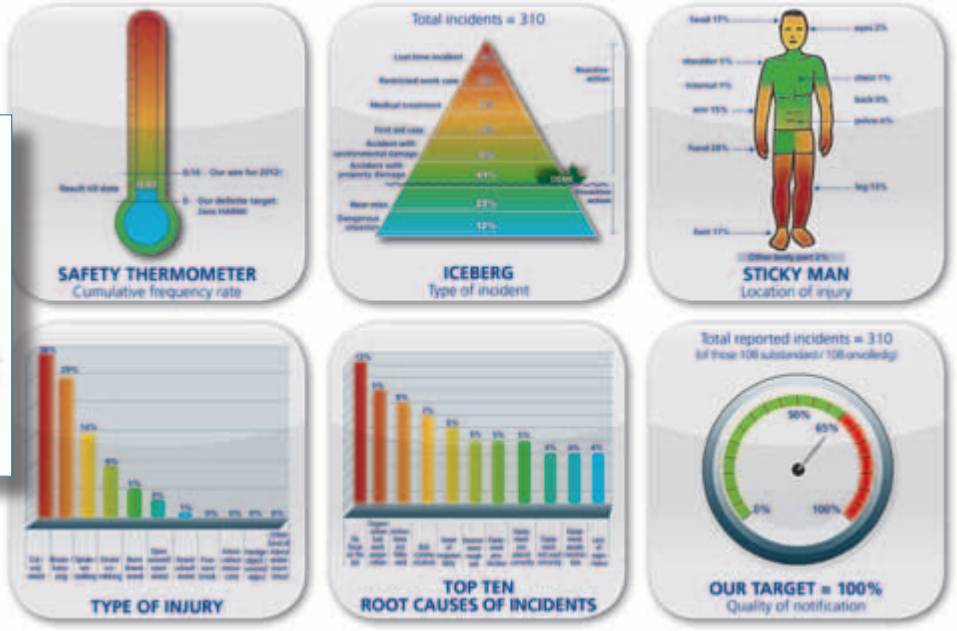


Figure 4. The Safety Thermometer for indicating the progress of the CHILD campaign and Dashboard give an overview of the progress of the Safety programme.

At about the same time in mid-2010, the Safety Department itself was also re-structured and strengthened with additional staff and budget. Working visits were paid to various major companies that have a reputation for their professional safety policy and good safety record. Lessons could be learnt from their experience.

A "Safety Thermometer" (Figure 4) indicating the progress as the campaign unfolded was developed. After a first announcement in July 2010, a comprehensive article on the CHILD programme appeared in the April 2011 issue of the company magazine. But it was a series of seminars that really triggered the worldwide campaign.

Figure 5. A DVD version of the Angola incident was made for as part of the seminar presentation.

Eighteen CHILD safety seminars worldwide

To start with, two seminars were organized: one for top management and one for area and project managers. Everyone was reminded of the origin of the CHILD initiative, namely the tragic incident in Angola, and the severe consequences both on a personal level and for DEME. Safety is personal, has to do with reputation and efficiency, which was the "red thread" for this 2-day seminar.

To catch broadest possible attention of all colleagues the seminar was setup psychologically for four typical types of personalities:

- In a first session, the statistics and the figures were presented for those who love to analyse and look at the numbers.
- The second session was the presentation of the Angola accident (Figure 5) for those who like to be convinced by the facts. The Angola case clearly points out each and everyone's responsibility, but especially the responsibility of the managers in the company, starting from the top of the organisation down. This presentation indeed targeted these managers specifically. The Angola case was always presented by the responsible area director himself (also the chairman of the CHILD initiative) who was present during the original accident investigations and who had to deal firsthand with this tragic situation.
- The third session was a theatre play where sketches showed typical and familiar unsafe situations on project sites, played by professional performers to which the audience was asked to respond. This was a particularly interactive show, addressed to people who like to be actively involved with the subject.
- In the fourth session 7 practical workshops were held, where people could feel and touch the latest developments in PPE: As a team safely build a scaffold, practice safe lifting of daily weights and prevent back injuries, experience what safe noise levels are and so on… This session was geared to people who only believe when they can feel and touch it.

In the closing session, people were asked to write down and submit a personal commitment and express where they intended to make a difference in the company from now on. The commitments were collected and filed and will be used for future purposes.

Seminars shift the focus

From now on, DEME would follow a unique approach with regard to raising the safety awareness: In the past, the safety department used to spread the word, but it still left some people in doubt with regard to the real meaning of promoting safety: "Is it not rather efficiency and production that top management is after?" Now, the very top management would take the lead of this campaign. Throughout all the seminars the real message was now clear and direct, because the interactive discussions were personally entertained and presided by the CEO, the COO and other members of the management team. Other departments, including the Safety Division, would play a supportive role because

of their obvious expertise and by way of disseminating the central message and execution. The focus was on the top management. As they were leaving the seminar, every participant was given a few "good viruses" – sweets with the name of the CHILD programme printed on them. It was just one little idea to spread the message and keep it alive on the work floor. And just like viruses are spreading – often even out of control, so the CHILD programme soon became the talk-of-the-day amongst 4,000 staff and crew all over the world.
The seminars at senior management level came to an end in January 2011. As from spring 2011, the initiative was generalised and similar seminars were organised for operational management, vessel staff, site and desk management. Based on specific feedback or case by case, dedicated seminars were also organised on sites and at desks in Belgium, the Middle East, India and the Netherlands. Some area directors and regional offices began organising the same at their level of authority. Clearly the message had been heard, and the "good viruses" were spreading. No one could escape facing the issue any longer. The programme of each of the following seminars was broadly the same as with the two seminars for senior management. It was deadly quiet, every time the story of Simão Macanda was recounted – universally moving and recognisable. The interactive stage play was so concrete that discussion came up spontaneously, and various initiatives were suggested for correcting situations and behaviour that everyone perceived as familiarly dangerous. And more than anything else: Nobody left the seminar room without a profound conviction that they themselves had to face, to report and to correct unsafe situations and behaviour. That was a major result for the intended change of mindset. Finally, and before a new packet of "good viruses" was "sneezed" through the audience, every participant was asked to commit to one very specific point of action in the field of on-job safety. It was announced that this written allegiance would be followed-up. Listening to feedback after the initial seminars for operational management, DEME decided to organise additional and specific safety seminars for other departments, such as Human Resources. Observations confirmed that language issues and multicultural work environment certainly influence safety matters. Assignment practice, site allocation, availability of technical skills, and replacement of crew asked for alertness with regard to safety implications. Worldwide, a total of eighteen safety seminars were organised. More than 1000 management, staff and crew were directly reached. Very few of those that did not participate, did not catch a word of the safety campaign that had become the talk-of-the-company. Addressing 4,000 individuals in so many work situations in so many countries all over the world had been the biggest challenge. DEME's successful CHILD safety seminars proved that it is feasible. Safety concerns were no longer just an annoying requirement in a bidding procedure. Safety had become a living issue in the company. It was time to bring the CHILD safety campaign into higher gear.

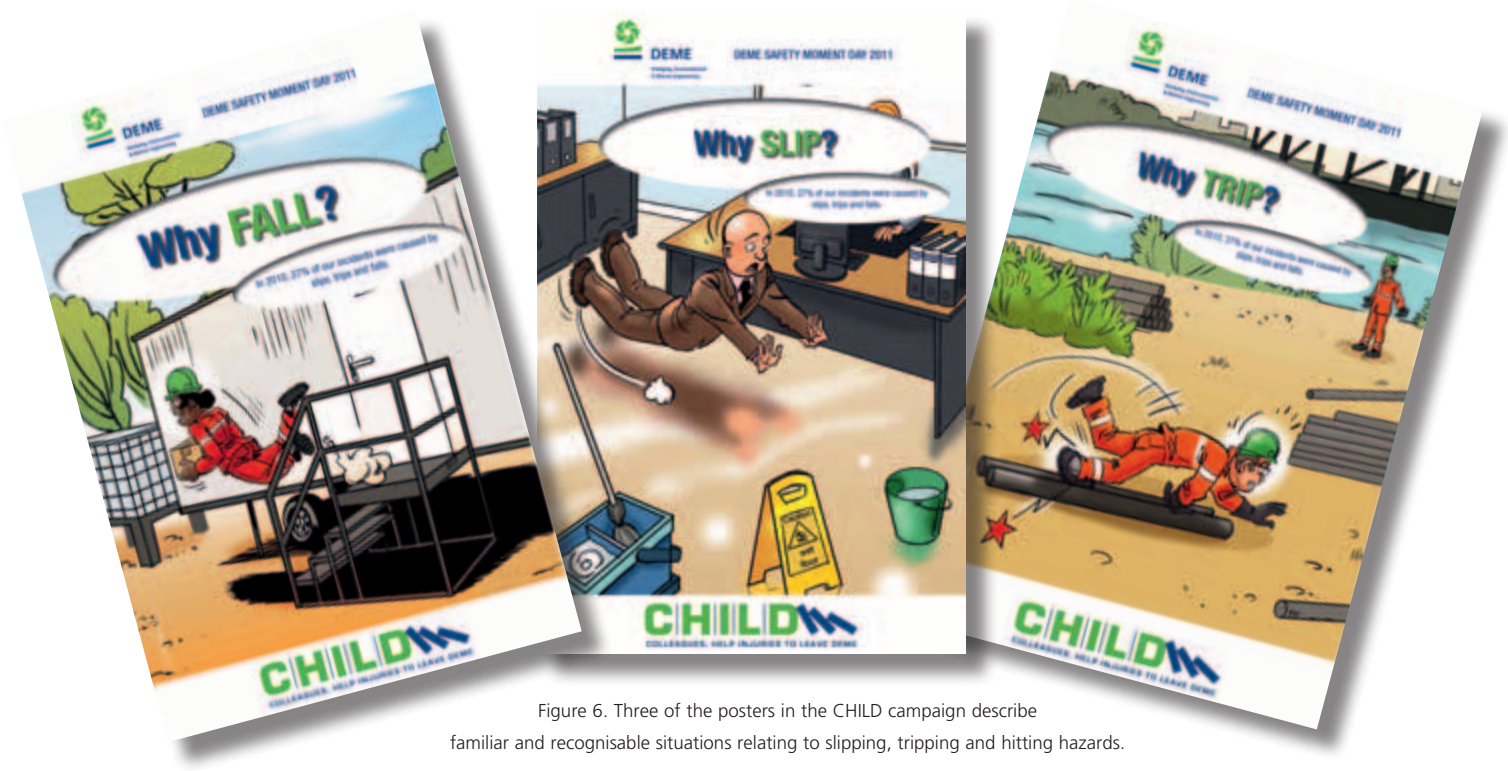


Figure 6. Three of the posters in the CHILD campaign describe familiar and recognisable situations relating to slipping, tripping and hitting hazards.

SAFETY MOMENT DAY 2011

To keep up the momentum, DEME Management proclaimed a "Safety Moment Day" to be held at all sites, vessels and offices on Wednesday November 30, 2011. A series of tools were developed to increase safety awareness and to once again spread the CHILD virus. The campaign would start after the summer holidays, and steadily escalate to the set date. In a period of barely eight weeks, operational management, staff and crew all

Figure 7. The DVD focussing on "Slips, trips and finger nips".

over the world would be bombarded with an all-round barrage of letters, posters, e-mails and specific actions. There was no way to escape. The "Safety Moment Day 2011" campaign was launched with a letter of September 12, 2011, signed by the CEO, the COO, the chairman of the CHILD campaign and the QHSE-S manager. The aim was explained ("to increase awareness") and the focus was reminded to be on 'Slipping, Tripping, and Hitting' – the top priority of 'DEME's Hazard Top-10'-list which had been developed and promoted one year earlier by CHILD to focus the attention of the employees on the most dangerous situations. All workplace, site, project and area management was explicitly asked to be visibly present during the campaign, together with the area directors and the other members of the DEME Management Team. Various initiatives and practical arrangements were set forth.

Specifics became clear in a CHILD letter of October 28, 2011:

- Three sets of posters (Figure 6) each are distributed. In a series of telling, colorful comic strips, they draw a picture of familiar and recognisable situations relating to slipping, tripping and hitting hazards. A strong picture tells more than a hundred words. Apart from a reference to the general framework of 'DEME Safety Moment Day 2011" and the CHILD logo, only two lines catch the eye: Why fall/slip/hit? And a reminder that in 2010 some 27 percent of all incidents in the company were caused by slipping, tripping, and hitting. All posters were purposefully neutral from the point of view of culture, race, or gender. A version was available without text, in order to be locally completed in any required language. The enclosed posters had to be visibly displayed on vessels, at projects, in work shops and offices.
- A DVD (Slips, trips and finger nips) would shortly be sent, produced by IMCA, to support the presentation/toolbox to be held on the "Safety Moment Day". The DVD addresses a variety of aspects, such as: hazard identification; risk assessment; means of control like Permit to Work (PTW); detailed procedures; importance of looking out for each other; safety is everyone's business; good housekeeping is really important; keep your eyes open; stop and correct, and so on (Figure 7).
- An announcement was made that an inspection tour on and about the site/workplace would be organised by the Management Team, together with the management of the ship, the area, the site. An inspection list and a blank action plan for the inspection tour will be made available.

A series of four letters followed within less than a month, between October 31 and November 23, with reminders, alerts, practical arrangements, requests for feedback. The bombardment was on. The company was under heavy shelling now and no one could hide against incoming shrapnel.

SAFETY QUESTION OF THE WEEK

To make the impact even harder, a parallel "raid" had been launched quite some time before with regular and continuous safety alerts by e-mail. Not the common e-mails that go unnoticed and disappear as spam before they are even read. A special automated format was created on a full A-4 page, with a multiple choice "Safety Question of the Week" to be answered. This was sent to all company e-mail addresses once in a week.

To make things even more enticing, the "Safety Question of the Week" was linked to a prize winning competition. Safety questions included very recognisable, everyday subjects: eye protection; the correct use of fire extinguishers; hazards related to lifting gear; working with excavators and wheel-loaders; management of subcontractors; the use of portable ladders, and so on (Figure 8).

The "Safety Question of the Week" e-mail campaign was an overwhelming success. Up to 650 answers came in every week. In total, the campaign was able to reach more than 1,150 active participants who answered the safety question on a regular basis.
As a very practical step towards improved protection against slipping and tripping, the Procurement Department selected anti-skid steps that were offered for fixing on stairs in offices and on vessels. An order form was sent out, and every local manager was asked to mark the number of desired appliances with stairs width.

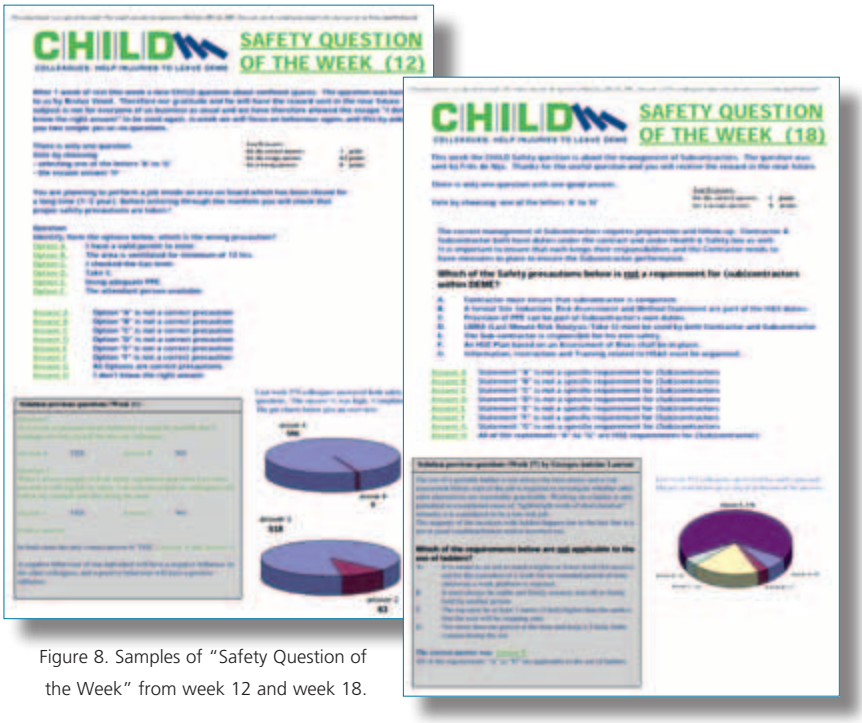


Figure 8. Samples of "Safety Question of the Week" from week 12 and week 18.

When the "Safety Moment Day" finally arrived, Presentation/toolboxes were held all over the world. Company-wide safety inspection tours were organised. At all workplaces an inspection checklist was circulated, containing eleven risk areas and several more focus points. Improvement action plans were submitted. The DEME-wide CHILD Safety Moment Day campaign 2011 was concluded with a letter of thanks signed by the CEO and the COO, stressing that a change of mindset had indeed been achieved. It was hard to imagine that even one single person in the company had not been confronted with the safety campaign and its objectives. The letter expressed gratitude for the 512 people that had taken part in a total of 167 inspections. No less than 983 action points for improvement had been identified and more than 1,000 anti-skid steps had been distributed so far. A new safety poster was added and would be displayed, together with this letter, on board all vessels and project offices. And if someone might have doubted, a new "DEME Safety Moment Day" would be planned for 2012. As scheduled, this took place in November 2012.

IMPROVEMENTS

Obviously management would like to see tangible and measurable results in return for the huge efforts that were put in the CHILD initiative. These measurable results indeed started to show and are best presented in the graph in Figure 9. The graph shows the 12-month rolling average LTI (Lost Time Incident) frequency rate and the number of Near-Miss Reports. One can notice a further escalation of the LTI frequency during the period of contemplation right after the fatality in Angola, followed by a flat curve when CHILD started to deploy its first initiatives and seminars for top managers. A sudden and steady decline is noticeable when more and more people were getting involved, resulting in an absolute low in the last few months where DEME enjoyed even a few zero LTI months.

Similarly, as soon as CHILD started focussing on pro-active safety (near incidents and dangerous situations), rather than on reactive safety (incidents), the near-miss reporting increased, with an even steeper increase in reporting after the popular DEME Safety Moment Day.

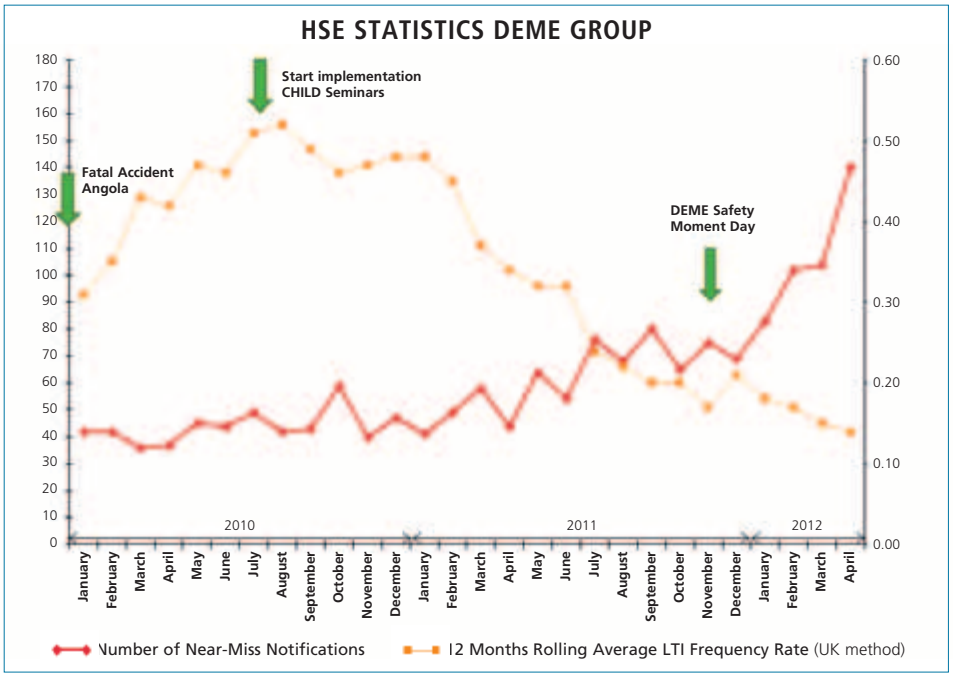


Figure 9. Graph of number of near-miss notifications and 12 month rolling average for LTIs.

CONCLUSIONS

The CHILD initiative was a result of a gap analysis after a fatal accident in Angola in December 2009. This gap analysis was conducted by a third party and clearly exposed shortcomings in leadership and in the organisation. It also pointed out the responsibility of the respective management levels within the organisation. This was the trigger for a radical change of the management's attitude and awareness around safety. It had to be embedded and promoted as a core value by top and line management and no longer *only by* – but still of course with the help of – the QHSE department.

After a period of contemplation and internal and external consulting, an ambitious programme was worked out by the CHILD working group, which comprised enthusiastic top management representatives.

The plan was to change the awareness of 4,000 employees, with three important focusses:

1. Safety is personal, because it concerns you and me;
2. Safety is about reputation and is a guarantee for the future;
3. Safety and efficiency go hand in hand.

Various initiatives were set-up focussing on 4 domains of the company: *people, equipment, organisation* and *procedures.* Amongst the most effective undertakings should be mentioned:

- The 18 seminars presided and entertained by top management, which mainly focussed on the personal responsibility of each manager and employee
- The very popular Safety Question of the Week, which made safety become a popular subject of regular discussion
- The issuing of the DEME Safety Hazard Top Ten, which became a popular subject for toolboxes on the biggest hazards of our job
- The Safety Moment Day on November 11, 2011 (and followed up in November 2012) initiated in each region by its own area management and followed-up by numerous management safety walk-abouts, generating loads of practical and useful feedback and suggestions for improvements.