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Effective tools for the highest level of safety

we care

The nuts and bolts: permanent awareness

we create

SAFETY FIRST

Occupational safety in industrial service



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“SUSTAINABILITY MEANS SAFETY FIRST”

The importance of occupational safety in the process industry is constantly increasing. What kind of leverage is available to further improve occupational safety? What future technologies can support these efforts? Answers from Fred Lütkenhaus, Head of Corporate HSEQ at Bilfinger.

Accidents occur relatively frequently in the process industry, especially during maintenance work. Do you have an explanation for this?

There are in fact a number of explanations: Firstly, maintenance work is always carried out under time pressure. The purpose of maintenance work is, after all, to eliminate defects or malfunctions that could potentially interrupt or hinder production operations. Secondly, the work is often carried out under difficult conditions such as narrow spaces, in heat or with the risk of falling. Not only that, but maintenance work is always an “exceptional” situation in which unplanned events can occur. This is particularly true when activities overlap in time or space, such as when several trades are being carried out side by side. In such cases, the greatest hazards exist due to what is then rapidly increasing complexity.

How do you maintain an overview in situations like that?

It is important that there is a central unit in charge of all processes. This unit has to keep an eye on all of the potential hazards and issue its approval for dangerous work. With the help of work permits, which must be updated daily and describe the risk assessments and corresponding safety measures, it is possible to that work only begins once all the necessary occupational safety measures have been implemented. But in order for everything to run smoothly, the units carrying out the work must also be able to

handle and check these work permits. It is a great advantage if the partners involved have known each other for some time and the processes are coordinated in great detail. The increasing digitalization of processes in maintenance is very helpful here.

What do you see as the most important levers for increasing occupational safety during maintenance and repair work?

For me, the most important levers are the qualifications and awareness of supervisors and employees. This is because all the devices and precautions for occupational safety are worth nothing if they are not meticulously observed and, ideally, intrinsically implemented. Unfortunately, most accidents today can be traced back to the fact that employees - not infrequently due to time pressure, the abundance of tasks or sloppiness - do not sufficiently put safety rules into practice and want to quickly achieve a solution to the problem. In doing so, however, they lose sight of their own safety and the safety of their colleagues (Brother's Keeper Attitude). This type of behavior must be avoided at all costs. And avoiding it is only possible if specialists and managers are trained and sensitized to occupational safety issues on an ongoing basis, in addition to audits and inspections. Another lever is the Behavior Based Safety method, which we intend to use more frequently in the future. The same applies to even more thorough analyses of the data available in our well-established ACTIVE reporting system.

How important is occupational safety when awarding contracts?

Occupational safety indicators are now a regular part of tenders in the process industry and are becoming increasingly important. If industrial service providers demonstrate above-average performance in this area, this significantly increases the probability of being commissioned. This applies not only to the awarding of contracts, however. Shortcomings can also lead to the loss of existing contracts and, of course, to high contractual penalties and claims for damages. We very much welcome the increased importance of occupational safety at Bilfinger, because the health and safety of our employees and external partners is a top priority.

How have the accident figures at Bilfinger developed in recent years?

One of the goals we have been pursuing for many years is to be a leader when it comes to accident prevention in our industry. To this end, we have implemented numerous measures as part of the "SafetyWorks" initiative to continuously improve occupational safety in all areas. As a result, our Group-wide key performance indicators have developed extremely well. Lost-time accidents were at an internationally leading level in our industry in the past financial year, with an accident rate of 0.21 per 1,000,000 working hours. For us, occupational safety is a central element of sustainability. At Bilfinger, sustainable therefore also means maximum safety first.

In your opinion, what forward-looking technologies have the potential to increase occupational safety in maintenance and repair?

There are a number of interesting developments: On the one hand, of course, increasing digitalization is contributing to higher occupational safety. If all work steps are digitalized, from the risk assessment to the completion of the activity, the manager can concentrate more on the actual task. Documenting hazardous situations and near-misses with the help of an app also promotes occupational safety because the data can be recorded and evaluated more systematically. Remote control and augmented reality technology also have considerable potential for maintenance and repair tasks. With their help, employees receive additional information about work steps and the potential hazards they pose. And I also expect a lot of input from increasingly intelligent sensor technology, which, in addition to predictive maintenance, can also make a significant contribution to the analysis and elimination of defects.



“ Remote control and augmented reality technology also have considerable potential for maintenance and repair tasks.”

FRED LÜTKENHAUS, HEAD OF CORPORATE HSEQ AT BILFINGER

TOOLS AND METHODS FOR MAXIMUM SAFETY

A comprehensive concept must be developed in order to achieve the highest level of occupational safety. Any such concept must include various tools, methods and best practices and these have to be carefully coordinated.

When Roland Piff is asked what the perfect occupational safety concept looks like, he tends to falter somewhat. The 57-year-old is Head of HSE at Bilfinger Life Science and has been dealing with occupational safety issues for more than 30 years. "There is probably no such thing as the perfect concept", he says. "But a concept that manages to combine and coordinate highly effective tools and methods is very close to the ideal."

He is convinced that training and information campaigns form the basis for all occupational safety measures. It is vital that these campaigns succeed in communicating the basic rules that apply to all employees and managers throughout the Group. "At Bilfinger, we call these basic principles 'Life Saving Rules'. With our Line of Fire campaign, we want to clearly communicate these key issues to our employees. If everyone adheres to them, then we have already achieved a great deal. The most important lever for a high level of occupational safety is, after all, the employees themselves", says Piff.

For this reason, the examination of work permits, the implementation of the safety precautions listed in them, and the last-minute risk analyses are of central importance. Before any work begins, the employee must first take a close look at the potential hazards involved and take the necessary time to prevent unforeseen situations from arising in the first place. A checklist in the last-minute risk analysis helps them remember all the necessary steps.

"However, potential risks to employee health can also be identified through safety walks", Piff explains. "A lot of accidents could be prevented before they even happen. If managers take the time to have regular discussions with employees and inspect workplaces and walkways for potential hazards. It is really important, however, that these safety inspections are carried out regularly and systematically and that they are also documented in writing." The HSEQ app developed internally by Bilfinger has proven to be helpful in this regard: With this app, all employees can easily document HSEQ-relevant events on their smartphones and forward them to the central HSEQ software. This simplified process makes a significant contribution to a better data landscape, more effective investigation and prevention of incidents, and thus to greater safety.

According to Piff, the foundation of daily safety work also includes measures that provide information on how to handle equipment or situations safely. These include daily safety briefings, regular meetings on occupational safety, safety days and knowledge cards containing notes on the most important safety rules for different trades and equipment. "It is crucial that all these measures are not only kept up to date, but that they are also presented in a way that is appealing", says Piff. "Because then employees are motivated when it comes to occupational safety and actively work toward continuous improvement. And that is the basis for the highest level of occupational health and safety."

“ The most important lever for a high level of occupational safety is, after all, the employees themselves.”

ROLAND PIFF, HEAD OF HSE, BILFINGER LIFE SCIENCE



SAFETY WALKS

Safety Walks are regular safety inspections conducted by managers. They serve to identify potential hazards and misconduct, but also to motivate and praise. The conduct of Safety Walks and their results are documented.

HSEQ INVESTIGATIONS

Incidents such as potential hazards, near misses and accidents are systematically documented, investigated and communicated. Improvement measures are derived from the conclusions and communicated to employees.

WORK PERMITS

Work does not start until the permit has been comprehensively checked and all the safety precautions that it describes have been taken. If there are any ambiguities or workers identify critical situations, they have a duty to address them before work begins.

LAST MINUTE RISK ANALYSIS (LMRA)

Immediately before starting work, the employee uses a checklist to verify that work is completely safe. If there are doubts, the employee is entitled to stop the work.

HSEQ APP

The Bilfinger HSEQ app makes it possible for employees to quickly and easily document HSEQ events - from safety walks to potential hazards and accidents as well as suggestions for improvement. The app, developed for smartphones and tablet computers, forwards the data to the central HSEQ software for further processing.

HSEQ SOFTWARE

All decision-relevant information flows into the HSEQ software - known at Bilfinger as ACTIVE - where it can be evaluated. The data collected serves as a basis for the further development and implementation of measures.HSEQ software.

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THE NUTS AND BOLTS: PERMANENT AWARENESS

Even the best tools and methods for occupational safety are of no use if employees do not use them. That's why a vibrant safety culture is the best guarantee for the highest level of occupational safety. Oskar Hack, Corporate HSEQ Director at Bilfinger, describes how such a safety culture is created in companies.

Why is it so important to raise employees' awareness of occupational safety on a permanent basis?

Only through permanent repetition is it possible to positively influence actions and thus actually make work processes safer. Scientific studies have shown this time and again. The relevant messages must therefore be conveyed on a regular basis. Permanently raising awareness also shows that the company takes the issue of occupational safety very seriously and wants to create a culture in which employees work safely on their own initiative and that they want to comply with the strictest occupational safety standards.

What measures can best be used to address employees on occupational safety issues? What has been your experience at Bilfinger?

My experience has shown that the more intensively employees are involved, the more successful the measures are. Active on-site training, for example, can achieve considerably more than traditional training courses, which are mostly taught in a lecture-style format. It is important to incorporate existing knowledge and to discuss it as specifically as possible in the workplace and to practice the right steps. This is because when it comes to these procedures, the rules and standards that need to be adhered to can be better explained and – even more importantly – the reasons for these rules and standards are also made much clearer. If employees understand the reasons, they are much more likely to view occupational safety not as a chore, but as a way to protect their own health and their lives.

In your experience, what tone should these measures have in order to ensure that they are as effective as possible?

First of all, of course, it is important that there is constructive communication at all times, based on understanding and respect. For campaigns that often involve a mix of measures, it is important that they are attention-grabbing. Otherwise, there is a great risk that they will not penetrate. It is helpful to address emotions. Funny or humorous content as well as unusual designs are also good ways of ensuring that campaigns are noticed and, ideally, talked about. It is not really such a bad thing at all if the design of the campaign is also criticized. Having a robust discussion about a campaign is better than having it completely overlooked.

What role do the managers play? What are their responsibilities and how are they made aware of these responsibilities?

Managers have an extremely important role to play in all matters relating to occupational safety. Not only do they always have to serve as role models when it comes to occupational safety, they also have to be visible to everyone. That means that they have to formulate a straightforward set of expectations, actively address grievances and stand up for strict occupational safety standards at all times. They have to consistently insist that employees behave correctly, address misconduct and impose sanctions where they are necessary. At Bilfinger, one thing we cannot afford to tolerate is when managers "look the other way". No matter how urgently an order has



ALWAYS TIME FOR SAFETY

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THINK ABOUT YOUR OWN RISK WITH EACH INDIVIDUAL TASK AND CONSIDER WHETHER EVERYTHING IS PROPERLY PREPARED TO WORK SAFELY

MINIMIZE RISKS – YOU ARE IMPORTANT



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to be carried out: There always has to be enough time to ensure one hundred percent occupational safety.

How do you identify the issues that are addressed in your safety campaigns?

The most important sources are our HSEQ management software "ACTIVE" as well as discussions with our regional HSEQ managers and the managing directors of our subsidiaries. Many potential hazards and developments can be derived from our very powerful software, and from the discussions we learn about the greatest risks or major accident areas, as well as about the specific requirements of customers. Our current campaigns also highlight areas where we can make further improvements. One example of this is our current "Line of Fire - Keep Clear" campaign, which focuses on key aspects of the Life Saving Rules and supplements them.

Are there ways of evaluating the response to the campaigns? If so, how do you go about it?

We do not conduct a comprehensive evaluation. Once a campaign has been introduced, however, we receive feedback quite quickly on how it is being received by

the operating units. This is primarily attributable to the fact that nine to twelve months usually pass between the development and launch of a campaign and a number of decision-makers are involved in the process. These include managers from the operating units, who naturally monitor the reactions to the campaigns very closely. And by communicating regularly with the operating units, as well as conducting qualification and audit visits, we learn a great deal about the opinions and attitudes of employees on site.

How do you prevent employees from becoming disengaged from the topic of occupational safety?

In my opinion, variety is the key success factor: If you keep choosing new channels and measures, have fun developing campaigns, and are passionate about the topic, occupational safety is not going to "annoy" you. Instead, it will become a popular and much-discussed topic among the workforce. This is demonstrated, for example, by the high level of participation in our Bilfinger Safety Award. Of course, there are always critics and it will never be possible to please everyone. But there is no excuse for letting up your guard, and it is certainly not easy to find the right balance in everyday working life.

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THE BILFINGER SAFETY AWARD

NEW IDEAS TO HELP US GET BETTER

Employees who are directly involved in performing the work are frequently the ones who know best where risks can be found and where hazards can emerge, but also how they can be controlled. It is therefore imperative that this knowledge, along with colleagues' ideas and suggestions for improving occupational safety be systematically collected and shared with everyone in the Bilfinger Group - and that the best solutions be recognized with an award.



There are a lot of internal and external awards in the area of occupational safety. Yet by comparison, there are few awards that focus on new preventive measures and ideas from employees aimed at improving occupational health and safety.

The Bilfinger Safety Award was launched back in 2013. Since that time, it has been recognizing measures and ideas from employees that further improve occupational health and safety at Bilfinger. The result is a sustainable reduction in the number of accidents in recent years. 168 prevention measures and ideas were submitted for the Safety Award 2022. Over the years, there have been more than 1,000 such propos-

als. This commitment from all employees is the basis for our success and continuous improvement.

The call for submissions, the announcement of the nominated top 10 measures and the presentation of the awards create awareness and several communications events. The presentation of the awards by the Executive Board as part of the Management Days underscores the importance of the topic within the Group.

Three measures are recognized with the Bilfinger Safety Award (gold, silver and bronze). In addition, a special prize with annually changing criteria is awarded. In addition to bringing together valuable measures and ideas, the Bilfinger Safety Award also serves to address best practice solutions and the subject of oc-

Gold: Virtual communication

SUBMITTED BY: BILFINGER POWER AFRICA

Digitalization offers new possibilities. With various avatar video clips for smartphones, important occupational safety information from the daily work environment is communicated to employees. All stakeholders, including managers, HSEQ experts and employees, are represented by avatars with humor and lots of great ideas. The clips can be started with any smartphone via QR codes.

Special Recognition

At Bilfinger Engineering & Maintenance, 4.6 million working hours were completed – without a single lost-time accident. The company received the special prize of the Bilfinger Safety Awards 2022 for this outstanding achievement.

occupational health and safety in a general sense within the Group and encourage us to learn from each other.

It is clearly evident that employees participate in the competition with a great deal of commitment and enjoyment. They now frequently come together in teams to develop measures and ideas jointly. All Bilfinger units submit proposals on a regular basis. The Bilfinger Safety Award therefore also contributes to team building and cross-departmental exchange. Last but not least, the award is also a strong outward signal. It clearly demonstrates the commitment that Bilfinger employees develop and the potential they have to continuously and sustainably improve occupational safety standards.

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Silver: Intelligent gas cylinder technology

SUBMITTED BY: BILFINGER INDUSTRIAL SERVICE INC.

Smart-Top technology can be used to simplify the handling of gas cylinders while at the same time reducing risk potential. Because Smart-Top technology has a built-in pressure regulator fitting, assembly of the fitting is eliminated and the gas cylinder head and fitting are protected at all times.

Bronze: Reusable barrier tape

SUBMITTED BY: BILFINGER INDUSTRIAL SERVICES B.V.

Barrier tape is something that is needed nearly every day on construction sites. A durable and reusable barrier tape in a self-engineered roll-off box provides the solution. It reduces environmental impact by cutting down on waste and, thanks to its stability and flexibility, it also improves resistance and durability during use, which makes for greater safety.



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