Stiesdal

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Health and Safety Guide

Framework	**Health and Safety Guide**		
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1 Health and Safety in Stiesdal

At Stiesdal, we ensure that safety is always the top priority. No task is so urgent that it cannot be done in a safe way.
Our goal is to create a safe work environment with less bureaucracy and the absence of irrational or inconsistent processes. We instead focus on a high degree of autonomy to empower each employee as we believe in our employees' rational competencies. This also relates to our Health and Safety procedures. We believe a strong health and safety culture, combined with clear procedures, responsibilities, and competent people, is the best foundation for our health and safety work.
We must always ensure that everybody working under our management is safe and protected from:

- Accidents at work
- Occupational diseases
- Hazardous situations

To achieve this, we have launched several initiatives at different levels in the organization. Furthermore, we have chosen to have an objective third party to verify it in the form of an ISO 45001 Work Environment Certification.

2 Essential risks at Stiesdal

Based on a thorough analysis of risks at Stiesdal, the following three topics are identified as the most vital factors which we must focus on to ensure the health and safety of our employees and stakeholders are upheld.

- Mental health
- Feedback loops
- Human factors

As a consequence of our technologies developing into physical products a fourth essential risk has been identified:

- Unknown technical factor

All other risks and mitigations are handled in the “Health and Safety Procedure” while generic mitigations are handled in the “Emergency Preparedness Plan”.

The management team is responsible for mitigating the above-mentioned risks, and all employees have the obligation and authority to stop any work in which health and safety is not being properly managed, including mental health.

2.1 Mental Health

We are privileged to be working in an innovative environment with engaged colleagues, cooperating on developing solutions to the biggest challenge for humanity – climate change. This privilege has an inherent risk associated with it, however. That risk is stress and burnout. Working on something important that needs to be implemented fast is a rewarding task, but it can also lead to anxiety and a feeling of being overwhelmed by the activities and responsibilities that we undertake as a company.
If we do not take care of our mental health, we cannot function properly, and we will not see the results we hope for. More importantly, we risk hurting ourselves or our colleagues by not being at our best detail-oriented selves.
Among other factors, the following can be contributors to stress and burn out.

- Time pressure
- Bullying and harassment
- Uncertainty about roles and unclear organisation

We reduce the overall risk of stress burn out by:

- Daring to care. We care for each other also when it feels awkward or uncomfortable
- Creating a trustful environment where we can speak about concerns
- Maintaining a competent and accommodating Occupational Health and Safety Organisation helping with guidance and support
- Creating workplace assessments, including psychological work environment assessments
- Conducting regular “round tables” where all employees are assessed by management followed up by feedback dialogue

We reduce the risk of stress caused by time pressure by:

- Creating transparent project plans and deadlines
- Secure sufficient manpower by defining realistic tasks and content for each employee Explaining the bigger picture, that the responsibility of “saving the planet” is shared in

the team, the company, and by the rest of the world, and that it must not burden the individual
- Listening and embracing affected employees through dialogue and taking their concerns seriously

We reduce the risk of stress caused by bullying and harassment by:
- Applying a zero-tolerance policy towards bullying and harassment
- Implementing a whistle-blower scheme

We reduce the risk of stress caused by uncertainty about roles and unclear organisation by:
- Promoting our company culture, vision, and the reasoning behind empowerment instead of narrow fixed role descriptions, detailed instructions, detailed organisation charts, etc.
- Managing expectations on how we operate throughout the recruitment and onboarding process
- Working in defined teams with clear expectations and giving feedback both upwards, sidewards and downwards in the organisation

2.2 Feedback loops

An inherent risk when developing new technologies is insufficient communication and lack of a feedback loop between the designer, the manufacturer, and the end user. We need to ensure that our designs are suitable for manufacturing and the intended purpose. Hence communication and feedback loops between the design responsible and the execution are crucial when developing new products and solutions.

The responsibility for ensuring this feedback loop is always the person responsible for the design.

The risks related to insufficient communication are reduced by:
- Ensuring fast and systematic feedback to the design engineers from personnel working with prototypes, installations, and commissioning on site to improve safety
- Maintaining dialogue with costumers and end users to enable the design engineers to improve the design
- Making prototype reviews
- Completing lesson learned sessions
- Carrying out regular site visits
- Maintaining dialogue with vendors and external experts

2.3 The human factor

The human factor will always be a prevalent risk in our operations. Even though our designs, tools, and work environment meet the required standards, it will never be possible to eliminate all the human factors that might pose a risk.

The human factor includes, but is not limited to factors like:
- Simply forgetting stuff
- Getting lost in translation
- Misjudging the situation
- Using the wrong tools
- Using the tools improperly

The risks related to the human factor are reduced by:

- Ensuring a high degree of involvement with employees when developing procedures
- Implementing few but relevant rules and a system based on competencies
- Developing designs where the proper tools and work processes have been implemented as an integral part of the design process
- Conducting the job risk analysis as toolbox talk and having it facilitated by competent people
- Creating a safe culture where it is okay to fail and where we can talk openly and honestly about health and safety
- Conducting task specific lessons learned sessions.

2.4 The unknown technical factor

As our technologies develop from theory and thesis into the real world and physical products we identify another essential risk, the unknown technical factor.
There will be factors that are unknown and factors we cannot always foresee the adverse effects of. Even with the use of tests and prototypes we will never be able to foresee all the risks of operating and maintaining the first units.

The unknown technical factor includes, but is not limited to factors like:

- Incorrect calculations during the design phase
- Risks due to the unknown pace or degree of corrosion on parts.
- Risk due to insufficient attention to operation and maintenance of the product in the design phase, causing unsafe or dangerous situations when performing operation or maintenance activities, e.g. placing a regularly used dial in a hard-to-reach place.

The risk related to the unknown technical factor can be reduced by:

- The use of four-eye principle on data and calculations
- Considering safety in design throughout the product lifetime (from assembly to maintenance)
- Using relevant safety tools before performing new tasks, e.g risk assessments and toolbox talks.
- Monitoring the wear and tear on parts.
- Paying attention to any visible, hearable or feelable changes in the unit or its operation indicators before beginning any tasks.
- Feeding back any safety issue in design to the design team for updates to the design.
- Motivating a culture where everyone has the obligation and authority to stop any work in which Health and Safety is not being properly managed, including mental health. Ensuring that no single employee is blamed for stopping work for safety reasons, even when it results in delays and costs.

3 Methodology and Definitions

The methodology and definitions we use in our health and safety work are described in this section.

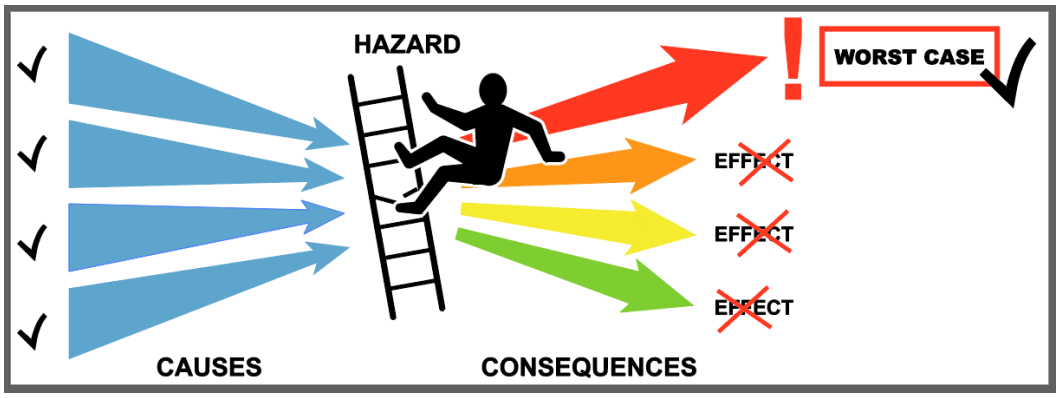
3.1 Risk, hazard, probability, and effect

We use the following definitions when describing our health and safety system:

- Hazard : A source with a potential to cause injury and ill health
- Probability : The likelihood that a hazard occurs
- Effect : The possible negative consequences the hazard can have
- Risk : The product of the probability and the effect of a risk

3.2 The hazard methodology

The illustration below demonstrates how hazard methodology works.



The probability that a given cause can lead to a specific hazard combined with the probability that the hazard will lead to a given effect.

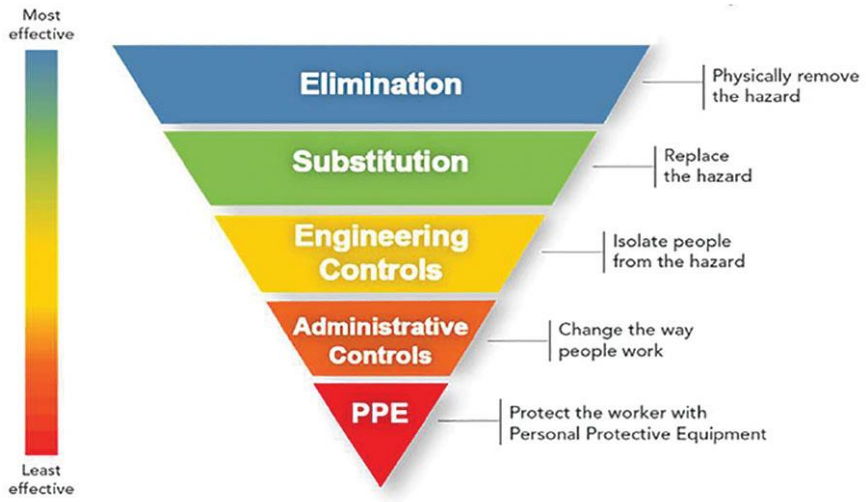
In our risk assessment we focus on the worst-case effect and the associated probability. The reason behind this method is to simplify and increase clarity so that we do not risk important hazards are lost. As a side-effect of this approach, most of the mitigation actions for low consequence hazards are automatically included.

In addition, we deal with the low consequence hazards that may occur more often by establishing a safety culture and using the high competence of our employees, rather than focusing on the documentation of trifles.

3.3 Mitigation hierarchy.

We apply a hierarchical approach when assessing risks and developing mitigation measures.

It is compulsory to use the hierarchical approach as illustrated below. This ensures that one works systematically towards removing hazards completely, rather than all hazards being handled with only personal protective equipment.



3.4 The Risk Identification process

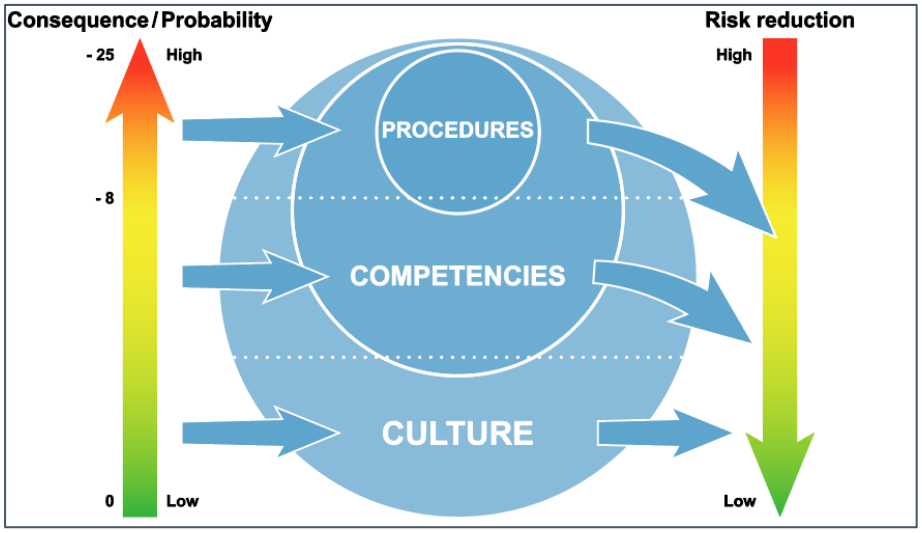
We work with heavy machinery and hazardous materials, and there is a potential risk of accidents occurring in all subsidiaries.

We have hosted a series of workshops covering all subsidiaries with representatives from various departments. In these workshops, we brainstormed about the potential risks (identification) and then used the risk matrix shown below to categorize them.

Consequences / Probability		No personal injury	Illness < 2 days	Illness 2-14 days	Illness > 14 days	Death, disability
		-1	-2	-3	-4	-5
Occurs daily	5	-5	-10	-15	-20	-25
Occurs monthly	4	-4	-8	-12	-16	-20
Occurs yearly	3	-3	-6	-9	-12	-15
Few incidents (in business)	2	-2	-4	-6	-8	-10
Unlikely	1	-1	-2	-3	-4	-5

The registration is maintained in a Risk and Opportunities Excel sheet. The worst-case effects (consequence) were handled, and the corresponding probability was assessed.

Subsequently, we have sorted and treated the most serious risks in accordance with the principles described above in this chapter. The model presented below illustrates how we mitigate the risks that we have identified and addressed.



The product of this risk identification process is the Health and Safety Procedure document.

All subsidiaries and all departments have contributed to the process by:

- Maintaining knowledge of the contents of our health and safety documents
- Maintain awareness of work environment and the belonging risks
- Working according to the relevant procedures
- Making reports if accidents or near-accidents occur
- Coming up with new ideas for how to achieve an even better and safer work environment

Workshops will be held on an ongoing basic to keep framework relevant.

3.5 General Mitigations

We found that, for each risk, description of some of the mitigations ended up as repetitions which tended to make the Health and Safety procedure unnecessarily long.

To avoid this problem, we identify certain mitigation measures as general mitigations. These general mitigations comprise:

- Emergency- and training plans
- Risk awareness amongst employees
- Using Personal Protection Equipment
- First aid training of employees
- First aid kits
- Access to prompt treatment in the private health sector
- Psychological first aid scheme
- Whistle-blower scheme
- Fire course for employees

The General Mitigations are described in the Emergency Preparedness Plan.

4 Changelog

Revision	Change	Changed by	Date
1	First version approved and published.	Marie Munk Andersen	26-04-2022
2	Changelog integrated.	Anna Strøbech	06-07-2022
3	A new essential risk added. Workshops added to keep framework relevance. “Approved by” removed. Company address updated	Niklas Dalsjø	22-01-2025