




DIRECTIVE	OHSAS 18001 4.4.6
<i>Work Health and Safety Risk Analysis</i>	HS_20 Rev. B


WORK HEALTH AND SAFETY RISK ANALYSIS

The risk analysis of all workstations is an essential process for the prevention of accidents and occupational diseases

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SUMMARY OF REQUIREMENTS


Requirements
Regulatory requirements shall be known and respected.
A risk analysis shall cover all workstations on the site.
The risk analysis must be carried out with the direct involvement of the persons concerned, that is, the people actually occupying the workstations and their direct supervisors.
The risk analysis shall be updated annually and at least each time that a modification that may affect the nature or level of risk of a workstation is made.
An action plan to eliminate or reduce the risk of exposure of personnel shall be developed based on the risk analysis. This action plan shall be updated every time that the risk analysis is updated.

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MODIFICATIONS		
Index	Date	Designation
A	09/09/2013	Initial version
B	1/12/2014	Update of the Self Inspection Report

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1. PURPOSE OF THE DOCUMENT

This Directive outlines the Valeo Group's requirements in regard to risk analysis.

The method developed in this Directive must (unless a contrary regulatory requirement exists) be applied 'as is' by all sites that are starting their risk analysis process (a new site for example).

Sites that already have a risk analysis method shall assess its "performance" compared to the one proposed by the Group. If the method used by the site has significant shortcomings (some risks not taken into account, for example) compared to the one of the Group, the site shall implement the latter.

2. RELATED DOCUMENTS

Reference	Title of the document
HS_20-RiskAnalysis_Table	Excel tool for risk analysis
Ergonomics 1A to 4B	Ergonomics Directive, available on the " Ergonomics " portal
HS_20-RiskAnalysis_SIR	Self Inspection report

3. DEFINITIONS


Sharing the following terminology is essential to the understanding of the risk analysis.

The following definitions have been extracted from the OHSAS 18001 standard.

- **Hazard**: Source or situation that could cause harm, either by injury or damage to health, damage to property, damage to the workplace environment, or a combination of these.
- **Risk**: Combination of the probability and the consequence(s) of the occurrence of a specified hazardous event.
- **Acceptable Risk**: Risk that has been reduced to a tolerable level in regards to the regulatory obligations and to the Group's own health and safety policy.
- **Hazard identification**: Process of recognizing the existence of an hazard and defining its characteristics.
- **Risk assessment**: Overall process of estimating the magnitude of the risk and decision-making process regarding the acceptability of the risk.

Other definitions and abbreviations used in this Directive:

- **Risk Analysis**: synonymous with risk assessment, as defined by the OHSAS 18001 standard.
- **HEG**: Homogeneous Exposure Groups: group of people, jobs or job functions for which the exposure is estimated to be of the same type and of similar intensity.

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4. REQUIREMENTS

4.1. Compliance with applicable regulatory requirements

The site shall implement an organization aimed at ensuring compliance with the work risk analysis regulatory requirements on the one hand, and the requirements of OHSAS 18001 on the other hand.

4.2. General Principle

4.2.1. Performing the risk analysis

The risk analysis must be carried out with the direct involvement of the persons concerned, that is, the people actually occupying the workstations and their direct supervisors.

The purpose and method of the risk analysis must be explained, in order to have the support and understanding of the people involved.

The questions asked must be open, in order to not suggest the answers.

At each step, it is important to check with the people concerned that the analysis is complete and that no important omission has been found (in the tasks, means of prevention, etc.). The answers must be reformulated to ensure that the analysis accurately describes reality.

4.2.2. Division of the site into Homogeneous Exposure Groups (HEG)

The risk analysis process begins with the division of the site into **areas/activities** constituting **Homogeneous Exposure Groups (HEG)**.

The purpose of this division is to gather people who are estimated to be exposed to the same risks with the same level of intensity within a same HEG.

For example:

- Usually, all staff with purely administrative functions (HR, purchasing, secretarial, etc.) can be grouped into the same HEG.
- Production staff assigned to the same APU and that are engaged in the same activity may also be grouped within the same HEG.
- The maintenance team staff can often be divided into two HEGs (mechanics and electricians, for example).

This division of the site areas/activities constituting HEGs is a key element to the sustainability of the site risk analysis.

This division is performed by the Site HSE Manager, with the assistance of HR, APU Managers and, where possible, the occupational doctor and the body representing the employees regarding health and safety at work.

Once the division has been made, it is advisable to make sure that all of the site workstations are covered by the risk analysis.


The traceability of the assignment of an employee to a particular HEG is the responsibility of HR. The same employee may be assigned simultaneously to several HEGs.

4.2.3. Risk analysis tool

The main purpose of the risk analysis is to prioritize risks present in a HEG and implement action plans to eliminate the most important risks or to reduce them to an acceptable level.

This is the purpose of the risk analysis tool in Excel format listed in Chapter 2.

The basic principle of this tool is as follows:

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1. The "Assessment" sheet must be repeated as many times as there are Homogeneous Exposure Groups (for clarity these sheets shall be called by the name of the HEG concerned).

For example: APU 1, APU 2, etc.

2. Risk analysis is performed for each workstation and for each activity or basic operation of this workstation (Column B).

For example: "Welding station: displacement of the copper wire coil" or "Welding station: Insertion of the wire into the machine"

3. The following activities/operations (column C, drop-down list) must be examined:
 - a. Routine activities/operations,
 - b. Punctual activities/operations (cleaning or adjusting, for example).
4. The person in charge of the analysis shall then indicate the risk category involved (Column D, drop-down list) from the list provided in the "Hazards" tab. This first selection will result in creating a new drop-down list corresponding to the hazards associated with this category of risk (Column E, drop-down list).

For example, in the "Mechanical hazards" risk category there are various hazards, such as rotating parts, cutting tools, or even the projection of components.

5. Column F "Description of the hazardous situation" will provide specific details of the situation that could lead to an accident. This field must be filled in to facilitate the reading of the risk analysis.

For example: "copper wire breakage and projection into the eye of the operator."

6. For each hazard, the rating of the initial risk (equivalent to the **gross risk** in Column J) is performed based on the scoring system described in the "Method" tab in the Table.

This scoring system (also see Section 4.4) will thus allow the following to be entered:

- a. the potential consequences to which people are exposed, known as **Severity**, Column G;

For example, for the projection of copper wire: very incapacitating disease (loss of an eye), score E.

- b. frequency of exposure to the hazard, known as **Frequency**, Column H;

For example, for the projection of copper wire: Once per week, or more than 8 hours per month, score E.

- c. the site accident **History**, Column I .

For example, for the projection of copper wire: it has already happened once, score B.

Thus: **Gross Risk = Severity x Frequency x History** (Column J)

7. Next, the **risk control** measures shall be entered (Column K) and the related score (Column L). These measures are also described in the "Method" tab.


For example, for the projection of copper wire: Written instructions and wearing of glasses required, the score is C.

The risk control measures generally act:

- either by reducing the potential consequences of the unfortunate event, for example, an anti-cut glove reduces the consequences of a cut, but does not change the number of times the risk of cuts is present.
- or by reducing the frequency of exposure, for example, the presence of a light barrier on a machine prevents the user from reaching into the machine in operation, it reduces the risk of exposure to zero.
- or both simultaneously, for example, anti-slipping safety shoes can reduce the likelihood of slipping on the floor and, in the event of slipping, boots reduce ankle injuries).

8. The **residual risk** level (Column M) will thus be obtained, from A for a low risk to E for a very high risk (see Section 4.8).

Residual risk = gross risk x risk management

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4.3. Risk rating

4.3.1. General case

The **severity** rating is given using the following table:

Probable consequences	Score	Example
No consequence	A	
Health care without lost time	B	Minor cuts, light dermatosis
Accident with lost time, illness requiring absence from work	C	Sprain, severe dermatosis
Disabling injury or illness	D	OA, Ear drop
Very disabling accident or illness, disease reducing life expectancy	E	Amputation, Cancer
Fatality	F	

The **frequency of exposure** rating is given according to the following table:

Frequency	Score
No exposure	A
At the most once per year and less than 8 hours per year	B
Once quarterly	C
Once per month or more than 8 hours per year	D
Once per week or more than 8 hours per month	E
Once per day or more than 8 hours per week	F


Passive protection elements that are not removable by the user and that guarantee the absence of exposure are taken into account in the rating of the frequency of exposure (for example, a machine guarding prevents the operator from being exposed to moving parts within the machine, a correctly sized railing along the roof prevents the risk of falls).

The **history** rating is given using the following table (the site accident history over the past three years shall be used):

History	Score
Never happened	A
Has already occurred once	B
Occurred once last year	C
Occurs every month	D

The **risk control measures** are listed according to their performance and their "reliability", based on the following table:

Risk control	Score
None	F
Staff informed of risks	E
Trained personnel wearing PPE	D
Trained personnel wearing PPE + written instructions	C

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Trained personnel + collective protection + written instructions	B
Trained personnel + collective protection with guaranteed effectiveness + written instructions	A

Collective protection is considered to have guaranteed effectiveness in the case of:

- a passive protection (a fixed screen for example) that cannot be removed by the operator.
- an active protection that, in the event of malfunction, prevents risk-taking (for example, cutting-off of the paint booth gun in the event of insufficient pressure at the filter).
- a passive or active protection whose presence and/or effectiveness is tested at each change of shift (start-up checklist).

4.3.2. Case of chemicals

Using the table presented in the previous chapter, the risk analysis tool (Excel) provides the corresponding severity score ("Chemicals" tab) for each hazard statement defined in the GHS (Globally Harmonized System, international standard for labelling hazardous substances),

Thus, for example:

- a product classified as H330 (fatal if inhaled) is said to have Severity F,
- a product classified as H350 (may cause cancer) is said to have Severity E,
- a product classified as H317 (may cause an allergic skin reaction) is said to have Severity D,
- a product classified as H315 (causes skin irritation) is said to have Severity C.

As part of the risk analysis, the chemicals can be considered:

- individually,
- or
- grouped by hazard type (for example, grouping of products classified as H350)
- or
- grouped by level of severity according to the same method proposed (for example, grouping of products whose severity is rated as E).

If grouped,

- the frequency of exposure is rated by considering the overall exposure (sum of exposures of several products)
- risk control is rated based on the product for which it is the weakest.


4.3.3. Case of ergonomics

The analysis of the ergonomic hazards is conducted applying the Ergonomics Directive and tools developed by the Group.

The results of four ergonomic assessments (postures: standing, sitting, lifting and repetitive) are reported as follows in the risk analysis tool:

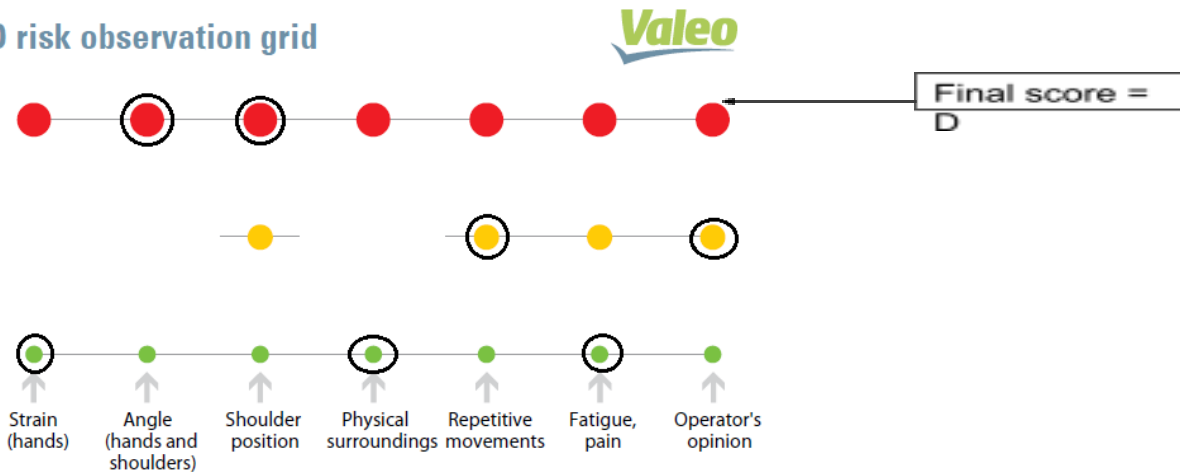
- Red dot = severity is rated as D
- Orange dot = severity is rated as C
- Green dot = severity is rated as B

The overall rating of the severity is equal to the highest score.

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Example of the MSD risk observation tool:

MSD risk observation grid



4.4. Risks that must be assessed obligatorily

Risk analysis allows risks to which employees are exposed to be evaluated; it also allows to attest that some exposures are very low or non-existent.

Risk analysis is generally done easily for risks whose effects are visible in the short term (cutting, etc.) However, risks whose effects are felt in the longer term are sometimes ignored.

This is why the following risks must be systematically evaluated, even if the conclusion is the absence of exposure or hazard:

- Exposure to noise,
- Exposure to CMR (Carcinogenic, Mutagenic or toxic for Reproduction) substances,
- Ergonomics,
- Vibrations.

The following will be indicated with the rating:


- absence of a hazard (A rating in the tool).
- absence of exposure (A rating in the tool).

4.5. Action Plans following the risk analysis

The final risk rating is graded from A to E (see the corresponding figure ranges that can be modified in the "Method" tab).

	Intolerable risk
	High risk
	Significant risk
	Controlled risk
	No risk

An action plan to reduce the level of risk is drawn up based on the results of the risk analysis, by prioritizing actions to reduce the most significant risks. Thus, the scores should be treated as a top priority and

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- **An unacceptable risk must be reduced to an acceptable level within a period not exceeding 3 months,**
- **A high risk must be reduced to an acceptable level within a period not exceeding 6 months,**
- **A significant risk must be reduced to an acceptable level within a period not exceeding 1 year.**

This general rule, however, must not prevent the immediate implementation of actions that are easy to set up at no cost, allowing low level risks to be reduced even further.

4.6. Updating of the risk analysis

The risk analysis of each site area/activity (HEG) shall be reviewed annually, or when any significant modification affecting the area/activity (HEG) is made.

A significant modification means, for example, the addition of new equipment, the use of a new product with risk, etc.

Depending on the number of areas/activities (HEG) identified, the HSE site manager shall plan to update the site risk assessment, in such a way that all Area/Activity (HEG) analyses are reviewed throughout the year.