1. In the following you see some extracts from example of machine tool operator of the “Occupational Health and Safety Risk Assessment Guide- SAFEGUIDE”.

We would ask you to fill in the right column of the following table the measures that you suggest, which correspond to potential risks shown in the left column.

SAFEGUIDE OCCUPATIONAL HEALTH & SAFETY RISK ASSESSMENT GUIDE

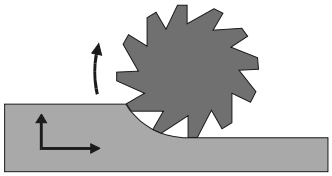
APPLICATION EXAMPLE

OCCUPATION: MACHINE TOOL OPERATOR

PART A. GENERAL FACTS ABOUT THE OCCUPATION

1. THE JOB OF A MACHINE TOOL OPERATOR

Machine tools operators are responsible for the production of metal elements by operating machine tools such as lathe, miller, planer, drill press, surface grinder and a wide range of modern CNC machine tools.
Common tasks performed by an electric welder include:



- Carrying the parts and locating the workpieces
- Mounting and fixturing of the parts to be machined
- Adjusting the machine parameters (cutting speed, cutting tool, coolants etc)
- Surveillance of the work, checking the workpieces and the machines
- Taking away the machined parts
- Keeping the workplace clean, collect and remove the chips and the swarf.

The equipment used by a machine tool operator includes: machine tools, cutting tools, adjustment tools, hand tools and mechanical aids to assist in moving, lifting and fastening of the parts.

2. MOST COMMON HAZARDS RELEVANT TO THE JOB OF A MACHINE TOOL OPERATOR

- Injuries (crushing, snagging) from moving machine parts
- Injuries as a result of flying components (chips, workpieces inadequately secured)
- Injuries as a result of carrying the workpieces
- Injuries during the chip and swarf removal
- Slip- fall hazard due to liquids, oil spills and garbage existing in the workplace.

3. MOST COMMON WORK RELATED DISEASES AND ILLNESSES RELEVANT TO THE JOB OF A MACHINE TOOL OPERATOR

- Dermatitis from contact with coolants and cutting fluids
- Operational deafening
- Permanent bronchitis, asthma
- Myosceletical problems due to inappropriate working posture
- Possible cancer due to the use of poly-aromatic hydrocarbons (PAHs).

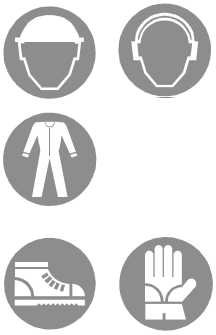
4. OTHER GROUPS OF WORKERS THAT ARE SUBJECT TO THE HAZARDS RELATED WITH THE JOB OF A MACHINE TOOL OPERATOR

Persons working near or passing by the machine tool operators' workplace are also exposed at flying chips and high noise level hazards.

5. PREVENTIVE MEASURES IN THE JOB OF A MACHINE TOOL OPERATOR

- All the machines should be kept in good conditions and periodically checked and maintained according to the manufacturers' instructions.
- Protective covers should be kept in good condition and should not be removed.
- Machinery and tools should only be used for the purpose they were made for.
- Machine tools should only be operated by well trained, specialised and experienced personnel.
- Protective devices preventing hand or finger contact with the machines' moving parts to be installed where possible.
- Machine tools should not be left to work unattended.
- Machine tool operators should always use the appropriate PPE (see unit 7).
- Before starting any operation it is necessary to check the correct location and fixturing of the workpiece and also check for any forgotten tools on the bed of the machine.
- Manual checking adjustments and gauging work is prohibited while the machine is in operation.
- Maintenance and repair work must only be carried out with the machine not working and isolated from the power supply.
- The workplace should be kept tidy and obstacle free. Other requirements may include:
  - Additional lighting where necessary.
  - Suitable fire extinguishing apparatus and appropriately equipped first aid medical kit should be placed in a nearby and easily reachable place.
  - Emergency exits should always be reachable and appropriately signed.
  - Safety signs should be placed where necessary.
- Chip and swarf removal should only be done using the appropriate tools (swarf hook), not with the use of compressed air.
- The cutting fluid tank should be kept clean. No garbage or litter is allowed.
- Electrical Installations should follow the Internal Electrical Installations Regulation should be followed (K.E.H.E.).

6. PERSONAL PROTECTIVE EQUIPEMENT OF A MACHINE TOOL OPERATOR



- Safety Spectacles
- Protective footwear
- Apron
- Gloves (not while operating rotating machinery)
- Helmet
- Close fitting clothing.

Machine tool operators having long hair should tie them up or wear a cap. No finger rings, bracelets etc. are allowed when working.

Some brief guidelines for the selection of the appropriate Personal Protective Equipment are given in APPENDIX 2. In every case the relevant EN Standards should be taken into account.

7. LEGISLATIVE REQUIREMENTS IN THE JOB OF A MACHINE TOOL OPERATOR

A state licence is not necessary for a worker to do the job of a machine tool operator. The duties are assigned from the employer, who is responsible for the sufficient training and the proper adaptation of the worker to his tasks.

8. NOTES AND REMARKS

When working with conventional machine tools (nor CNC closed type) close fitting clothing should be worn and the sleeves must be tightly buttoned at the wrists. Be careful of eye injuries. Protective gloves should only be worn whenever swarf is being collected.

9. DESCRIPTION OF THE PARTICULAR WORKPLACE

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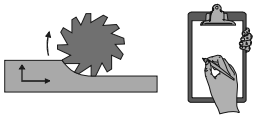
SAFEGUIDE OCCUPATIONAL HEALTH & SAFETY RISK ASSESSMENT GUIDE

APPLICATION EXAMPLE

OCCUPATION: MACHINE TOOL OPERATOR



PART B. WRITTEN RISK ASSESSMENT

WORKPLACE:…..…… ASSESSMENT DATE:……..

1. HAZARDS ASSOCIATED WITH THE RAW MATERIALS USED			
POTENTIAL HAZARDS	**LIK.**	**SEV.**	**PREVENTIVE/ PROTECTIVE MEASURES**
Hazards associated with the raw material supply • Injuries as a result of carrying or lifting of the workpieces			
Hazards associated with the temporary storage of the raw materials used • Injuries from the fall or misplacement of the workpieces …… …… …… ……			• Appropriate storage (rigging, stacking securing) • Use the appropriate PPE (protective footwear)

2. HAZARDS ASSOCIATED WITH THE CURRENT PRODUCTION PROCEDURE			
POTENTIAL HAZARDS	**LIK.**	**SEV.**	**PREVENTIVE/ PROTECTIVE MEASURES**
Tools, Machinery, Fixtures etc. in use. • Injuries due to uncovered moving machine parts or badly maintained machinery • Injuries from tools *……*			
Hazards associated with the work method used • Injuries caused by long workpieces projecting beyond the machine tool (e.g. long bars) • Injuries caused from the ejection of the workpiece due to inadequate clamping or fixturing or the ejection of adjustment tools • Injuries from cutting tools • Injuries during the chip and swarf removal			
Hazards associated with repair and maintenance works • Injured during repair and maintenance works			
Mechanical hazards and ergonomic faults in the workplace • Sleeve, hair, jewellery caught from machine rotating parts • Slip-fall due to oil or liquid • Myosceletical problems due to inappropriate working posture • Insufficient working space *……*			
Other potential hazards associated with the current production procedure *……*			*Preventive and protective measures that are proposed* *……* *…*

3. HAZARDS ASSOCIATED WITH THE WORKING ENVIRONMENT			
POTENTIAL HAZARDS	**LIK.**	**SEV.**	**PREVENTIVE/ PROTECTIVE MEASURES**
Physical Hazards • Insufficient lighting • Noise			
Chemical Hazards • Dermatitis from contact with coolants and cutting fluids			
Electricity • Electrocution or fire due to insecure electrical installations			
Job site • Quick fire spread due to flammable construction material, large openings and lack of fire extinguishing apparatus • Injuries during the emptying of the premises in case of emergency			
Other potential hazards associated with the working environment *…… …*			*Preventive and protective measures that are proposed* *…… …*

4. HAZARDS ASSOCIATED WITH THE FINAL PRODUCT AND SUBPRODUCTS			
POTENTIAL HAZARDS	**LIK.**	**SEV.**	**PREVENTIVE/ PROTECTIVE MEASURES**
Hazards associated with taking away of the final product and by-products • Injuries as a result of taking away the machined workpieces			
Hazards associated with the temporary storage of the final product and by-products • Injuries as a result of fall or displacement during the storage of the machined workpieces			
Other potential hazards associated with the final product and by-products:			*Preventive and protective measures that are proposed*

5. OTHER TYPES OF HAZARD			
POTENTIAL HAZARDS	**LIK.**	**SEV.**	**PREVENTIVE/ PROTECTIVE MEASURES**
Hazards associated with the poor organisation of work • Working instructions that are not clear			
Hazards associated with psychological factors • Time pressure • Poor cooperation with co-workers and supervisors *……* *…*			

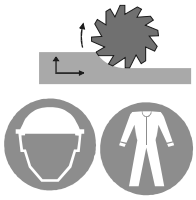
Hazards associated with the particular requirements of the work and the particularities of the specific workplace *……* *…*			

SAFEGUIDE OCCUPATIONAL HEALTH & SAFETY RISK ASSESSMENT GUIDE

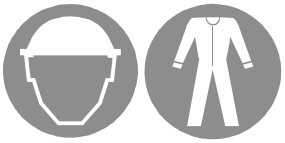
APPLICATION EXAMPLE

OCCUPATION: MACHINE TOOL OPERATOR

PART C. POTENTIAL HAZARDS AND PERSONAL PROTECTIVE EQUIPMENT



		PART OF THE BODY AT RISK												
		HEAD					UPPER LIMBS		LOWER LIMBS		GENERAL			
		SCULL	EARS	EYES	FACE	RESPIRAT. TRACK	HANDS	ARMS	FEET	LEGS	SKIN	ABDOMEN	WHOLE BODY	OTHER IDENTIFIED PART OF THE BODY AT RISK
POSSIBLE HAZARDS														
MECHANICAL	FALLS FROM HEIGTS													
	BURNS – CUTS													
	IMPACT – CRUSHING – ENTANGLEMENT												X	
	VIBRATION													
	SLIPS												X	

ELECTRICAL													X	
THERMAL	HEAT-FLAMES													
	COLD													
RADIATION	NON IONISING													
	IONISING													
NOISE			X											
CHEMICAL	GASES-VAPOURS													
	FUMES													
	MISTS													
	IMMERSION													
	SPLASHES										X			
GASES-VAPOURS														
BIOLOGICAL	HARMFUL BACTERIA													
	HARMFUL VIRUS													
	FUNGI													
PROPOSED PERSONAL PROTECTIVE EQUIPMENT 		HELMET	EAR MUFFS	GOGGLES	FACE PROT.	RESPIR. DEV.	GLOVES	PROT. CLOTHING	FOOTWEAR	PROT. CLOTHING	OINTMENTS	PROT. CLOTHING	PROTECTIVE CLOTHING, PROTECTIVE EQUIPMENT AGAINST FALLS FROM A HEIGHT ETC	PROPER PROTECTIVE EQUIPMENT

2. Please, put in the following columns as many symptoms belonging to each category as you can.

Stress symptoms

Physical	Cognitive	Behavioural

3. Mobbing is a form of systematic emotional pressure and psychological violence exercised on specific employees-victims by colleagues or by managers or by persons lower in the hierarchy aiming at expelling these employees from their jobs or at being forced to resign.

- **Have you ever witnessed such behaviour?**
- **If yes, what were the characteristics of the victims?**
- **In which way psychological pressure was exercised?**
- **What was the role of the rest of employees? Of the trade union?**
- **What was the final outcome?**

According to Dr Tara Palmatier, one may react in 7 ways:

1. With vigilance to tackle such phenomena from the very start
2. By asking to leave him quiet
3. By keeping a low profile
4. By playing it cool
5. By looking them directly in the eyes
6. By using conflict management techniques
7. By knowing and using his/her rights