

Subject: How do we protect our employees at ENK?

Presentation by QA/HES Manager Knut Brattgjerd



We all want to come home unharmed after finishing work!



What are the risks of the job

RISKASSESSMENT

- Ergonomics
- Gas (CO)
- Dust
- Noise
- Heat stress
- Vehicle (driven on by vehicles?)
- Explosion (molten metal and water?)

Risk = consequence and probability

INSTRUKSMAPPE		ERAMET NORWAY KVINESDAL			
Kapittel/Emne	RISIKOANALYSER RISIKODIAGRAM	Rev. nr 2	Dato 16.09.10	Kap. Felles	
Ref. nr. Instruks E49 vedlegg 3	Utstedt av (Sign) KB	Utarbeidet/revidert av (Sign) KB	Erst. nr. 1	Dato 12.12.08	Vedlegg 3

Risk Chart:
(Sett kryss)

People Environment Material

Skjema 3a

Probability	Consequence				
	Harmless 1	Slight risk 2	Hazardous 3	Critical 4	Catastrophic 5
Could happen frequently 5					
Probable 4					
Small likely 3					
Unlikely 2					
Extremely unlikely 1					

Skjema 2

Risikoevaluering av uønsket hendelse/tilstand Nr.:

Hendelse/tilstand:		Sted:				
KONSEKVENNS: (Etter hendelsen)						
Beskrivelse av hendelse/forløp:						
Ekisterende tiltak for å redusere utviklingen av hendelsen/tilstanden:						
	Ufarlig	En viss fare	Farlig	Kritisk	Katastrofal	
Personer						
Miljø						
Matr./økon. verdier						
SANNSYNLIGHET: (Før hendelsen)						
Beskrivelse av årsaker:						
Ekisterende tiltak for å hindre at hendelsen / tilstanden oppstår:						
	<input type="checkbox"/>	Kan skje ofte				
	<input type="checkbox"/>	Sannsynlig				
	<input type="checkbox"/>	Lite sannsynlig				
	<input type="checkbox"/>	Usannsynlig				
	<input type="checkbox"/>	Ekstremt usannsynlig				
Forslag til ytterligere risikoreducerende tiltak (forebyggende og eller skadebetende):						
Utført av: _____ Sign.: _____						
Date: _____						

What if we don't know the risks? Measure the work environment.

Dust samples were submitted to STAMI for analysis. Detailed results from STAMI are saved in the BHT. A summary of results:

Sted/ Arbeids- operasjon	Dato	Total dust respirable (mg/m ³)	Manganese respirable (mg/m ³)	Total dust Inhalable (mg/m ³)	Manganese Inhalable (mg/m ³)	Comments
Tapping deck	12.10.09	0,10	0,011	1,2	0,15	Furnace II, III. Filter replacement. Working conditions: normal / Ventilation: local / Respiratory protection: yes
	13.10.09	0,10	0,013	0,93	0,18	Furnace, II. Filter replacement. The pumps were 1 hour in office. Working conditions: normal / Ventilation: local / Respiratory Protection: Periodical
	15.10.09	0,25	0,038	1,6	0,18	Furnace II, III. Working conditions: normal / Ventilation: local / Respiratory Protection: Periodical
Crane 4	12.10.09	0,32	0,043	2,9	0,63	Replacing the brake bands. Working conditions: normal / Ventilation: general / Respiratory Protection: yes
	14.10.09	2,0	0,26	5,1	0,87	On top of the crane. Repair. Working conditions: normal / Ventilation: none / Respiratory Protection: yes
	15.10.09	0,67	0,11	5,2	1,1	On top of the crane. Working conditions: normal / Ventilation: none / Respiratory Protection: Periodical
Gas Cleaning 1B	12.10.09	0,23	0,025	3,2	0,47	Driving of the tube. Working conditions: normal / Ventilation: none / Respiratory Protection: No
Weight Construction	12.10.09	0,34	0,074	*	*	Furnace I, II. Fixed funnel. *) The pump did not work. Working conditions: worse than usual / Ventilation: none / Respiratory Protection: yes
	13.10.09	0,53	0,037	3,6	0,31	Furnace I, II. Fixed Funnel + some welding + welding workshop. Working conditions: worse than usual / Ventilation: none / Respiratory Protection: yes
	14.10.09	1,1	0,094	68	9,9	Furnace I, II. Fixed weight system. + a little welding. Working conditions: worse than usual / Ventilation: none / Respiratory Protection: yes
	15.10.09	0,33	0,047	4,4	0,72	Furnace I, II, repaired funnel + workshop. 2 h in the wheel loader. Working conditions: normal / Ventilation: none / Respiratory Protection: Periodical
Packing workshop	12.10.09	-	-	11**	3,6**	A term change. **) The pump had stopped - uncertain values. Working conditions: normal / Ventilation: none / Respiratory Protection: yes
	13.10.09	0,61	0,040	8,0	2,5	Repair of the term belts. Working conditions: normal / Ventilation: local / Respiratory Protection: No
	14.10.09	0,95	0,069	7,8	2,1	Rep. the term belts. Working conditions: normal / Ventilation: local / Respiratory Protection: No
	15.10.09	1,1	0,085	7,8	2,2	Rep. the term belts. Working conditions: normal / Ventilation: local / Respiratory Protection: No
Workshop	13.10.09	0,74	0,056	5,8***	0,79***	***) Low speed pump - uncertain values. Workshop - shorter periods elsewhere. Working conditions: normal / Ventilation: general / Respiratory Protection: yes
	14.10.09	0,13	0,023	0,79	0,087	Much workshop, some 3 floor + tapping deck. Working conditions: better than usual / Ventilation: general / Respiratory Protection: no

Values above the administrative norms are given in red in the table. Values above 25% of administrative norm are given in blue in the table.



When we know the risks.

How can we eliminate or reduce the risks?

- Installations / work equipment
- PPE
- Training and procedures



Overview of the implemented and planned measures to reduce dust exposure on ENK

Installations and work equipment

2009

Have changed many tubes on dust suction system in the packing.

High pressure wash the walls in the production hall. CPD perform this in summertime during "stopping."

2010

New minor sweeping-car. New and improved sweeping-car used in the floors.

Cleaning of the crane track. Crane railway (dust) is now vacuumed by an external company.

New tapping deck at furnace 1 which means that operator receive their own tapping cabin. (The same as furnace 2 and 3.)

Started up the pilot project for the suction system of the casting area (kokiller.)

All wall fans in the 3, 4 and 5th floor at furnace 1 and 2 is switched to the new type that provides a greater amount of air.

Some work concerning sealing the wall to the tapping hall is completed.

2011

Setting up more suction across the bags at the big-bag filling.

2012

Will complete the project for the suction system of the casting area (kokiller.)

PPE

2009

Dust mask is required when filling the bags in the packing.

Filter mask / respirator is required by mantle welding and filling of the "knott" (electrode mass) in the 4th floor.

Dust mask is required for maintenance work in the packing, the crane and the weight area.

2010

2011

Training and procedures

2009

Smoking outdoors should be at least 10m from the doors. (Forbidden to smoke indoors in 2004.)

Improved procedures for salting, sweeping and watering of dust attenuation on the outside areas.

Proper use of large sweeping-car. Training in correct use... Work performed inside the production hall at. 0600 - 0700 and during lunch.

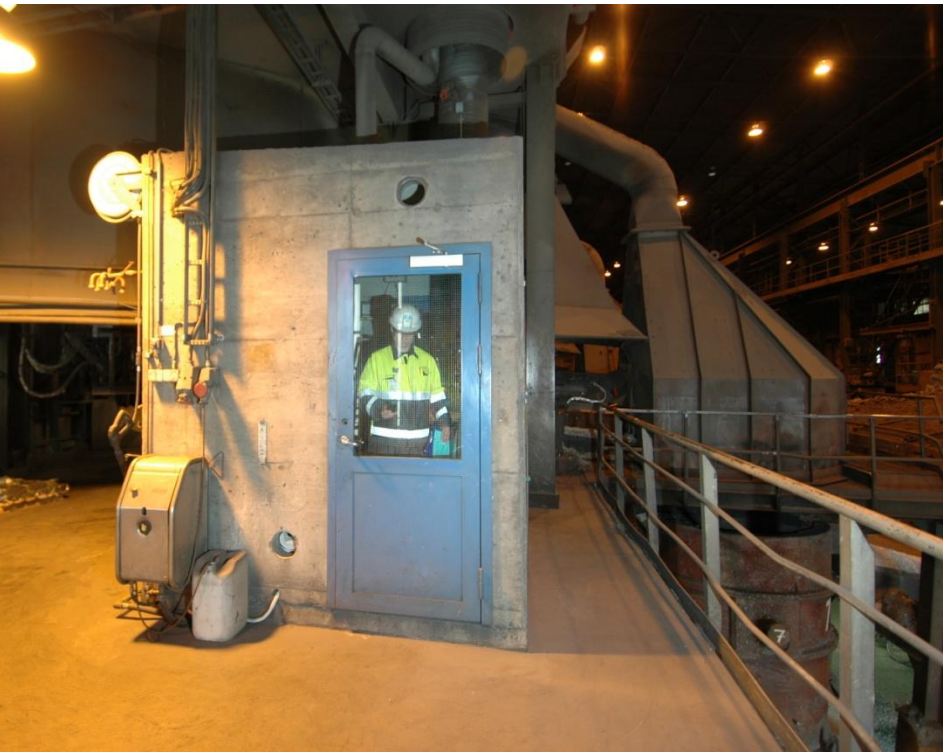
2010

2011

INOSA: New and better training of work procedures (visible and easier to understand.)

Inninstallations

Tapping cabin with ventilation/cooling.



Protective “skirts” during foaming of the ladle.



PPE – Personal protection equipment

- ❑ Tapping PPE.
- ❑ “Gold”-coated visor and aluminum coat reflect heat radiation effectively





- Helmet
- Safety glasses (not shown)
- Hearing protection
- "Gold"-coated visor
- Anti-flame cloths
- Leather-gloves
- Leather-coat
- Socks in wool
- Boots

Training

- ❑ INSOA (job descriptions.)
- ❑ E-course (safety course for employees and subcontractors) etc.

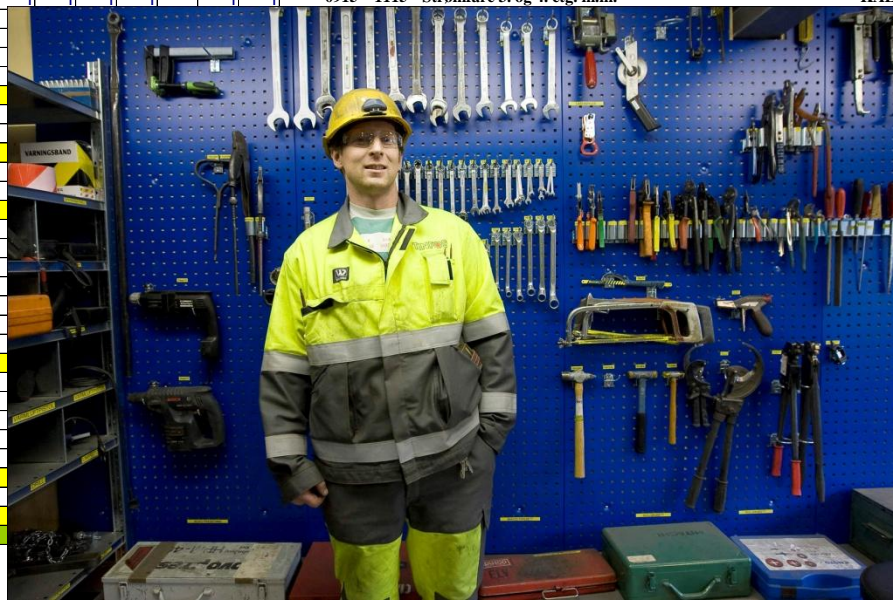
How to follow-up safety.

- ❑ 1by1-rounds
- ❑ Focus on order and cleaning
- ❑ HES-day for all the employees yearly
- ❑ Deviation system: Synergi (12 pr. month.)

Focus on "repeaters" (36% / 40% injuries with or without absence.) In a hurry, clumsy..

1 med 1 runder 2010

Område	Navn	Stilling	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Okt	Nov	Des
Adm/diverse	Trond M Unhammer	Fabrikkssjef	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Svein Bøgwald	Personalsjef	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Leif Hursbedt	FoU leder	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Kjell Svindland	Økonomisjef	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Per Hompland	Personalsekretær	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Sigmund Røynestad	Hovedvernombud	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Leif Tønnessen	Verne- og industrivernleder	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Knut Brattgjerd	KS/HMS-leder	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse	Rune Nilsen	Innkjøpsjef råvarer	1	1	1	1	1	1	1	1	1	1	1	1
Adm/diverse Total			9	9	8	8	6							
Kaldprosess K	Ole T Sendland	Kai- & transportleder	1	1	1	1	1	1	1	1	1	1	1	1
Kaldprosess K	Ola Omland	Formann råvarelager	1	1	1	1	1	2						
Kaldprosess K Total			2	2	2	2	3							
Kaldprosess P	Bjarne Meland	Kaldprosess sjef	2	1	1	1	1	1	1	1	1	1	1	1
Kaldprosess P	Terje Rørvik	Formann pakkeri	1	1	2	1	1	1						
Kaldprosess P Total			3	2	3	2	2							
Produksjon	Dag Haaland	Produksjonssjef	1	1	1	1	1	1	1	1	1	1	1	1
Produksjon	Torgeir Nilsen	Formann skift A	1	1	1	1	1	1	1	1	1	1	1	1
Produksjon	Dag R Egeland	Formann skift B	1	1	1	1	1	2						
Produksjon	Arthur Øysæd	Formann skift C	1	1	1	1	1	1						
Produksjon	Frank Gilbertson	Formann skift D	1	1	1	1	1	1						
Produksjon	Jan G Røynestad	Formann skift E	1	2	2	1	2							
Produksjon	Johnny Egenses	Formann dagtid	1	1	1	1	1	1						
Produksjon Total			7	7	8	6	8							
Vedlikehold	Knut Arild Egeland	Teknisk sjef	Syk	1	Syk	1	1	1	1	1	1	1	1	1
Vedlikehold	Inge Helle	Formann mekanisk verksted	1	1	2	1	1	1						
Vedlikehold	Rune Førland/ Per Rafoss	Formann elektro	1	1	1	1	1	1						
Vedlikehold	Knut Kristoffersen	Formann anlegg	1	1	1	1	1	1						
Vedlikehold	Andreas Omland	Formann kjøretøy	1	1	1	1	1	1						
Vedlikehold Total			4	5	5	5	4							
ØVK	B. Hompland/K. Høydal	Formann varmekraftverk	1	1	1	1	1	1						
ØVK Total			0	1	1	0	1							
Grand Total			25	26	27	23	24							



OPPSLAG Ø /2011

HMS - dager på ENK 2011

I år korter vi ned til en ½ dag.. fra 0715 – 1115

Dagen er obligatorisk for alle ansatte

Tidspunktene er:

- 27. april** Produksjonsavdelingen (Skift C, D og E.)
- 29. april** Produksjonsavdelingen (Dagtid, varmekraftv. og stab.)
- 04. mai** Teknisk avdeling (anlegg, elektro, kjøretøy, mekanisk v. og stab.)
- 06. mai** Teknisk avdeling (anlegg, elektro, kjøretøy, mekanisk v. og stab.)
- 11. mai** Kaldprosessavdelingen (pakkeri, kai og råvare.)
- 12. mai** Produksjonsavdelingen (Skift A + "slengere" og stab.)
- 13. mai** Personalavdelingen (renholdere og funksjonærer) + avdelingene: FoU, Logistikk, innkjøp og regnskap.

Sted: Alle dager i undervisningsrommet.

TIMEPLAN

Tidspunkt Tema Ansvarlig
0715 – 0755 Avviksbehandling (Synergi.) KB

0800 – 0900 Førstehjelp og brann.. AO/LT

For avdelingene: Produksjon og teknisk
0915 – 1115 Strømfare 3. og 4. etg. m.m. KAE

Thank you for your attention!

