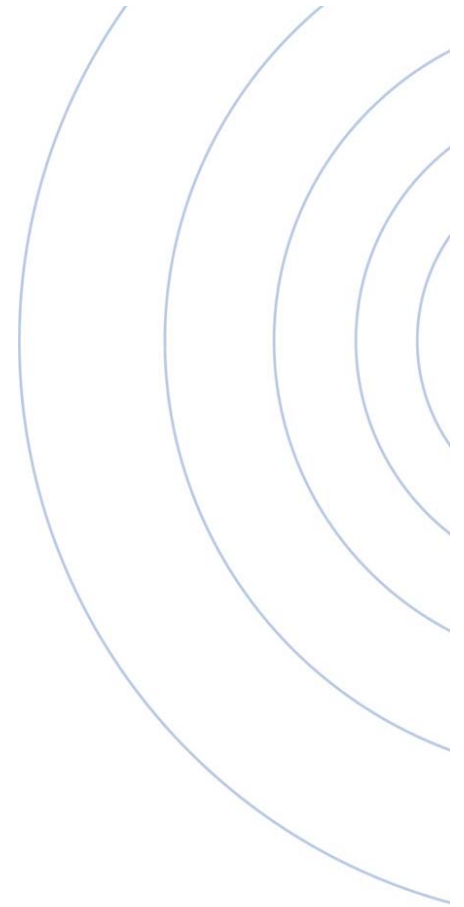


Competencies and skills gap

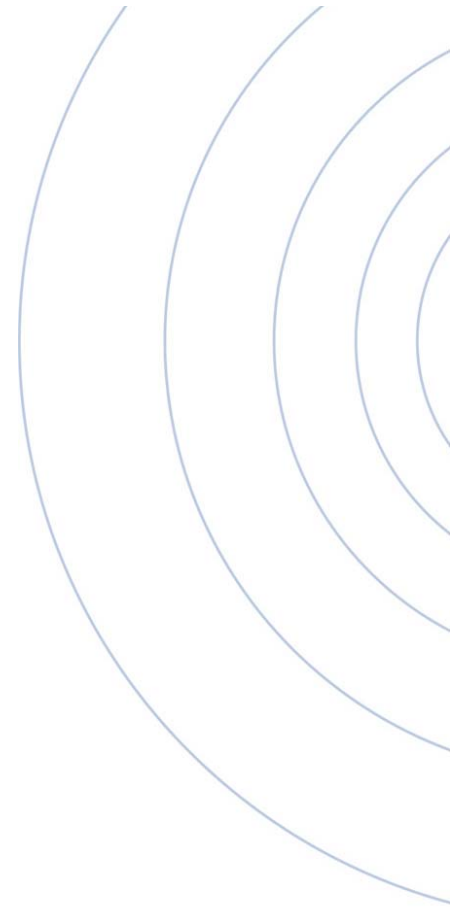
Nammo Raufoss AS

By
Sigmund Sofienlund



Overview

- Laws and regulation
- Requirement for education and training
- PC based system
- Evaluation of competences
- Skills gap
- Cooperation with defense forces



Norwegian laws and regulations

- In Norway the explosive business are quit small
- Very little is specified in laws and regulation for education and training in explosives sector.
- The responsibility is on each company to make sure that all employee have education and skills to doe their job
- The rock blaster organization are the only one with demand for a certificate

Study of requirement for education and training

- The idea was initiated by the first EuExcert program
- The study should provide a overview for need of common courses and training events in each country

NARA chose to evaluate the following functions within explosive production:

- Operator
- Safety officer
- Foreman
- NDT technician
- Skilled maintenance worker
- Maintenance foreman
- Quality auditor
- Purchaser
- Planner
- Design engineer



COMPETENCE DEMANDS - POSITIONS AT NAMMO RAUFOSS AS

POSITION	COMPETENCE (UNITS)	LEVEL DEMANDED				
		0	1	2	3	4
Worker	Transportation and transmission of expl.goods		x			
	Working environment		x			
	Instructions and lay-outs			x		
	Handling with waste/rubbish			x		
	Working with explosives			x		
	Explosives' sensity			x		
	Explosive knowledge			x		
	HES - Data sheet		x			
	Internal control		x			
	Knowledge of chemicals		x			
	Handling with crisis		x			
	Internal and external environments (ISO14001)		x			
	Knowledge of production equipment		x			
	Laws and regulations		x			
	Cleaning and order		x			
	Personal safety				x	
	Product knowledge				x	
	Risk analysis		x			
	Risk understanding				x	
	Safe treatment of explosives				x	
	Safety revision			x		
	Safe job analysis			x		
	Static electricity (ESD - Electrostatic Discharge)			x		
	Safety protection principals				x	
	Safety equipment				x	

COMPETENCE LEVELS:

- 0 = no knowledge/skills
- 1 = some knowledge/skills
- 2 = good knowledge/skills
- 3 = very good knowledge/skills

System for competence registration

- In Nammo Raufoss AS we register the complete competence of all employees
- Formal education like upper secondary school, degrees from high-school and university, technical education and also the official statement confirming approval as a skilled worker
- Internal and external courses – with or without exams

System for competence registration(2)

- Official certificates (for certain vehicles, cranes and so on, but also certificates confirming approved skill to carry out special working tasks)
- Real competence in several areas, such as languages, computing and know-how, especially regarding explosives. The competence level is usually based on a common consideration from both employee and his superior, but it can also be based on the contents of certain training programmes

Skills gap

- When using this system it is possible to make training plans for the employees, both common and individual.
- It may be done by defining required competence level in some areas for a certain position or for groups of employees, and then comparing this with their real competence.
- The gap between required and real competence makes it easier to create a training programme for the actual employees.

Cooperation with the Norwegian defense forces

- Nammo and The Norwegian Defence Forces have established cooperation on education and competence transfer on explosives and product knowledge.
- The Norwegian Defence Forces is also part of the reference group of EUExCert.
- The cooperation with the Norwegian Defence Forces includes development of training programs and mutual support in teaching and instruction.

Questions?

