‘LOLER’ INSPECTOR CERTIFICATION STANDARDS ACROSS EUROPEAN COMMUNITY PARTNERS (Research & Needs Analysis).

Work Package 2: Result no. 2 (PART 2 OF 2)

Introduction

In relation to the use of Rope Access equipment each partner country is subject to European Directives such as Council Directive 89/686/EEC concerning Personal Protective Equipment (in all categories of PPE the manufacturer has to draw up and sign the EC Declaration of Conformity) and Council Directive 2009/104/EC concerning the minimum safety and health requirements for the use of work equipment (bringing together the earlier Work At Height Directive 20001/45/EC and the original Use of Work equipment directive 89/655/EEC).

In the UK, there are at least three Regulations that derive from these Directives:

- The Provision and use of Work Equipment Regulations 1998 (PUWER)
- Work at Height Regulations 2005 (WAHR)
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

LOLER contains a requirement for anyone using lifting equipment subject to wear and tear to have the equipment Thoroughly Examined by a competent person (usually annually for general lifting equipment, six monthly for ancillary equipment or equipment used for lifting people or over people). The UK qualification for an independent examiner is a ‘gold-plated’ version of the European Directives and in effect separates the requirements particular to lifting operations from the more general requirements of PUWER (and subsequently the WAHR).

Mapping

Mapping standards across European partners was undertaken using the only known existing ‘stand-alone’ assessment standards for certification of 'LOLER' inspectors: the arboricultural Thorough Examination Certification administered by City & Guilds / NPTC, based in the UK.

It was anticipated that partners consulted would be able to compare the UK ‘LOLER’ Arboricultural standards with either training syllabi or certification criteria from within their countries’ current requirements. The results from the exercise are summarised in spreadsheet form in **Appendix 1.**

Discussion

The mapping was based on a comparison between these UK standards and Training syllabi / assessment criteria used within partner countries. It was anticipated that the questionnaire would be completed with relative ease by each partner but this was not the case: Certification for examination of arboricultural equipment as a stand-alone assessment (i.e. separate to the training activity) is unique to the UK (and the Republic of Ireland, who have adopted the NPTC system).

It would appear that the partner countries follow various European Norms for Working at Height Equipment, including those for PPE, such as BS EN 365: 2004 *Personal protective equipment against falls from a height — General requirements for instructions for use, maintenance, periodic examination, repair, marking and packaging*, to meet the requirements under Council Directive 89/686/EEC (PPE) and Council Directive 2009/104/EC (Work Equipment, including work at Height).

This is similar to the UK, where additional requirements to those in WAHR are also considered by some sectors (e.g. construction using scaffolding and ladders as well as rope access) in BS EN 365: 2004 and BS 8437(2012) which contain both general and specific information on periodic inspection of fall protection equipment, which give more specific guidance than the statutory requirements under LOLER. (See WAHSA: http://www.hse.gov.uk/falls/downloads/inspection.pdf)

However, the results reflect the fact that all partners have a system to train operators and supervisors to inspect their rope access equipment but the assessment to judge level of performance, leading to certification, is an integral part of the training.

This is carried out in a formal college environment (such as Skovskolen in Denmark) or by commercial training providers, all of whom who follow European Norms (see **Appendix 2**) in partnership with equipment manufacturers for system of checking equipment, such as Singing Rock in the Czech Republic (http://www.singingrock.com/inspection-oopp) and Petzl in Spain (http://www.petzl.com/en/ppe-checking). An illustration of an example of a syllabus from a training company in Barcelona is translated into English in **Appendix 3.**

In Germany, a system is documented in 'BGG 906', the 'PPE (personal protective equipment) required to prevent falls'. In addition to the appropriate use and storage, it is mandatory to have any PPE annually inspected by an expert. Tests must be performed by qualified personnel subject to stringent conditions. This is a thorough and comprehensive training programme, as required for service technicians and is run by professional associations and their training centres. Training principles are laid down, test books complied and Certificates issued (see **Appendix 4**).

Conclusion

The UK at present is unique in providing 'stand-alone' assessment criteria for Thorough Examination' of Arboricultural rope access equipment. All other industries in the UK appear, including offshore, construction, amenity rock climbing and civil engineering applications appear to have their own trade organisations responsible for training, with certification standards integrated into each programme, similar to other partner counties within Europe. In the UK the standards are usually based on the National Occupational Standards for the specific industries (see http://nos.ukces.org.uk/Pages/index.aspx).

The manufacturers who offer web-based inspection regimes are not necessarily confined to arboriculture and appear to be aimed more at sports and amenity activities such as rock climbing. However, the general principles are transferable and there is a wide overlap with the all industries using common equipment.

In the UK, despite the presence of an arboriculture-specific certificate for inspectors, employers and insurance companies will accept a 'LOLER' certificate from an examiner from, say, the civil engineering sector where there is no occupational competence in tree work.

Similarly, this is subject to some controversy in Germany where some arborists argue that they do not trust a third party 'outsider' to inspect their equipment; they are more satisfied with their own personal inspection (from blog site comments). However, it is self-evident that these observations are made by individuals with a high level of practical expertise so could well be justified in their approach: The BGG 906 system is used by all industries and is thereby wide in scope and the technicians have not necessarily expertise specific to arboriculture.

Interestingly, the requirements actually set down in the 'LOLER' legislation in the UK show that this problem is anticipated and guidance is given to avoid it:

"Thorough examination should be undertaken by a competent person who has appropriate practical and theoretical knowledge and experience of rope access equipment to enable them to detect defects or weaknesses and assess their importance in relation to the safety and continued use of the lifting equipment. The competent person should decide upon the nature and extent of the examination and carry out tests when necessary. Any thorough examination of personal protective equipment should not include proof loading but would normally rely on 'pre-use checks' (see Reg. 8) and 'inspection' by competent persons. It is essential that the person carrying out a thorough examination is sufficiently independent and impartial to allow objective decisions to be made, i.e. have appropriate and genuine authority to discard equipment. This does not mean that competent persons must necessarily be employed from an external company".

One particular point that was observed from conversations with Leonardo partners, in addition to the mapping results, was that there appear to be three levels, or stages, when inspections are carried out:

- by periodic detailed inspections of own equipment with documentation by competent operators (IN-HOUSE)
- by periodic detailed inspections of 3rd party equipment with documentation by competent operators, supervisors or other personnel (INDEPENDENT)
- interim inspections e.g. after an incident or subject to annual mandatory requirements (i.e. 'special examination'), with documentation, by a third party (EXPERT WITNESS)

These three levels, specific to each industry, have not necessarily been addressed entirely by any member countries.

In conclusion, it would appear that inspectors of rope access equipment should be trained and qualified within their own industries to check equipment at two or three levels of expertise. This will encourage a culture of operator pre-use checks, supervisor routine inspection and periodic independent inspection that will reflect good practice and be transferable across member states.

Appendix 1

Work Package 2: Mapping of standards											
Research and needs analysis of European and UK National Occupational Standards related to LOLER & equipment inspections											
	A comparison with UK Certificate of Competence in the Thorough Examination of Arboricultural Equipment										
		EU Member State:									
	Overview:	Denmark		Italy		Spain		Germany		Czech Republic	
	The candidate will be able to:	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**
1	Understand the legislation and other official guidance relating to the examination of arboricultural equipment	✓	✓		✓				✓		✓
2	Understand the definition and status of a "competent person" under LOLER		✓		✓				✓		✓
3	Identify the range of lifting and lowering equipment appropriate to working at height in arboricultural operations		✓		✓				✓		✓
4	Understand the requirements for operator pre-use checks, inspection and record keeping	✓	✓		✓				✓		✓
5	Identify different categories of equipment and their appropriate examination intervals	✓	✓		✓				✓		✓
6	Recognise appropriate marking of equipment to identify individual items		✓		✓				✓		✓
7	Correctly identify levels of wear and damage in a range of arboricultural equipment		✓		✓				✓		✓
8	Record the findings of the "thorough examination" using the appropriate forms	✓			✓				✓		✓
9	Make recommendations for future use and inspection or retirement of equipment, according to findings	✓	✓		✓				✓		✓

Work Package 2: Mapping of standards									
Research and needs analysis of European and UK National Occupational Standards related to LOLER & equipment inspections									
A comparison with UK Certificate of Competence in the Thorough Examination of Arboricultural Equipment									
THEORY SECTION									
UNIT 1 – PRINCIPLES OF "THOROUGH EXAMINATION" OF ARBORICULTURAL EQUIPMENT									

		EU Member State:					
		Denmark		Italy		Spain	
		Standard exists	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**
1.Demonstrate knowledge of legislation and other official guidance relating to arboricultural equipment				**X**			

Management of Health and Safety and Work Regulations (MHSWR) 1999	The Load • Type of load • Weight • Centre of gravity		X	X		X	
	Risk of the Load falling • Striking a person • Striking objects below		X	X		X	
	Risk of lifting equipment striking • A person • Other objects		X			X	
	Risk of lifting equipment failing during use		X	X		X	
Personal Protective Equipment at Work Regulations 1992	PPE is maintained in an efficient state/good repair	X	X	X		X	
	Must have evidence of conformity to appropriate European norms			X		X	
	Information and training is provided in the use and maintenance of PPE			X		X	
	All losses, defects and damage are reported			X		X	
Provision and Use of Work Equipment Regulations (PUWER) 1998	Construction and design		X			X	
	Where it is going to be used		X			X	
	The purpose for which it will be used		X			X	
Lifting Operations and Lifting Equipment Regulations (LOLER) 1998	Lifting equipment is inspected and maintained to ensure it is safe to use		X	X		X	
	Equipment is fit for purpose		X	X		X	
	Equipment is regularly inspected to ensure it remains fit for purpose		X	X		X	

	Equipment is marked and any other information is provided to inform the user of the parameters of use for that piece of equipment		**X**	**X**		**X**	
	Equipment is uniquely identifiable			**X**		**X**	
	There is a differentiation between equipment for lifting people and rigging		**X**	**X**		**X**	
2. Demonstrate knowledge of the following terms in relation to the forces and limits incurred by arboricultural lifting equipment				**X**			
Minimum Breaking strength/Load	Minimum Breaking Strength is the load above which an item may fail		**X**				
Working Load Limit	Working Load Limit is the maximum load that an item of lifting equipment is designed to lift		**X**				
Safety factors/Safety Co-efficient (SF)	Safety factor is the ratio between the Working Load Limit and Minimum Breaking Strength		**X**				
Cycles to failure	The more an item is loaded beyond its SWL, the sooner it is likely to fail. This is accelerated by abrasive conditions		**X**				
Safe Working Load (SWL)	Safe Working load is the maximum load (as certified by a competent person) that an item of equipment should be subjected to		**X**				
3.Demonstrate knowledge of the requirements of the "Competent Person" for the purposes of Thorough Examination of Arboricultural Equipment							
	Theoretical knowledge of the type of material under inspection						
	Practical experience of the type of material under inspection		**X**				
	Can certify with confidence and competence that material under inspection is free from defect						

	Can certify with confidence and competence that material under inspection is totally suitable for the duty for which the material is required.						
	Can de-rate or retire equipment if appropriate		**X**	**X**			
4. Demonstrate knowledge of inspection of arboricultural equipment							
The different types of inspection	Pre-use check, (before every use) by the operator		**X**	**X**			
	Thorough Examination		**X**			**X**	
	Inspection in between thorough examinations on items subject to rapid deterioration						
Intervals at which the thorough examination should take place	Every 12 months for rigging equipment	**X**	**X**				
	Every 6 months for equipment for lifting people						
	This interval can be reduced if appropriate, by the LOLER examiner.	**X**	**X**				
	Exceptional circumstances such as shock loading	**X**	**X**			**X**	
5. Demonstrate knowledge of different systems using arboricultural climbing equipment						**X**	
Fall Arrest Equipment	Comprises an energy absorber attached to a full body harness by thoracic attachment	**X**	**X**				
	Required when climbing above the anchor point		**X**				
	Intended to arrest a fall to stop a person from hitting the ground or other obstacles						
	Designed to limit the impact force of the fall		**X**				
	Retains the user upright in the harness		**X**				
Work Positioning Equipment	Comprises a harness with pelvic attachment		**X**	**X**		**X**	

	Intended for use when climbing beneath anchor point with PPE in tension in such a way as to prevent a fall		X				
	Re-directs used to improve work positioning		X				
Supplementary Anchors	Additional support to prevent fall and or swing whilst working		X			X	
	System uses “adjustable lanyards”		X				
6a. Demonstrate knowledge of the reactive forces acting on anchor points							
Likely forces to be encountered on each component in a rigging system.	Pulley - up to 2x the load imposed on the line		X			X	
	Lowering device - the same load as held on the line		X				
6b. Demonstrate knowledge of the relationship between sling configuration and strength loss						X	
A sling will have different strength ratings when used in different configurations	Basket hitch - increases lifting capacity of single leg configuration by at least 140% (provided the angle between the legs is 90° or less)	X	X				
	Choker hitch – reduces lifting capacity to 80% of single leg capacity.	X	X				
7. Demonstrate knowledge of the range of arboricultural equipment that requires the LOLER “thorough examination”.	Harness		X	X		X	
	Rope		X	X		X	
	Connector (e.g. karabiner, snap, maillon rapide)		X	X		X	
	Pulley		X	X		X	
	Sling		X	X		X	
	Lowering Device		X	X		X	
	Ascender/descender or guided fall arrester		X	X			
	Lanyard (soft)		X	X			
	Pole Strop (wire core)		X	X			
	Friction saver		X	X			
	Prusik cord		X	X			

8. Demonstrate knowledge of the requirements for "traceability" of equipment	Date of purchase		X			X	
	Name of supplier		X			X	
	Evidence of conformity			X			
	Mark each item (on non-load-bearing part)						
	Mark in clearly visible manner with any markings appropriate for reasons of health and safety						
9a. Demonstrate knowledge of the different types of damage and defects that can affect metal items of equipment.	Corrosion		X			X	
	Abrasion		X	X		X	
	Cracks		X			X	
	Deformation		X			X	
	Chemicals		X	X		X	
9b. Demonstrate knowledge of the different types of damage and defects that can affect textile items of equipment.	Cuts		X	X		X	
	Abrasion		X			X	
	Burns/Melting		X	X		X	
	Age		X				
	Chemicals		X				
	Deformation		X				
	UV degradation		X				
10. Demonstrate knowledge of the examination procedures for different types of equipment							
Identify the item to be inspected and inspection method suitable to type	Inspect item thoroughly		X			X	
	Try to expose hidden areas where		X				

	appropriate						
	Pay particular attention to attachment points		**X**			**X**	
	Check moving parts for function and freedom of movement		**X**				
	Look for distortion, stiffness or residues		**X**			**X**	
	Smell or discoloration may indicate contamination		**X**				
	Use the log book/sheet to check on the history						
	Consider interaction with other items of equipment						
11. Demonstrate knowledge of records required under LOLER for arboricultural equipment							
Purchase information	Date of issue	**X**	**X**				
	Suppliers certificates of conformity for the service life of the equipment	**X**	**X**	**X**		**X**	
	Manufacturers' instructions should be available	**X**	**X**			**X**	
Record of thorough examination(s)	Interim inspection records						
	Name/signature of inspector						
	Date of report						
Particulars to identify each item of equipment	Safe Working Load			**X**		**X**	
	If equipment is safe to use			**X**		**X**	
	Identification of any defect					**X**	

	Particulars of any repair or remedial action taken or required					**X**	
	Latest date for next examination						
	Date of report						
	Any additional clarification required						

Work Package 2: Mapping of standards										
Research and needs analysis of European and UK National Occupational Standards related to LOLER & equipment inspections										
A comparison with UK Certificate of Competence in the Thorough Examination of Arboricultural Equipment										
PRACTICAL SECTION		**UNIT 2 – "THOROUGH EXAMINATION" OF ARBORICULTURAL EQUIPMENT**								
		EU Member State:								
		Denmark		Italy		Spain				
		Standard exists	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**	**Standard exists**	**Covered in training**
1. Conduct a "Thorough Examination" of a range of arboricultural equipment provided by the assessor	Identify item to relevant inspection record		**X**			**X**					
	Check item and record for any indication of damage and/or wear		**X**			**X**					
	Check to see if damage has occurred		**X**			**X**					
	Evaluate whether damage identified is within acceptable limits		**X**			**X**					
	Pass as "Safe					**X**					

	to Use" and record as such										
	Remedial action or reduced inspection interval					**X**					
	Fail as "Not Safe to Use", remove from service and record as such		**X**			**X**					
	Notify employer forthwith of any defects which could become a danger to persons										
2. Record the results of the "thorough examination", completing the appropriate records required by the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998	Make a written and signed report of the "Thorough Examination" containing:										
	Name/signature of inspector										
	Date of report										
	Particulars to identify each item of equipment										
	Safe Working Load										
	If equipment is safe to use										
	Identification of any defect										
	Particulars of any repair or remedial action taken or required										

	Any additional clarification required										

	Other standards for "LOLER Examination " that exist in your country not listed above	**Please describe or explain the certification that exists in your country for "LOLER Examination"**
Denmark	Our standards has to follow the manufactures standards and recommendations.The Danish Working Environment Authority (The danish "health and safety") gives minimum standards and guidelines for use and handling and inspections of PPE, but manufactures standards has to be followed	Certifications has to follow the manufactures standards and recommendations
Italy	Climbers to be certificated after attending a course of 5 days held in an approved educational centres- The examination is divided into two parts; Theoretical: Open Questions Practical: The commission is composed by a climbing instructor, and expert in safety and first aid and a public officer of the local health department	
Spain		None

Appendix 2

European Norms for Working at Height Equipment

EN 341: Personal protective equipment against falls from a height. Descender devices

EN 352-2: Revised 2002 standards on hearing protectors. Safety requirements and testing, generally about earplugs.

EN 353-1: Personal protective equipment against falls from a height. Guided type fall arresters including a rigid anchor

EN 353-2: Personal protective equipment against falls from a height. Guided type fall arresters including a flexible anchor line

EN 354: Personal protective equipment against falls from a height. Lanyards

EN 355: Personal protective equipment against falls from a height. Energy absorbers

EN 358: Personal protective equipment for work positioning and prevention of falls from a height. Belts for work positioning and restraint and work positioning lanyards

EN 360: Personal protective equipment against falls from a height. Retractable type fall arresters

EN 361: Personal protective equipment against falls from a height. Full body harnesses

EN 362: Personal protective equipment against falls from a height. Connectors

EN 363: Personal protective equipment against falls from a height. Fall arrest systems

EN 364 Personal protective equipment against falls from a height: Testing methods

EN 365 Personal protective equipment against falls from a height. general requirements for instructions for use and for marking

EN 397: Specification for industrial safety helmets

EN 567: Mountaineering equipment. Rope clamps. Safety requirements and test methods

EN 795: Protection against falls from a height. Anchor devices. Requirements and testing

EN 813: Personal protective equipment for prevention of falls from a height. Sit harnesses

EN 1891: Personal protective equipment for the prevention of falls from a height. Low Stretch kernmantle ropes.

BS EN 1492-2:2000: Textile slings. Safety. Roundslings, made of man-made fibres, for general purpose use

EN12841 Type c: Descenders

EN 818-4 wire slings

EN1496 Rescue Equipment: Rescue lifting devices

EN 1497 Rescue Equipment: Rescue harnesses

EN 1868 Personal protective equipment against falls from a height. List of Equivalent Terms

Also of interest:

- EN 10002: Metallic Materials - Tensile Testing

EN564 accessory cords

EN565 tape

EN892: Dynamic mountaineering ropes

Appendix 3

Vertical: Spain http://www.vertical.es/profile.php

PERSON RESPONSIBLE FOR THE REVIEW OF PPE FOR WORK IN HEIGHT PETZL

Training Course Information

Objective: This course, theoretical / practical, has been designed to train persons designated by the employer, which are or will be, responsible for conducting the review of the Personal Protective Equipment (PPE) for work at height used by workers of the company.
In addition to general information on legislation and regulations concerning these types of PPE, the purpose of this training is to provide information, guidelines and protocols to follow for:
- Identify the damage and / or defects that can affect the safety and / or functionality of PPE used.
- Carry out a review before use, the special review and periodic review of PPE used.
- Create a management system for review of PPE.
- Specify reviewing plans PPE.
- Prepare written reports of reviews and determine specific actions to be performed.

Although the official course is called "Person responsible for the review of PPE for work at height Petzl ", from now on, we will use the short name" Inspector of PPE for work at height Petzl ".
Target audience: persons designated by the employer, whose responsibility is to conduct the review of PPE for work at height used by workers of the company.
Technical level of the participant, in order to attend this course, participants should have a working knowledge of PPE covered by this course and have experience in the practical use of such equipment, as well as techniques arising from its use.
Both knowledge of the operation, as experience in the use of PPE will be supported by the company they work for participants by a certificate issued and delivered to the course instructor, prior to commencement.

Object EPI Course: PPE used during the course and for both to be certified as a person competent, that is, as "Inspector of PPE for work at height Petzl" are:
1. Energy absorbers EN355
2. EN795 temporary anchors
3. Fall arrester EN353-2 and EN12841 Type A
4. Work and Rescue Harnesses EN358, EN361 and EN813
5. Blockers EN567 and EN12841 type B
6. Work and Rescue Helmets EN397 and EN12492
7. Connectors EN362
8. Strings EN1891
9. Descenders EN341 and EN12841 Type C
10. Lanyards EN354 and EN358
11. Pulleys EN12278

Course duration: 32 hours.

Course Outline: the course will cover the following topics:
- Introduction
- Personal Protective Equipment
- Legislation
- Management system
- Selection of equipment
- Review of equipment
- Storage, cleaning and maintenance
- Evaluation
- Course Rating

Course participants: 6 people maximum, minimum 4 people. If the minimum is not reached, will void the course.
After passing the training successfully, each participant will receive a numbered certificate with a valid for three years, in which the holder is recognized as "competent person for review of PPE for work Petzl height "….

Prerequisites for the course: before starting the course, each participant must meet the following requirements:
- Have the necessary technical level.
- Complete and sign the Application Form the training course.
- Complete and sign the Terms and Conditions of Service.
- Provide proof of payment made: tuition and the rest of the course.
- Provide a certificate of declaration of the technical level of the participant.

Appendix 4

BGG 906-Germany

Accident Prevention and Insurance Association: Principles, test books and Certificates: Accident Prevention and Insurance Association-principle: Selection, training and Qualification of Experts for personal Protection Equipment against Fall for height (October 1995 HVBG Federation of commercial Bgs Technical Committee"Personal Protective Equipment" BGZ Updated version published in March 2006)BGG 906 Contents Page:

BG = Accident Prevention and Insurance Association or Goverment Safty Organisation 2 Introduction If during the execution of work at height, the establishment of Guardrails or reception facilities inadequate, are personal Protective equipment to be used to prevent falls.

This personal protective equipment against falls have high requirement scores, as they are intended to protect against mortal danger. Then besides proper preparation, application and periodic testing this personal fall protection equipment is required. This checks must be carried out by qualified persons. For this there is a thorough and comprehensive training for technicians experts required. (Information on the implementation of such training with training contents are as described below of the trade associations and their training centers granted.)

1 Scope This BG principle applies to the selection, training and the qualification of experts for personal Fall protection equipment. It should make it possible selected on the basis of predetermined criteria suitable persons and for those with appropriate training expert empowering for personal fall protection equipment.

2 Selection of persons 2.1 Basics The sections 5.1, 7.1 and 7.2 of the BG rule "use of personal Fall protection equipment "(BGR 198), and the BG rule "use of personal protective equipment for Rescue from heights and depths "(BGR 199) include receivables, that: - Damaged or stressed by personal fall To avoid the use of fall protection equipment until they are approved by an expert from further use (see section 5.1), - The entrepreneur personal fall protection equipment accordance with the

operating conditions and operation Conditions as needed, but at least annually, in perfect condition by an expert to an audit (see section 7.1), - The contractor fixed guides (rails) of fall protection systems, unless shorter periods are fixed, as required in perfect condition by an expert

to an audit (see section 7.1), - The entrepreneur personal fall protection equipment to have to wait through expert (see Section 7.2).

2.2 Training Target The aim of training is sufficient knowledge in the field to provide personal protective equipment against falls and with relevant state health and safety regulations Accident prevention, BG rules and generally accepted Codes of practice (eg DIN-/EN-Norms) are trusted To do that he the safe condition and proper use of personal protective equipment can judge from falling.

2.3 2.3 Requirements For training only such persons are selected, which

1. have completed the 18t Year of age, 2.have sufficient knowledge regarding the use and ambulatory with personal fall protection equipment and 3. are thought to be able to fulfill the assigned tasks reliably. Source: www.arbeitssicherheit.de - the HVBG cooperation with the WIPO BGG 906 3 Training 3.1 Duration of training The time frame for the mediation of the listed in Section 6.2 Knowledge and skills must be at least 16 teaching units 45 minutes including practical and theoretical check amount. The number of persons should be limited to 20 participants.

3.2 Training content 3.2.1 Theoretical Education The necessary knowledge to be imparted. This includes a basic understanding of structural relationships and the intended use of the personal Fall protection equipment. The construction has to be mentioned as far as the knowledge abput it is necessary for its proper use and the detection of defects of personal protective equipment against Crash are required. The safety aspects of the basic rules are integrated in the individual instruction sections.

The following rules have to be considered: • Public health and safety regulations • Professional Association regulations (accident prevention), • codes of practice (for example DIN-/EN-Norms).

Other topics to be considered: • types of personal protective equipment against falls (Holding, collection and recovery systems), - Evaluation, selection, - Ingredients - Proper use, - Storage, maintenance, - Identification, Source: www.arbeitssicherheit.de - the HVBG cooperation with the WIPO BGG 906 • duties of a competent person, • Operating instructions, • User information of the manufacturer, and special significance Attention • use, use areas of personal protective equipment

against falling • Anchor devices, • organization of the examination by an expert.

3.2.2 Practical training Using practical examples, the participant hasto learn the intended use and the function of various Types of personal protective equipment against falls.

As Types are to be treated - Support systems, - Fall arrest systems and - Systems for rescue every system, every type which by practical use may be occurring damages must be comprehensively identified and explained to the participants. There must, in particular be shown the inner, e.g. Loss of elongation, and external defects, e.g. Cracks, Fractures, corrosion, show.

The Participants will learn through exercises to demonstration projects, to identify damages and a lack of personal protective equipment and to decide on the further use.

3.2.3 Evidence of competence 3.2.3.1 The evidence of competence can be shown through the successful participation in a course along these lines, for example at a Professional association. Source: www.arbeitssicherheit.de - the HVBG cooperation with the WIPO BGG 906 6 3.2.3.2 The course participants has to prove his theoretical knowledge and practical skills at the end of training in a test. Prove.

3.2.3.3 The supporter of education are invited to inform the"Personal Protective Equipment", Zwengenberger Straße 68, 42781 Haan, about the implementation of demonstration of competence and to involve, where appropriate. The results of the evidence must be documented and to keep at the training providers store.

4 qualification 4.1 About the proof of competence, the participant receives a certificate from the training institute (see sample Appendix).

4.2 If the Education is limited to a specific product or product groups, this must be noted separately in the certificate.