



Information about FISAT Assessments in English

One of the main principles of FISAT assessments is equality of opportunity and the same requirements for all examinees. When offering the exam in English, we have to stick to this principle and guarantee a clear and definite communication between the examinee and the assessor. This applies not only to on-site communication on the day of the assessment, but also to all examination and preparatory documents. For this reason, the assessment can only be taken in English upon request, as we have to assign an Assessor with adequate language skills. 98% of persons requesting to take the exam in English are not native speakers themselves and some legal or technical terms cannot be translated without accompanying explanation, therefore we are fully aware, that unclear situations might occur during training or assessment despite our efforts. With this information, we intend to provide background information on the German legal HSE system as well as technical phrases and help to eliminate misunderstandings and miscommunication during your assessment.

Training and Assessment

Training and assessment have to be seen as two completely separate events. The week of specific training and exam preparation is offered by independent training companies that can be found in Germany, Austria and Switzerland. Please check directly with your training company whether they provide training courses in English or not. They will also answer your questions regarding the required documents as medical statements and first aid certificates, request an English speaking Assessor and register you for the examination. Price for training courses include the examination fees, so you will have only one contractual partner.

Working outside Germany

Although the FISAT system is conforming the international standard ISO 22846 "Rope Access Systems", as well as the minimum requirements for training and assessment of rope access technicians signed by ECRA (European Committee for Rope Access) in 2012, it is heavily based on German rules and regulations. When working outside Germany, it is mandatory to check national laws and specifics in order to work according to the locally binding regulations. This applies mainly to administrative and organizational aspects, as the basics of industrial rope access (two ropes, separate anchor points, use of certified equipment, etc.) are more or less identical all over the world.

Occupational Health and Safety in Germany

When it comes to occupational health and safety (OHS), Germany has boon and bane of referring to two different pillars. On the one hand there are governmental laws, rules and regulations, on the other hand, there is the German Legal Accident Insurance (German: DGUV, also referred to as Employers Liability Insurance Association). Each company having one employee or more has to become member of an industry specific DGUV division (called "Berufsgenossenschaft"). Benefit for the entrepreneur is insurance coverage for occupational accidents, commuting accidents and occupational illnesses as well as medical, social and occupational rehabilitation. To avoid as many accidents and work-related illnesses as possible, the main task of the German Legal Accident Insurance is prevention. Millions of Euros are invested on campaigns and information on safe work practices each year.

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As per German law (Social Code, 7th book), the DGUV is empowered to pass legally binding accident prevention regulations and rules for protection of health and safety. On the state side, compliance with the federal laws is monitored by the authorities and offices of the individual federal states. (Please refer to chart 1.)

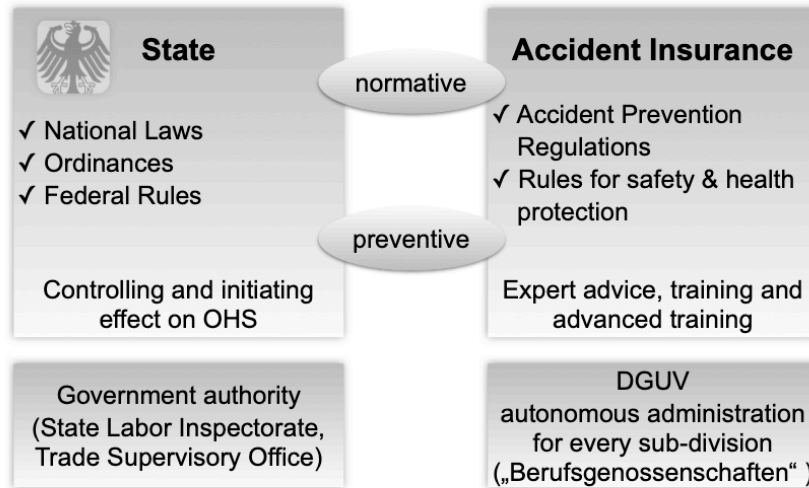


Chart 1: Occupational Health and Safety in Germany

Rules and Regulations

This might be the toughest part to learn – certain names of ordinances and regulations just cannot be translated. When becoming a FISAT-certified rope access technician, you will most probably work in Germany or for a German employer, making it necessary to have a general knowledge of the OHS legislation and rope access related documents from day one of your career.

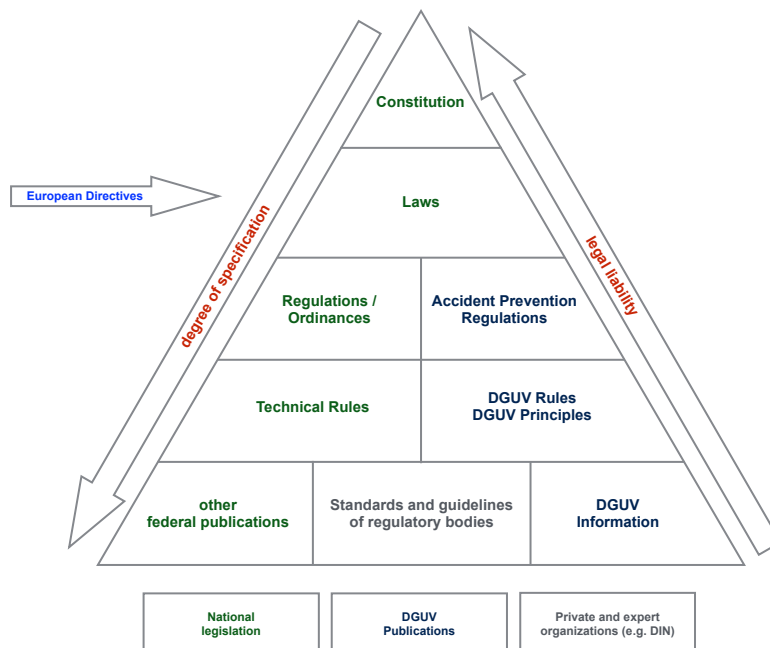


Chart 2: rules and regulations in Germany / general overview

Rope access supervisors are expected to have profound understanding. For this reason our exam questions cover this field of knowledge as well, ranging from only a few general questions for Level 1 up to several detailed questions for Level 3. There will be a clear indication, whenever you are asked for a German expression and a brief English explanation will be provided in brackets. Chart 2 gives an overview of how labor related laws, rules and regulations are structured in general. Chart 3 classifies the rope access specific documents into this general overview.

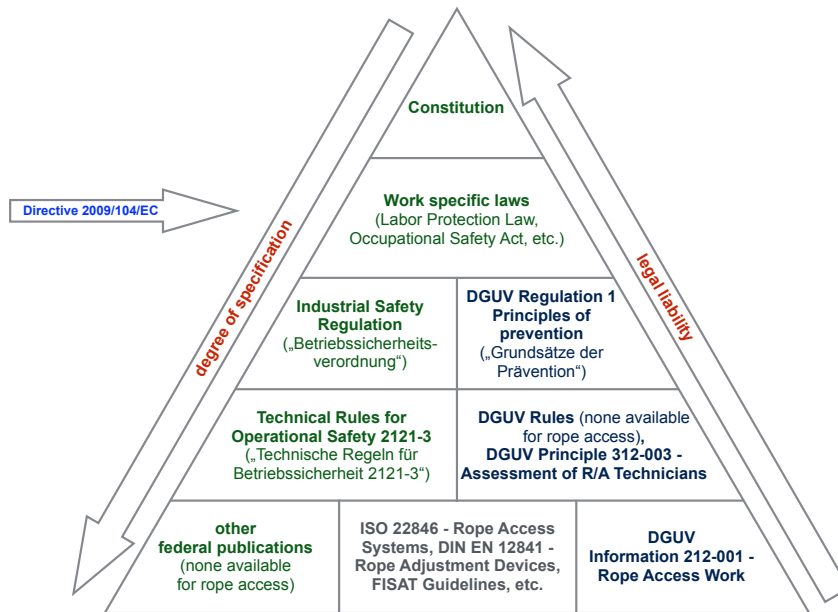


Chart 3: rules and regulations in Germany / rope access specific

Overview - German Rules and Regulations

German Name	English Name or Explanation	Contents
Laws		
Grundgesetz / Verfassung	Constitution	Determines the most important rights of the individual in relation to the state and organizes state action.
Arbeitsschutzgesetz	Labor Protection Law	Regulates the basic occupational health and safety obligations of the employer, the duties and rights of employees as well as the monitoring of occupational safety and health according to this Act.
Arbeitssicherheitsgesetz	Occupational (Health and) Safety Act	Regulates the obligations of employers to appoint occupational physicians and occupational safety specialists, defines their rolls and calls for operational cooperation in occupational health and safety and accident prevention.
Arbeitszeitgesetz	Working Hours Act	Ensures the safety and health protection of workers when organizing working hours.
Siebtens Sozialgesetzbuch	Social Code, 7 th Book	Regulates statutory accident insurance.

<i>Regulations / Ordinances</i>		
Betriebssicherheitsverordnung	Industrial Safety Regulation	German implementation of the Work Equipment Directive 2009/104/EC. Regulates the provision of work equipment by the employer and the use of work equipment by employees at work. Rope Access is outlined in Annex 1 (section 3)
Gefahrstoffverordnung	Hazardous Materials Regulation	Comprehensively regulates the protective measures for employees when working with hazardous substances.
Arbeitsstättenverordnung	Workplaces Ordinance	Regulates the safety and protection of the health of employees in workplaces and contains requirements for the humane design of work.

<i>Technical Rules</i>		
Technical Rules are published and updated by the Federal Ministry of Labor and Social Affairs. They reflect the state of the art and other reliable scientific findings and concretize a higher-level government regulation.		
Technische Regeln für Betriebssicherheit (TRBS)	Technical Rules for Operational Safety	Concretize the Industrial Safety Regulation regarding occupational medicine and hygiene for the provision and use of work equipment as well as the operation of systems requiring monitoring. The relevant part for rope access is the TRBS 2121 part 3.
Technische Regeln für Gefahrstoffe (TRGS)	Technical Rules for Hazardous Substances	Concretize the Hazardous Materials Regulation regarding the requirements for hazardous substances with regard to handling and placing on the market.
Technische Regeln für Arbeitsstätten (ASR)	Technical Rules for Workplaces	Concretize the requirements of the Workplace Ordinance.

<i>DGUV Publications</i>		
DGUV Vorschrift 1 Unfallverhütungsvorschrift Grundsätze der Prävention	DGUV Regulation 1 Accident Prevention Regulation Principles of Prevention	Regulates the organization of occupational health and safety as well as the related obligations of employers and employees. This includes, among other things, risk assessment, operational training, first aid and provision of personal protective equipment (PPE).
DGUV Regel 112-198	DGUV Rule 112-198	Use of PPE against falls from a height.
DGUV Regel 112-199	DGUV Rule 112-199	Rescue with PPE against falls from a height.
DGUV Information 212-001	DGUV Information 212-001	Rope Access Work
DGUV Grundsatz 312-001	DGUV Principle 312-001	Requirements for trainers and training centers for training in the use of PPE against falls from a height.
DGUV Grundsatz 312-003	DGUV Principle 312-003	Requirements for assessments of rope access technicians.
DGUV Grundsatz 312-906	DGUV Principle 312-906	Basics for the qualification of competent persons inspecting PPE against falls from a height.

Operational Planning

When taking the assessment FISAT Level 3, Rope Access Supervisor, there are three subsections to pass. A theoretical and a practical section as they are known from Level 1 and Level 2 plus the preparation of a set of documents referred to as operational planning or safety method statement. This subsection is based on a fictitious work task that is described with text and images and with the assumption, that the candidate will prepare the operation and will later lead the team on site as the responsible supervisor. The document consists of two different parts, an access- and rescue concept with work instructions and a risk assessment. Concept-wise you are asked to describe team size, qualification of the personnel, selection of gear and equipment, access to the building/construction site, access to your anchor points, the actual rope access techniques and how you are getting the job done. A conclusive rescue concept must be presented for all areas of the worksite. This includes special equipment (if required) and additional training your team members might need to have. For the risk assessment, the examinee receives an overview of potential hazards as auxiliary material. For all identified risks, the hazard factor, the source of the respective hazard, as well as an adequate counter measure need to be noted on the form issued by the assessor. Evaluating potential risks is an employer's obligation which can be transferred to a competent person. It is mandatory and firmly anchored in German legislation and the occupational health and safety system. Details of how to prepare it can be found in the Technical Rules for Operational Safety part 1111 (Technische Regeln für Betriebssicherheit 1111) and DGUV Information 211-032.

Mechanical Advantage Pulley Systems

Books have been filled about mechanical advantage pulley systems and while some technicians barely use and understand them, others seem to make a complete scientific discipline out of them. Every rope access technician has to understand the basics of mechanics, however no one expects you to have a degree in physics. We have defined the essential basics that can be learned by everyone and that, despite the simplification, deliver physically correct values. As a rule, friction loss, rope elongation and other variables are neglected in those basic methods for determining the purely theoretical mechanical effectiveness. In contrast to proper names of rules and regulations, that cannot be translated, there are definitions for different mechanical advantage pulley systems in English. Unfortunately they are different than the German ones. We have decided to stick to those English definitions rather than translating the German approach. To put it in other words: keep in mind those differences when discussing mechanical advantage pulley systems with colleagues as there is a chance for misunderstanding.

Definitions:

Fixed (or stationary) pulley – change of direction only, no mechanical advantage, pulley will not change position within the system, fixed pulleys amplify forces where they are anchored.

Travelling pulley – provides a mechanical advantage (theoretically 2 to 1), pulley will change position within the system. Also referred to as working or moving pulleys.

In line pulley system – the main hauling rope is used to create the pulley system. Also known as direct pulley system.

Ganged on – a separate rope or section of rope is used to set up the mechanical advantage pulley system which is then attached to the main line with a friction hitch or rope clamp. Also known as indirect pulley system.



Simple mechanical advantage pulley system – a system where fixed pulleys are connected directly to the anchor and all travelling (working) pulleys are connected directly to the load. Therefore all travelling pulleys are moving toward the anchor at the same rate of speed. (Note: the German expression “Faktorenflaschenzug” is defined exactly the same way.)

Compound mechanical advantage pulley system – any configuration where a mechanical advantage system is being hauled on by another system. Such a system can either consist of a combination of fixed and travelling pulleys or travelling pulleys only. Travelling pulleys are moving into the same direction - toward the anchor - at various speeds. (Note: the German “Potenzflaschenzug” knows only travelling pulleys.)

Complex mechanical advantage pulley system – a system that is neither simple nor compound, at least two travelling pulleys converge toward each other as the load is hauled. (Note: systems with travelling pulleys converging toward each (one travelling towards the anchor, the other towards the load) are not existing in FISAT’s basic definition.)

FISAT – HALLMARK OF SAFE ROPE ACCESS