Training, Assessment and Certification Scheme

for personnel engaged in industrial rope access methods

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Foreword

IRATA International (IRATA) is recognized as the world's leading authority on industrial rope access. Established in 1988, the association's aim is the promotion and development of the safe system of work that it has pioneered since its inception and to support its member companies and trained rope access Technicians to enable them to work in a safe and effective manner.

IRATA member companies have to meet specific entrance qualifications and are subject to regular audits to ensure that they meet IRATA's requirements for quality assurance, safety, training and working practices. The audit program is in line with standards such as ISO 9001:2008 and OHSAS 18001.

The benefits of the audits and requirements are reflected in an annual work and safety analysis, where the comparatively low level of accidents and incident rates of IRATA members are reported. The IRATA work and safety analysis can be viewed by visiting www.irata.org.

IRATA produced the first documented certification scheme in 1992 (formerly known as the General requirements for certification of personnel engaged in industrial rope access methods) as a scheme of training guidance and qualifications focusing on safety. Since then, IRATA qualifications have become the industry standard requirement for personnel engaged in industrial rope access methods. This revision results from the experience gained in operating the scheme for many years and reflects IRATA's commitment to continuous improvement.

IRATA's supporting publication, the International Code of Practice (ICOP) [TC-102], reflects current best working practice in rope access and is commended by respected organisations such as the United Kingdom's Health and Safety Executive (HSE) and others.

IRATA member companies are required, as a condition of membership, to comply with the principles of the code of practice; this includes using rope access personnel who have been trained and certified in accordance with this scheme.

IRATA believes that its requirements and recommendations, as laid out in the International Code of Practice [TC-102] and in this document, set the standard for industrial rope access worldwide.

Although care has been taken to ensure, to the best of IRATA's knowledge, that the contents of this document are accurate to the extent that they relate to either matters of fact, accepted practice or matters of opinion; at the time of publication, IRATA assumes no responsibility for any errors or misinterpretations of such contents or any loss or damage arising from or related to their use.

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Introduction

IRATA's rope access system is a safe method of working at height, where ropes and associated equipment are used to gain access to and egress from the work place, and to be supported at it.

Like any other method of working at height, the application of rope access should be regarded as a complete system, in which planning, management, competence and suitable equipment should be treated with equal importance, as each is dependent on the others to ensure a safe system of work. The IRATA International Code of Practice (ICOP) [TC-102] explains this in detail, and this document, the IRATA Training, Assessment and Certification scheme (TACS) [TC-101], should be used in conjunction with it.

The competence of personnel who are engaged in rope access methods is a key element of IRATA's rope access system. This document has been developed by IRATA to provide training and assessment criteria to develop, maintain and test competence to ensure training is delivered to the required standard, in a safe and controlled environment by competent and experienced Trainers. Training courses are thorough, and there are different levels of qualification reflecting increasing levels of responsibility.

Independent assessments are designed to test the candidate's knowledge, skills and attitudes in relation to the operations performed and to provide independent, impartial judgement on the candidates' understanding of the techniques taught during their training. Certification provides industry with an assured standard of proficiency. Further training and assessments are required at regular, defined intervals to maintain certification.

All IRATA member companies and rope access Technicians are required to meet all the requirements of this scheme as a condition of membership. Training courses leading to certification under the scheme may only be carried out by full or probationary Trainer member companies of IRATA.

1 Scope

This document details the requirements of IRATA's Training, Assessment and Certification scheme [TC-101] and offers guidance to assist implementation. It provides:

a) the levels of certification for new and existing IRATA rope access Technicians, and explains the training syllabuses and assessment criteria required to attain and revalidate them;

b) guidance for candidates, including pre-training requirements and topics covered;

c) requirements and guidance for IRATA Trainer member companies;

d) requirements and guidance for IRATA Instructors;

e) requirements and guidance for IRATA Assessors, including the marking process.

The scheme does not include operating procedures: these are drawn up for the specific task by operating companies following the IRATA Code of Practice [TC-102]. The ICOP [TC-102] also includes more information on the applicability of IRATA's rope access qualifications in the workplace.

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2 Terms and definitions

For the purposes of this Training, Assessment and Certification scheme [TC-101], the following terms and definitions apply:
NOTE A wider set of definitions can be found in ICOP [TC-102] Part 1, 1.3.

Assessor
appointed person who has been proved competent to assess the IRATA International qualifications of a rope access Technician

candidate
individual either seeking to undergo training or undergoing assessment

certification
written testimony of qualification

desk-based
learning or assessment task carried out as a theoretical, rather than practical, exercise

employer
corporate, private or public entity which employs personnel for wages, salary, fees, or other considerations

Instructor
individual delivering training who has achieved the IRATA International Instructor qualification

logbook
IRATA International approved record of work experience

major discrepancy
critical safety issue caused by a candidate during assessment, which puts themselves or others at risk

minor discrepancy
non-critical safety issue caused by a candidate during assessment, which compromises his/her safety or the safety of others but which is not considered to be a major discrepancy

refresher training
training intended to revise and update knowledge and skills

revalidation training
training course delivering the entire syllabus at a given level, leading to assessment and, if successful, renewal of certification

rope
appropriate flexible line used to support, restrain or safeguard a person in combination with other equipment
NOTE Depending on the context, a rope is also referred to as an anchor line, working line or safety line.

shall
verb indicating that the statement is mandatory under IRATA International rules

should
verb indicating that the statement is a recommendation

technical contact
employee of an IRATA International member company nominated to deal with rope access matters
NOTE The technical contact is also known as the company nominated person.

trainee
individual undergoing training

Trainer
individual delivering training
NOTE Experienced Trainers can become certified as Instructors.

training
organized programme developed to impart the knowledge and skills necessary for qualification

working hours
hours worked using rope access techniques including rigging, equipment maintenance and inspection

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3 Levels of qualification

3.1 Rope access Technicians are grouped into three technical grades depending on their experience and level of assessment. Figure 1 provides a flowchart showing the route to qualification.

3.1.1 Level 1

This is a rope access Technician who is able to perform a specified range of rope access tasks under the supervision of a Level 3 rope access safety supervisor. They are:

a) able to understand and follow the rope access procedures, method statements and associated risk assessments;

b) responsible for pre-use checks of his/her own rope access equipment;

c) able to assist in rigging and other operations, under the guidance of a higher grade;

d) able to undertake a simple rescue in descent, and assist in rescue operations.

NOTE While in the process of being trained to Level 1, a person is considered to be a trainee.

3.1.2 Level 2

This is an experienced rope access Technician who is able to perform more complex tasks under the supervision of a Level 3 rope access safety supervisor. They are:

a) able to demonstrate the skills and knowledge required of Level 1;

b) capable of more complex rigging, including re-anchors, deviations and tensioned lines;

c) able to undertake rescues from a variety of situations;

d) able to assemble and implement hauling systems.

3.1.3 Level 3

This is an experienced rope access Technician who is responsible for understanding and implementing the rope access procedures, method statements and associated risk assessments, and:

a) is able to demonstrate the skills and knowledge required of Levels 1 and 2;

b) understands the elements and principles of IRATA's safe system of work;

c) is conversant with relevant work techniques and legislation;

d) has an extensive knowledge of advanced rope access rigging and rescue techniques;

e) holds an appropriate and current first-aid certificate.

A Level 3 can become a rope access safety supervisor: see ICOP [TC-102] Part 2, 2.6.2 for guidance.

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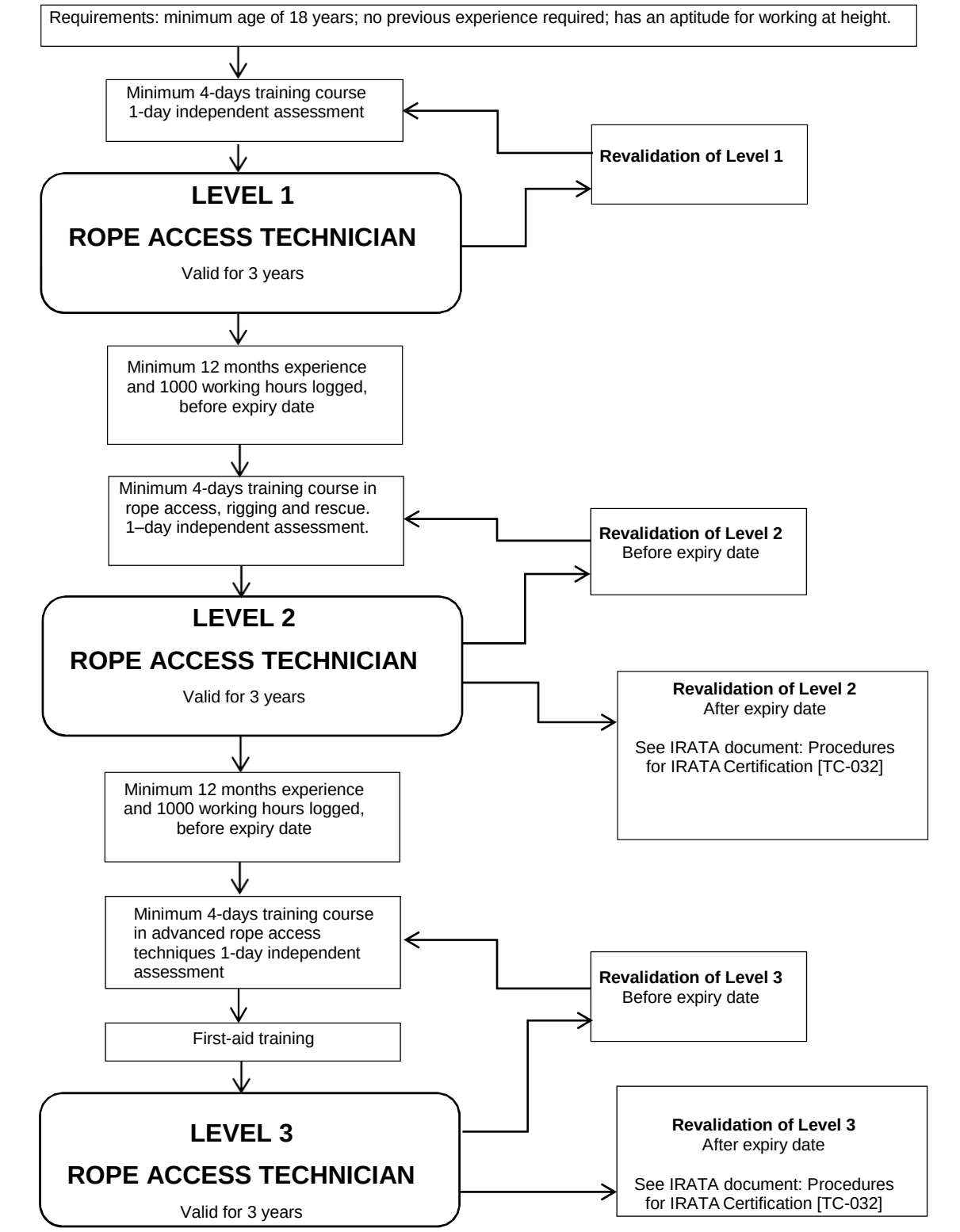

Independent IRATA re-assessments are required every three years at all levels, following a minimum of four days of training.

Rope access Technicians **not** engaged in rope access work for six months or more should attend refresher training.

Holders of expired Level 2 or Level 3 certificates that have been expired for more than 6 months should contact an IRATA Trainer member company for information on revalidation procedure. To ensure rope access Technicians are up to date with certification, re-assessment may be done up to 6 months before due expiry date without any time penalty.

Figure 1 – Flowchart showing qualification process

4 Guidance for candidates

4.1 Suitability of candidates for training

4.1.1 To work safely in rope access requires those engaged in the work to have an appropriate attitude and aptitude. A good level of fitness and physical capability is also required. If unsure, an appraisal session should be arranged with an IRATA Trainer member company.

4.1.2 An aptitude for work at height includes not only having 'a head for heights', but also an appropriate level of responsibility and self-reliance. A healthy respect for heights remains an advantage; over-confident or reckless workers may present greater risks than the cautious.

4.1.3 Rope access work locations are often remote from outside help; it is, therefore, especially important that operatives can be relied upon to behave in a sensible and responsible manner.

4.1.4 The Trainer member company has the right to exclude any candidate from training if they have concerns over the candidate's health, fitness or attitude to safety during training.

4.2 Pre-training requirements: health and fitness

4.2.1 Candidates shall be at least 18 years of age at the start of the course.

4.2.2 Candidates should be physically fit and unaffected by any disability or medical condition that may prevent them from working safely. They shall ensure that they have an adequate level of fitness, are physically able to perform the tasks expected in terms of strength, agility and co-ordination, and are able to withstand the stresses of the working environment, such as heat, cold, and other inclement weather.

4.2.3 Candidates are required to declare that they do not have any medical conditions or contra-indications that may prevent them from working safely. The minimum requirement is a self-certification statement, see the IRATA Candidate Disclaimer and Liability Release form [FM-014].

4.2.4 It is recommended that prospective employees are in possession of an appropriate medical certificate before starting this kind of work, and that they are re-assessed at regular intervals thereafter.

4.2.5 If a candidate has a contra-indicated condition which is controlled with medication, he/she shall obtain a signed doctor's note to show the Training member company or employer that the condition should not prevent that person doing rope access work providing they have access to the required medication.

4.2.6 Candidates should consider their experience carefully before attempting to progress to a higher level. Candidates without appropriate experience, adequate pre-assessment training and knowledge of the syllabus are unlikely to meet the required standard when assessed.

4.3 Pre-training requirements: upgrading to Levels 2 or 3

4.3.1 Candidates applying to upgrade shall be competent in all practical and theory requirements of their current level prior to attendance of an upgrade course, e.g. an existing Level 1 attending a Level 2 course shall be capable of performing all Level 1 techniques and answering Level 1 theory questions prior to the start of a Level 2 course.

4.3.2 Candidates who are not competent at their existing level may require additional training. As little time is available on upgrade courses for refresher training, pre-course evaluation is recommended to verify the candidates' current level of competence.

4.3.3 Candidates seeking to upgrade shall ensure that:

a) their current certification is still valid on the day of assessment;

b) they have the necessary 1 years' experience and 1000 working hours recorded and signed off in their logbook. See **4.13** for more details on logbooks.

NOTE For the avoidance of confusion, 1 year experience means a Technician is eligible for an upgrade assessment on the calendar day one year and one day after their previous assessment; e.g. 1st April 2014 Level 1 assessment, 2nd April 2015 earliest possible L2 assessment.

4.3.4 Rope access Technicians who are upgrading or revalidating shall provide their logbooks to the IRATA Trainer member company prior to the start of the training course. Where rope access Technicians have lost their logbooks, they shall arrange for a replacement to be issued, completed and verified before training commences.

4.3.5 Rope access Technicians whose certification has expired should consult Procedures for IRATA Certification [TC-032].

4.4 Training programmes

4.4.1 Training shall be carried out by full or probationary IRATA Trainer member companies. Non-member companies are not permitted to provide IRATA training.

4.4.2 Training shall be led by an IRATA Level 3 rope access Technician. The maximum candidate to Trainer ratio shall be six to one (only with a Level 3 Instructor). See **7.4** for more information on candidate/Trainer ratios.

4.4.3 The Trainer may have an assistant, who shall be an IRATA rope access Technician qualified to the same or higher level as the trainees.

4.4.4 Training programmes shall comprise at least 30 hours training over a minimum of 4 days. This time is specific to the level of course and will not normally include any refresher time for lower level requirements. Breaks in training, or between training and assessment, shall not be longer than 60 days, after which candidates are required to attend a further training course in full. Evidence of qualifying prior training must be presented to the Training member company prior to assessment.

4.4.5 Supporting information shall be available to trainees and shall include as a minimum: course hand-outs; relevant equipment instructions; the IRATA International Code of Practice [TC-102]; the IRATA Training, Assessment and Certification scheme [TC-101]; IRATA safety bulletins (all available from www.irata.org).

4.5 Conversion and accelerated entry to IRATA Certification

The Direct Entry scheme permitted candidates to be trained and assessed at the IRATA certification level equivalent to their rope access experience and skills. This scheme is now obsolete.

Candidates with significant rope access experience evidenced outside the IRATA system may be eligible for conversion or accelerated entry into the IRATA certification scheme. The requirements for conversion are available from IRATA Training member companies.

4.6 Assessments

4.6.1 The purpose of the assessment is to ensure that each candidate demonstrates the required tasks in a safe manner, in accordance with the requirements of this scheme.

4.6.2 The Assessor shall not require tasks that are outside the relevant syllabus.

4.6.3 IRATA assessments shall only be carried out by IRATA Assessors who are independent of the candidate, the candidate's employer and the organisation providing training.

4.6.4 Before starting the assessment, the Assessor and Training member company shall agree how the responsibility for the health and safety of the candidates is to be managed.

4.6.5 All candidates shall be fully briefed by the Assessor before and during the assessment.

4.6.6 The assessment is in two parts: written and practical. Where appropriate, the Assessor may explore the candidate's knowledge further by discussion.

4.6.7 Candidates may be asked to carry out an exercise, or exercises, that include more than one element of the assessment.

4.6.8 There are two possible overall results: pass or fail. To pass the assessment, the candidate shall successfully complete all the required elements of the syllabus at the relevant level. The assessment ends and the candidate fails if one major discrepancy or three minor discrepancies are committed during the assessment. More information on assessment criteria is given in **9.3**.

4.6.9 The candidate shall be able to obtain clarification of any requirement from the Assessor at any time during the assessment.

4.6.10 The Assessor shall inform the candidate of discrepancies when they occur and shall explain the safety issue arising from the situation.

4.6.11 The candidate shall sign the IRATA Technician Assessment Form [FM-025] at the beginning of the assessment. At the end of the assessment, the Assessor shall debrief each candidate and inform them of the result. The Assessor shall provide all copies of the completed IRATA Technician Assessment Form [FM-025] to the Training member company (see clause 7.9.5).

4.6.12 Where a candidate has failed to reach the required standard, the Assessor may specify that more training is required. This should be completed before re-assessment.

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4.7 Re-assessment

4.7.1 Candidates failing to attain a pass grade at their desired level are permitted to apply for a re-assessment.

4.7.2 Re-assessment shall take place within 60 days of the original assessment, after which candidates are required to attend a further training course in full.

4.7.3 Candidates shall provide a copy of their previous assessment form at the time of re-assessment. This allows the Assessor to check whether any recommendations for extra training have been met. Candidates unable to provide a copy of their previous assessment form are required to attend a training course in full before re-assessment.

4.8 Complaints and appeals

Complaints can be submitted through the IRATA website (www.irata.org) or by writing to complaints@irata.org. The Complaints and Appeals procedure [MP-256] is available from www.irata.org.

4.9 Validity of certificates

4.9.1 Certification at all levels is valid for three years, or until the next assessment.

NOTE In some circumstances, early revalidation can mean certificates are valid for up to 3 ½ years.

4.9.2 After the expiry date on the certificate has passed, rope access Technicians are no longer certified to carry out rope access operations.

4.9.3 If a revalidation assessment is failed, the candidate's existing certification shall not remain valid. However, depending on the candidate's performance, the Assessor may continue the assessment to allow the candidate to attempt revalidation at a lower level. Candidates have 60 days to attempt re-assessment, see **4.7**.

4.9.4 If an upgrade assessment is failed the candidate's existing certification should remain valid until expiry. However, depending on the candidate's performance, the Assessor may continue the assessment to allow the candidate to attempt revalidation at their current level. Candidates have 60 days to attempt reassessment, see **4.7**.

4.9.5 In exceptional circumstances IRATA may withdraw a Technician's certification prior to its expiry date. Such circumstances include a lack of regard to safety issues, inability to operate in a safe manner, abuse of IRATA certification and falsification of information.

NOTE Failure at assessment, whether upgrade or revalidation, may result in the withdrawal of all IRATA Technician certification.

4.9.6 Certificates are issued in the name of the rope access technician, not the employer, irrespective of who has paid for the course. A change of employer for a rope access technician, therefore, is not a cause for reassessment.

NOTE All employers should ensure that their employees' or sub-contractors' certificates are current by verifying validity at www.irata.org.

4.9.7 IRATA will not process complaints in relation to fees or contractual disputes.

4.10 Revalidation training

4.10.1 IRATA certificates shall be renewed within three years of the date of assessment. Revalidation courses are subject to the same requirements as set out in **4.4**.

4.10.2 If revalidation training and successful assessment are completed in the 180-day period prior to the expiry of a current certificate, a new certificate shall be issued with an expiry date three years from the date of expiry of the previous certificate.

4.10.3 All revalidating candidates are required to complete a minimum of four days of training prior to assessment.

4.10.4 Any Level 2 or Level 3 rope access Technician undertaking re-assessment after the expiry of their previous certificate should contact an IRATA Trainer member company for further guidance. Further information can be found in the Procedures for IRATA Certification [TC-032].

4.10.5 Rope access Technicians wishing to revalidate or upgrade who anticipate expiry of their certification due to medical reasons can, prior to expiry, contact an IRATA Trainer member company. The IRATA Trainer member company shall document the reasons for the planned expiry and ensure there are suitable grounds for in-date certification to be delayed by liaising with the IRATA Head Office directly.

4.11 Refresher training

4.11.1 If rope access Technicians are not using rope access techniques regularly, they should be evaluated for competence prior to the commencement of operational duties. Refresher training in particular techniques may be required and the amount of operational supervision necessary afterwards may need to be adjusted, depending on the outcome of the risk assessment.

4.11.2 If rope access Technicians do not use rope access methods for a period of more than 180-days, they are required to undergo refresher training. The training should be appropriate for each individual and should be recorded in his or her logbook (see ICOP [TC-102] Part 2, 2.5.2.8). Refresher training:

a) shall be carried out by an IRATA Level 3 rope access Technician;

b) shall not be carried out during operational duties;

c) may involve the need to undergo a full training course.

4.12 First-aid certificates

Level 3 rope access Technicians and employing companies are both responsible for ensuring that all first-aid certificates are appropriate and current during operational duties.

4.13 Logbooks

4.13.1 Logbooks are issued by IRATA Head Office and shall be maintained by the rope access Technician.

Logbook entry verification signatures and company contact details shall only be provided by the following persons:

a) An IRATA Level 3 Technician who was directly involved in the supervision of the rope access activities;

b) A Director, General Manager, Rope Access Manager, or Technical Authority of the rope access company responsible for the undertaking of the rope access activities;

c) A rope access site Project Manager who is responsible for the project management of the worksite where the rope access activities were undertaken.

4.13.2 Each logbook issued carries a unique serial number.

NOTE This is different from the rope access Technician's unique IRATA number.

4.13.3 For identification purposes, each logbook shall include the rope access Technician's unique IRATA number and the rope access Technician's photograph, which shall be signed by themselves.

4.13.4 The logbook shall be used to record the rope access Technician's experience and training undertaken, including the total hours engaged in rope access, the type and variety of work undertaken, and when the work took place. Rope access Technicians wishing to upgrade to Level 2 or Level 3 cannot be considered for assessment without a correctly maintained and up to date logbook.

4.13.5 All IRATA assessments shall be recorded in the rope access Technician's logbook. The original course training dates, location and course title (e.g. Level 2 upgrade) shall be recorded in the boxes provided. Failed assessments shall be recorded in the 'Record of Training Courses Attended' section of the candidate's logbook. The word 'Fail' shall be recorded in the box titled 'Other information' with the date clearly recorded in the same box. The Assessor shall record their IRATA number and signature in the box titled 'Training Organisation & Course Stamp'.

4.13.6 Work using other harness-based access methods such as fall arrest or work restraint should be recorded but hours logged solely for these methods do not count towards upgrade requirements.

4.13.7 Hours accrued while being trained in rope access should be logged, but do not count towards the working hours required to upgrade.

4.13.8 Hours accrued while working as a rope access Trainer or assistant are considered to be working hours and, therefore, count towards upgrades.

4.13.9 Level 3 rope access Technicians are responsible for the accuracy of their own logbooks. Where possible, they should ask the employer to countersign them. When signing the logbooks of rope access Technicians under their supervision, Level 3 rope access Technicians should ensure entries are completed correctly and logged hours are accurate.

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4.13.10 Logbook entries should be made after the end of each period of qualifying rope access activities (see clause 4.14.5). These entries shall be legible and made using a ball-point pen in either blue or black ink.

4.13.11 If any rope access Technician loses their logbook, they shall contact IRATA immediately to arrange for a replacement. Technicians shall obtain credible references (see clause 4.13.1) for all lost logbook hours.

Where lost hours are required to move up a level, e.g. Level 1 to Level 2, the Technician shall obtain credible reference documents to verify the hours in the replacement logbook before training commences. Maintaining a scanned copy of a logbook can facilitate the process of completing a replacement logbook.

4.13.12 Fraudulent misuse or alteration of an IRATA logbook shall result in the suspension or withdrawal of the rope access Technician's IRATA certification.

4.14 How to complete the work experience section of a logbook

4.14.1 Under the heading *Date*, work shall be recorded in the logbook in time periods of no more than two weeks. Where rope access Technicians work on more than one site in a day, the tasks should be entered separately.

4.14.2 Under the heading *Employing Company*, the name of the employing company shall be recorded.

4.14.3 Under the heading *Details of task being undertaken*, both the nature of the work and the access methods employed shall be described; e.g.:

- window cleaning: descent on ropes; basic rigging;
- installing fall-arrest nets: aid-climbing; retrievable rigging;
- inspection of steelwork: ascent and descent on ropes; aid climbing; tensioned lines.

4.14.4 Under the heading *Location*, rope access Technicians shall briefly describe the type of structure worked on; e.g.:

- concrete tower block;
- steel-framed warehouse;
- flare stack; oil platform.

4.14.5 Under the heading *Hours worked*, an accurate reflection of the time spent directly engaged in rope access activities shall be recorded. In addition to time spent on the main task noted under *Details of task being undertaken*, this may include time spent rigging and de-rigging ropes, inspecting rope access equipment, and toolbox talks. It shall not include other time spent on site such as meal-breaks, waiting for permits or down-time due to weather. For this reason, logged hours are typically less than those paid or entered on timesheets.

4.14.6 Under the heading *Max height worked*, an accurate reflection of the maximum height spent working at height while carrying out rope access tasks shall be recorded.

4.14.7 Under the heading *Supervisor's signature*, all logbook entries shall be countersigned by the supervising Level 3 rope access Technician, who shall log their name (printed clearly), signature and unique IRATA number.

NOTE Rope access Technicians wishing to upgrade who are unable to provide Level 3 signatures should contact an IRATA Training member company prior to booking on a course.

4.14.8 Under the heading *Total hours for this page*, the total hours logged on that page shall be added up and recorded.

4.14.9 Under the heading *Running total of hours worked*, hours carried over from the previous page are added to *Total hours for this page* and then recorded; see **Figure 2** for an example. **Figure 2** assumes the running total of hours worked from the previous pages is 2300. Adding the total hours of 148 for this page gives a running total of 2448 hours worked.

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WORK EXPERIENCE

Date	Employing company	Details of task being undertaken	Location	Hours worked			Max. height worked	Supervisor's signature
02-13 January 2014	XYZ Offshore Inspection Services	Ascending/descending, passing re-anchors. Painting.	Offshore platform XYZ, North Sea	x	5	0	30 m	A N Other 3/xxxxx *A N Other*
23-27 January 2014	XYZ Offshore Inspection Services	Climbing with fall arrest lanyards, descent, rope-to-rope transfer. NDT Inspection.	Offshore platform XYZ, North Sea	x	2	2	28 m	A N Other 3/xxxxx *A N Other*
06-17 February 2014	XYZ Offshore Inspection Services	Horizontal aid climbing, ascent/descent, passing deviations. NDT Inspection.	Offshore platform XYZ, North Sea	x	4	6	25 m	A N Other 3/xxxxx *A N Other*
20-24 February 2014	Onshore Cleaning Services	Rigging Y hangs and rope/edge protection with Level 3, descending. Window cleaning.	Glass hi-rise, London	x	3	0	90 m	A N Other 3/xxxxx *A N Other*
Total hours for this page				x	1	4	8	
Running total of hours worked				2	4	4	8	

Figure 2 – Example of how a work experience page within an IRATA logbook should be completed

5 Guidance for companies employing IRATA rope access Technicians

5.1 To comply with the IRATA membership requirements, member companies shall ensure that their employees' or sub-contractors' IRATA certificates are current and, in the case of Level 3s, that they hold an appropriate and current first-aid qualification. Assessment results are recorded both in the rope access Technician's logbook and on the IRATA Online System (IOS).

5.2 Employers should maintain their employees' level of ability. Refresher training is appropriate for rope access Technicians who are not regularly engaged in rope access work, with specific requirements for those who have not been engaged in rope access for 180-days or more. Refresher training may be either a refresher course or a full course at the appropriate level.

6 Training syllabus and assessment: requirements and guidance

6.1 General

6.1.1 To help ensure a safe system of work, rope access Technicians need to be competent. To be considered competent, rope access Technicians need to have sufficient professional or technical training, knowledge, actual experience and authority to enable them to carry out the required tasks properly. Competence is developed in training by addressing three elements:

a) **knowledge**, which is delivered by a range of methods, including classroom-based lessons, lectures and presentations delivered by the Trainer, and through self-directed learning using study materials supplied by the Training member company;

b) **skills**, which are taught through observation of practical demonstrations and subsequent practice of the syllabus elements by the candidate under the direction of the Trainer;

c) **attitudes**, which are developed by explaining the importance of personal responsibility in creating and maintaining a safe system of work.

NOTE Training programmes and procedures can vary between training providers, while still meeting the requirements of this document.

6.1.2 The three elements of competence are continuously assessed both during training by the Trainer and during an assessment by the Assessor upon completion of the training:

a) knowledge is assessed by means of written and/or online examinations, by discussion during practical demonstrations, and observation of knowledge during practice;

b) skills are assessed by the demonstration of practical elements of this syllabus;

c) attitudes are assessed by observation of candidates' respect for safe practice.

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6.1.3 A summary of the training syllabus is given in **Figure 3**. Syllabus elements covered at assessment are described in **6.1.3.1** to **6.1.3.14**. These syllabus elements vary, depending on the level being assessed.

6.1.3.1 At Level 1, candidates are assessed on all elements of the syllabus. At Level 2 and Level 3 it is not normally practicable to cover every element of the syllabus during assessment. Assessors shall select a representative number of elements meeting the criteria given in **6.1.3.2** to **6.1.3.11.**

6.1.3.2 Level 1 candidates shall complete 20 Level 1 questions.

6.1.3.3 Level 1 candidates shall demonstrate all of the rope manoeuvres except passing wide re-anchors.

6.1.3.4 Level 1 candidates shall demonstrate all of the climbing techniques except vertical aid climbing.

6.1.3.5 Level 1 candidates shall demonstrate two rescues:

a) in descent from a separate set of ropes;

b) by lowering with a pre-rigged rig-for-rescue system.

6.1.3.6 Level 2 candidates shall complete 30 Level 2 questions.

6.1.3.7 Level 2 candidates shall demonstrate ascent, descent, changeovers, passing wide re-anchors plus at least four other rope manoeuvres.

6.1.3.8 Level 2 and Level 3 candidates shall demonstrate vertical aid climbing.

6.1.3.9 Level 2 and Level 3 candidates shall demonstrate at least one of each of the following rescue exercises at assessment:

a) rig-for-rescue;

b) hauling;

c) de-weighting on ropes, e.g. rescue from ascending devices;

d) de-weighting from structure, e.g. aid climb, fall arrest lanyards;

e) passing an obstruction, e.g. deviation, rope-to-rope, re-anchor.

6.1.3.10 Level 3 candidates shall answer 10 Level 3 questions and 20 Level 2 questions.

6.1.3.11 Level 3 candidates shall complete one or more planning exercises covering:

a) anchor selection;

b) rigging and emergency planning;

c) hazard identification;

d) selection of equipment;

e) access method and personnel;

f) third-party protection and exclusion zones.

Completion of the Job Planning form [HS-061], may be used to fulfil this requirement. However, candidates or Assessors may use their own format.

6.1.3.12 Level 3 candidates shall demonstrate a complex rig-for-rescue exercise involving a team of rope access Technicians. This exercise should include making a written plan for the exercise.

6.1.3.13 Level 3 candidates shall demonstrate implementation of a method statement.

6.1.3.14 Level 3 candidates shall complete an equipment inspection report.

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Syllabus item	Level 1	Level 2	Level 3	Ref
Planning and management				6.2
IRATA International system				6.2.1
Legal framework				6.2.2
Hazard identification and risk assessment				6.2.3
Selection of access method				6.2.4
Selection of personnel and competence				6.2.5
Safety method statement				6.2.6
Exclusion zones, permits to work etc.				6.2.7
Planning for emergencies				6.2.8
First aid and suspension intolerance				6.2.9

Equipment				6.3
Selection of equipment				6.3.1
Care and maintenance of equipment				6.3.2
Pre-use checking of equipment				6.3.3
Detailed and interim inspections				6.3.4
Assembly of equipment and buddy check				6.3.5

Rigging				6.4
General				6.4.1
Anchor selection				6.4.2
Knots and rope handling				6.4.3
Basic anchor system				6.4.4
Y-hangs				6.4.5
Hazard avoidance and rope protection				6.4.6
Re-anchors				6.4.7
Deviations				6.4.8
Retrievable rigging				6.4.9
Work restraint lines				6.4.10
Vertical fall arrest systems				6.4.11
Tensioned lines				6.4.12

Rigging for rescue and hauling				6.5
General				6.5.1
Lowering systems				6.5.2
Hauling systems				6.5.3
Cross haul				6.5.4
Complex rescue systems (team exercise)				6.5.5

White boxes: demonstrate competence; understand and apply technique
Shaded boxes: show awareness of technique/use under direct supervision
Black boxes: awareness not required at this level

Figure 3 – Summary of the IRATA International training syllabus (Page 1 of 2)

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Rope manoeuvres				6.6
General				6.6.1
Back-up devices				6.6.2
Descent				6.6.3
Ascent				6.6.4
Changeovers				6.6.5
Descent using ascending devices				6.6.6
Ascent using a descending device				6.6.7
Single deviation				6.6.8
Double deviation				6.6.8
Rope-to-rope transfers				6.6.9
Re-anchors *				6.6.10
Passing mid-rope knots				6.6.11
Edge obstructions at the top				6.6.12
Use of work seats (comfort seats)				6.6.13
Passing mid-rope protection				6.6.14

***** *Level 1: small re-anchor (< 1.5 m); Level 2 and Level 3: wide re-anchor (> 1.5 m)*

Climbing techniques				6.7
General				6.7.1
Horizontal aid climbing				6.7.2
Vertical aid climbing				6.7.3
Climbing with fall arrest equipment				6.7.4

Rope rescues				6.8
General				6.8.1
Rescue from descent mode				6.8.2
Rescue from ascent mode				6.8.3
Passing a deviation with a casualty *				6.8.4
Rope-to-rope transfer with a casualty				6.8.5
Passing a small re-anchor with a casualty				6.8.6
Mid-transfer rescue				6.8.7
Passing mid-rope knots with a casualty				6.8.8
Use of tensioned ropes for rescue				6.8.9

** Level 2: single-anchor deviation; Level 3: double-anchor deviation*

Climbing rescues				6.9
Rescue from an aid climb				6.9.1
Rescue from fall arrest equipment				6.9.2
Rescue from an aid climb – short connection				6.9.3

White boxes: demonstrate competence; understand and apply technique
Shaded boxes: show awareness of technique/use under direct supervision
Black boxes: awareness not required at this level

Figure 3 – Summary of the IRATA International training syllabus (Page 2 of 2)

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6.2 Planning and management

6.2.1 IRATA International system

6.2.1.1 Overview

IRATA's safe system of work comprises three main elements:

a) the International Code of Practice (ICOP) [TC-102];

b) the Training, Assessment and Certification scheme (TACS) [TC-101];

c) audited member companies and their operating procedures.

6.2.1.2 Assessment requirements and guidance

6.2.1.2.1 All candidates shall show awareness of the three elements listed in **6.2.1.1** and the role of each in forming a safe system of work.

6.2.1.2.2 All candidates shall show awareness of IRATA's requirement that all rope access work is carried out within the management framework of an audited member company.

6.2.1.2.3 All candidates shall show awareness of the ICOP's [TC-102] requirement for supervision by a Level 3 rope access safety supervisor, see ICOP [TC-102] Part 2, 2.6.2.

6.2.1.2.4 All candidates shall show awareness of the levels of rope access Technician competence, the role of logbooks, and the requirements for revalidation and progression between levels.

6.2.1.2.5 Level 3 candidates shall demonstrate familiarity with the scope and content of the ICOP [TC-102], and may use it for reference when necessary.

6.2.2 Legal framework

6.2.2.1 Overview

In most countries, a legal framework exists for the control of health and safety in the workplace. In many cases, IRATA's system provides controls that exceed the requirements of such legislation; however, there may be exceptions.

Members may contact their IRATA Regional Advisory Committee (RAC) for further information. RAC contact details are available at www.irata.org.

6.2.2.2 Assessment requirements and guidance

6.2.2.2.1 All candidates shall show awareness of IRATA's system and its relationship to legal requirements.

6.2.2.2.2 Level 3 candidates shall demonstrate familiarity with the legal framework of their operating country, including any regulations that may be relevant to rope access activities.

6.2.2.2.3 Trainers and Assessors should ensure all content is relevant to any specific local legislative requirements.

6.2.3 Hazard identification and risk assessment

6.2.3.1 Overview

Risk assessment is a careful examination of hazards, and potential hazards, that could cause harm to people, and an assessment of any precautions required to prevent harm, see ICOP [TC-102] Part 2, 2.2.4 and ICOP [TC-102] Part 3, Annex A. Member companies should ensure individuals tasked with assessing the risk of carrying out rope access activities are competent to do so.

NOTE In-depth training for risk assessment is not within the scope of this document.

6.2.3.2 Assessment requirements and guidance

6.2.3.2.1 All candidates shall show awareness of the role of risk assessment within the process of planning and managing rope access activities.

6.2.3.2.2 Level 3 candidates shall demonstrate understanding of the risk assessment process, and shall be capable of identifying hazards that may affect rope access activities, e.g. falls from height; weather; falling tools and equipment; unusual loads; rope stretch; sharp edges; anchor failure; equipment failure; emergency evacuation; rescue provision for stranded/injured rope access Technicians. These may be identified when completing the Job Planning form [HS-061], or a form in the Assessor or candidate's own format.

6.2.3.2.3 Assessors should note that hazard identification exercises may be practical and/or desk based.

6.2.4 Selection of access method

6.2.4.1 Overview

A variety of methods for work at height exist and a pre-work analysis is required to be carried out to determine the most appropriate method for the task and location. See ICOP [TC-102] Part 2, 2.2.3.

6.2.4.2 Assessment requirements and guidance

6.2.4.2.1 All candidates shall show awareness of the requirement to confirm that rope access is a suitable method for the task.

6.2.4.2.2 Level 3 candidates shall demonstrate their understanding by assessing the suitability of rope access for a variety of scenarios.

6.2.4.2.3 Level 3 candidates shall be capable of identifying common situations where other access methods such as mobile elevating work platforms (MEWPS), or using work restraint or fall arrest systems would be more appropriate.

6.2.4.2.4 Assessors should note that access method exercises may be practical or desk-based.

6.2.5 Selection of personnel and competence

6.2.5.1 Overview

The selection of personnel for a rope access team is heavily dependent on the task and needs to take account of a number of factors, including:

a) the number of rope access Technicians required;

b) levels of competence and experience in rope access;

c) levels of competence and experience in any other relevant trade (e.g. non-destructive testing);

d) the rescue plan.

For some operational tasks, further training may be required before a team is deemed competent. See ICOP [TC-102] Part 2, 2.3 and 2.11.6.

6.2.5.2 Assessment requirements and guidance

6.2.5.2.1 All candidates shall show awareness of the requirements for supervision and rescue provision under the IRATA system. See ICOP [TC-102] Part 2, 2.11.11.

6.2.5.2.2 All candidates shall show awareness of the limits of their level of training with regard to work practices, rescue provision and supervision.

6.2.5.2.3 Level 3 candidates shall be capable of specifying a suitable team, including numbers of rope access Technicians, levels of competence and roles, for a variety of scenarios.

6.2.5.2.4 Assessors should note that team selection exercises may be practical or desk-based.

6.2.6 Safety method statement

6.2.6.1 Overview

A safety method statement is an effective way of producing an action plan for a safe system of work. It considers the findings of the risk assessment and states the sequence of procedures necessary for the safe execution of the task. It should take into account access, egress and permits to work, and should incorporate a rescue plan covering all foreseeable eventualities. See ICOP [TC-102] Part 2, 2.2.5.

6.2.6.2 Assessment requirements and guidance

6.2.6.2.1 All candidates shall show awareness of the role of the safety method statement and the importance of following it.

6.2.6.2.2 Level 3 candidates shall be capable of implementing a safety method statement, including briefing their team. They shall be capable of identifying when it may be necessary to revise a safety method statement and the procedure to be followed when doing so.

6.2.6.2.3 Assessors should note safety method statement exercises may be practical or desk-based.

6.2.7 Exclusion zones, protection of third parties and permits to work

6.2.7.1 Overview

It is very difficult to remove the risk of objects being dropped when working at height. Therefore, an exclusion zone should be established below the work area to reduce the risk to third parties. In some situations, it may be necessary similarly to prevent access to the area where the ropes are rigged, or any other area where third parties may come into conflict with rope access activities. Such conflicts are often managed by the use of permit to work systems. See ICOP [TC-102] Part 2, 2.11.8.

6.2.7.2 Assessment requirements and guidance

6.2.7.2.1 All candidates shall show awareness of the need for creating and maintaining exclusion zones, and the role of permit to work systems.

6.2.7.2.2 Level 2 and Level 3 candidates shall demonstrate an understanding of the process and requirements for creating and maintaining exclusion zones, including permit to work systems, size requirements, types of barrier and policing.

6.2.7.2.3 Assessors should note that exclusion zone exercises may be practical or desk-based.

6.2.8 Planning for emergencies

6.2.8.1 Overview

All safety method statements for rope access should incorporate a plan for emergencies, including evacuation of the worksite (e.g. in case of fire) and a rescue plan. See ICOP [TC-102] Part 2, 2.2.5 and 2.2.6. The rescue plan should include:

a) designated anchor points;

b) required equipment;

c) team size;

d) team competence;

e) supervision arrangements;

f) a reliable communication system;

g) step-by-step procedure for rescue;

h) first-aid provision;

i) contingency plan covering possible complications.

6.2.8.2 Assessment requirements and guidance

6.2.8.2.1 All candidates shall show awareness of evacuation and rescue plans.

6.2.8.2.2 Level 3 rope access Technicians shall be capable of preparing and implementing both evacuation and rescue plans. These may be completed on the Job Planning form [HS-061], or in the candidate's own format.

6.2.8.2.3 Trainers should explain the importance of being prepared for rescue, including the use of releasable anchor systems and the use of pre-rigged rescue kits. Trainers should also explain the importance of refresher training.

6.2.8.2.4 Assessors should use this exercise to plan the complex rescue exercise, see **6.5.5**.

6.2.9 First aid and suspension intolerance

6.2.9.1 Overview

6.2.9.1.1 Rope access often takes place in locations remote from outside help, so ideally all rope access Technicians should be trained in basic first aid. Level 3 rope access Technicians are required to hold a current first-aid certificate, which should be appropriate to their work and its location.

NOTE First-aid training is outside the scope of this document and should be organized by operating companies with reference to the work being carried out and its location.

6.2.9.1.2 Suspension intolerance is a condition in which a person suspended in a harness can experience certain unpleasant symptoms, which can lead to unconsciousness and eventually death (see ICOP [TC-102] Part 3, Annex G for more information).

6.2.9.2 Assessment requirements and guidance

6.2.9.2.1 All candidates shall show awareness of current advice on suspension intolerance, including its causes, symptoms and treatment.

6.2.9.2.2 All candidates shall demonstrate methods of managing a rescue in such a way that it causes the minimum of discomfort to the casualty. Trainers shall emphasize in all rescue scenarios the need for a prompt first-aid response and the potential for suspension intolerance, including its effects on the casualty.

6.2.9.2.3 Trainers shall emphasize in all rescue scenarios the potential for suspension intolerance and its effects. Trainers should ensure that rescue dummies or weight bags are used where possible. Where live casualties are used, the use of work seats should be encouraged, and the Trainer should ensure the casualty moves their limbs regularly, particularly the legs, to maintain blood flow (even when feigning unconsciousness or other immobility during exercises).

6.3 Equipment

6.3.1 Selection of equipment

6.3.1.1 Overview

Planning for a task should include the selection of appropriate equipment. Equipment should be selected based on its suitability for purpose, with reference to appropriate standards (some countries may have specific requirements) and manufacturer's recommendations. See ICOP [TC-102] Part 2, 2.7.

NOTE Some or all of the equipment used in training might not be the same as that used by a candidate's employer. It is the responsibility of the employer to ensure that their employees are trained and competent in the use of the particular equipment issued to them.

6.3.1.2 Assessment requirements and guidance

6.3.1.2.1 All candidates shall show awareness of the process by which equipment is selected, based on both fitness for purpose and conformance with relevant standards and legislation.

6.3.1.2.2 Level 3 candidates shall be capable of selecting suitable items of equipment for a given work task and be able to identify situations where other equipment is more appropriate.

6.3.1.2.3 Assessors should note that equipment selection exercises may be practical or desk-based.

6.3.2 Care and maintenance of equipment

6.3.2.1 Overview

Over its lifetime, rope access equipment is subject to conditions that may cause deterioration in strength or performance. Such factors include wear and tear, abrasion, extremes of temperature, ultra-violet light and certain chemicals. Therefore, all equipment should be subjected to regular inspections, which fall into three types: pre-use checks, detailed inspections and interim inspections. Items have to be identifiable so that they can be traced back to relevant inspection records and certificates. See ICOP [TC-102] Part 2, 2.8, 2.10 and Part 3, Annexes H, I and J.

6.3.2.2 Assessment requirements and guidance

6.3.2.2.1 All candidates shall be aware of common factors that may damage equipment and basic good practice to be followed when handling, identifying and storing it.

6.3.2.2.2 Level 3 candidates shall demonstrate an understanding of appropriate marking and storage procedures for rope access equipment.

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6.3.3 Pre-use checking of equipment

6.3.3.1 Overview

As a minimum, a pre-use check of equipment consists of a brief inspection carried out before use. However, it is wise to monitor the condition of equipment continuously, where possible.

6.3.3.2 Assessment requirements and guidance

6.3.3.2.1 All candidates shall demonstrate functional, visual and tactile pre-use checks of all personal equipment.

6.3.3.2.2 Level 2 and Level 3 candidates shall demonstrate functional, visual and tactile pre-use checks of all ropes and rigging equipment.

6.3.3.2.3 Assessors should explore candidates' ability and knowledge of checking equipment.

6.3.4 Detailed and interim inspections

6.3.4.1 Overview

All rope access equipment should be maintained within a formal inspection procedure that ensures all items are subject to a detailed inspection by a competent person at intervals not exceeding six months. Where equipment is used in arduous conditions or exceptional events have occurred, further inspections (called interim inspections) should be carried out. See ICOP [TC-102] Part 3, Annex H.

6.3.4.2 Assessment requirements and guidance

6.3.4.2.1 All candidates shall show awareness of the need for regular recorded examinations of all rope access equipment, both at suitable intervals and following arduous conditions or exceptional events. Candidates shall also show awareness of the process to be followed when items are to be quarantined or retired.

6.3.4.2.2 Level 3 candidates shall make out an inspection report on the condition of damaged or worn equipment provided. This may be on the IRATA Equipment Inspection form [HS-019], or in the candidates' own format. Level 3 candidates shall understand the limits of their level of competence in carrying out detailed inspections.

NOTE In-depth training for equipment inspection is not within the scope of this document. Member companies should ensure individuals tasked with inspecting rope access equipment are competent to do so.

6.3.4.2.3 Trainers shall emphasize the need to be able to identify failure, damage, and wear and tear to all rope access equipment, and the ways in which items can be tracked and controlled. Trainers should offer visual aids or examples of rejected equipment.

6.3.4.2.4 For Level 3 candidates, Assessors should present items from a selection of worn or damaged equipment to the candidates for correct identification of the faults.

6.3.5 Assembly of personal equipment, and 'buddy' checks

6.3.5.1 Overview

All candidates shall be capable of fitting and assembling his/her personal rope access and fall arrest equipment. This includes the tying, dressing and setting of knots; e.g. those used for attaching ropes to anchors, or to create knotted 'cow's tail' lanyards. See ICOP [TC-102] Part 2, 2.11.5.

6.3.5.2 Assessment requirements and guidance

6.3.5.2.1 All candidates shall be capable of performing a 'buddy' check of a rope access Technician wearing similar equipment.

6.3.5.2.2 Level 2 and Level 3 candidates shall be capable of fitting and assembling personal rope access equipment, for themselves and others using a variety of equipment.

6.3.5.2.3 Trainers shall emphasize the correct selection, fitting and adjustment of the harness, connecting all components to the appropriate attachment points and the correct uses for the various categories of harnesses, in particular the appropriate use of all harness attachment points.

6.3.5.2.4 Trainers shall explain the purpose and benefits of 'buddy' checks, and common issues that can be identified.

6.3.5.2.5 Assessors should start the assessment with the equipment separated into its component parts.

6.3.5.2.6 When assessing "buddy" checks, Assessors may introduce faults for candidates to identify.

6.4 Rigging

6.4.1 General guidance

Rigging is the method by which ropes are connected to the anchors; see ICOP [TC-102] 2.11.2 and 2.11.3. When rigging ropes (anchor lines), rope access Technicians should consider:

a) suitability and location of anchors;

b) positioning the ropes for the work task;

c) options and methods for rescue;

d) avoidance or mitigation of hazards; e.g. abrasive surfaces; sharp edges; heat sources;

e) angle loading.

6.4.2 Anchor selection

6.4.2.1 Overview

Rope access operations utilize a variety of anchors, from purpose-engineered steelwork and eye bolts to temporary ground anchors, weight-boxes and natural anchors such as trees. Rope access Technicians with the responsibility for selecting anchors should ensure they are competent to do so. Further training may be necessary. Detailed guidance is provided in ICOP [TC-102] Part 2, 2.11.2 and ICOP [TC-102] Part 3, Annex F.

6.4.2.2 Assessment requirements and guidance

6.4.2.2.1 All candidates shall show awareness of minimum recommended strength requirements for rope access anchors.

6.4.2.2.2 All candidates shall show awareness of the limits of their competence with regard to the selection and installation of rope access anchors.

6.4.2.2.3 Level 3 candidates shall be capable of selecting suitable structural elements to be used as rope access anchors.

6.4.2.2.4 Trainers should present candidates with a variety of anchors and discuss their suitability.

6.4.2.2.5 Assessors should note that anchor selection exercises may be practical or desk-based.

6.4.3 Knots and rope handling

6.4.3.1 Overview

Although sewn terminations are now widely available, tying knots remains a core skill in rope access. Knots provide a great deal of flexibility when rigging ropes to anchors and can help reduce impact loads, e.g. in a fall. Basic rope handling skills such as coiling and bagging facilitate transporting equipment and can prevent problems such as entanglement.

6.4.3.2 Assessment requirements and guidance

6.4.3.2.1 All candidates shall demonstrate the coiling and bagging of ropes.

6.4.3.2.2 All candidates shall demonstrate tying, dressing and setting the following knots, and have an awareness of their strengths, applications and limitations:

a) figure-of-eight on a bight;

b) double figure-of-eight on a bight ('bunny' knot);

c) figure-of-nine on a bight;

d) alpine butterfly;

e) scaffold or 'barrel' knot;

f) stopper knot.

NOTE The demonstration, tying, dressing and setting of these knots are a minimum requirement at Level 1. However, training could include a wider variety of knots.

6.4.3.2.3 Level 2 and Level 3 candidates shall demonstrate appropriate rope joining knots, choking of ropes and slings, and knowledge of relevant applications, strengths and limitations.

6.4.3.2.4 Trainers shall explain the methods, uses and hazards when bagging ropes.

6.4.3.2.5 Trainers should ensure that candidates are able to tie, dress and set the knots correctly. Candidates should be able to identify the knots by name, understand their main applications and any limitations of use, and be capable of re-threading appropriate knots.

6.4.3.2.6 Assessors may assess the tying of knots combined with other elements of the assessment, e.g. while rigging. Assessors shall allow Level 2 and 3 candidates to use other appropriate knots not listed above.

6.4.4 Basic anchor system

6.4.4.1 Overview

As a minimum, a basic anchor system consists of two ropes, each with its own anchor connection. Where a suitable structure is present, ropes can be simply rigged to two similar anchor slings or strops placed next to each other. See ICOP [TC-102] Part 2, 2.11.2 and ICOP [TC-102] Part 3, Annex F.

6.4.4.2 Assessment requirements and guidance

6.4.4.2.1 All candidates shall demonstrate the rigging of a basic anchor system. Level 2 and 3 candidates shall be expected to demonstrate rigging at height.

6.4.4.2.2 Trainers shall include the basic principles of rigging and attachments in rope access work, e.g. that each rope should have its own separate anchor. Where practicable, both the working line and the safety line should be connected to both anchors for added security, so that if one should fail, the impact load on the second anchor would be minimized. Knots should be dressed and set. Emphasis should also be placed on the use of different types of slings and rigging equipment, appropriate to the structure.

6.4.4.2.3 Assessors may observe demonstrations at ground level for Level 1 candidates. A variety of knots and methods is acceptable.

6.4.5 Y-hangs

6.4.5.1 Overview

Where ropes are to be rigged from two separate structural elements or bolt anchors, the rigging of a Y-hang confers three advantages: precise positioning of ropes, sharing of loads on the anchors, and reduced impact loads in the event of anchor failure. See ICOP [TC-102] Part 2, 2.11.2.

6.4.5.2 Assessment requirements and guidance

6.4.5.2.1 All candidates shall demonstrate the rigging of a small Y-hang between anchors less than one metre apart.

6.4.5.2.2 All candidates shall show awareness of the issues of angle loading and potential swings associated with large or wide Y-hangs.

6.4.5.2.3 Level 2 and Level 3 candidates shall demonstrate the rigging of a Y-hang between wider anchor points, where the consequence of failure of any one item needs consideration; e.g. the use of four anchors rather than two.

6.4.5.2.4 Level 2 and Level 3 candidates shall be expected to demonstrate rigging at height.

6.4.5.2.5 Trainers shall expand on the instruction for the basic anchor system and explain the need to avoid large angles wherever feasible. Anchors shall be equally loaded and positional adjustment shall be demonstrated.

6.4.5.2.6 Trainers shall emphasize the consequences of failure of any one item of equipment, and the need for redundancy where a swing could cause injury to personnel, or damage to equipment or property. Inclusion of extra rigging rope may be appropriate in some circumstances.

6.4.5.2.7 Assessors may observe demonstrations at ground level for Level 1 candidates. A variety of knots and methods is acceptable.

6.4.6 Hazard avoidance and rope protection

6.4.6.1 Overview

Hazards such as sharp edges, abrasive surfaces, corrosive substances and heat sources are common in the workplace and may damage ropes which contact them or come into close proximity. Wherever feasible, such hazards should be removed or contained (e.g. by isolating hot pipes). Ropes should be rigged to avoid any remaining serious hazards, using techniques such as Y-hangs, re-anchors and deviations. Other methods, such as canvas rope protectors, offer a limited degree of protection and may be appropriate for less serious hazards. See ICOP [TC-102] Part 2, 2.7.10 and ICOP [TC-102] Part 3, Annex P.

6.4.6.2 Assessment requirements and guidance

6.4.6.2.1 All candidates shall show awareness of the potential consequences of such hazards affecting equipment and of methods for removing, avoiding, containing or reducing them. All candidates shall show awareness of how their movement on the ropes may increase the risk from such hazards.

6.4.6.2.2 All candidates shall demonstrate attaching wrap-around style rope protectors.

6.4.6.2.3 Level 2 and Level 3 candidates shall be capable of identifying common hazards and shall demonstrate selecting and implementing appropriate methods of rigging or protection.

6.4.6.2.4 Trainers shall emphasize the application of the hierarchical approach (as is detailed in ICOP [TC-102] Part 2, 2.7 and 2.11, and Annex P), which prioritizes the removal of hazards before considering avoidance through rigging methods or mitigation through rope protection. The level of protection offered by various rope protection methods should be explained. Consideration should be given to arranging separate protection for each rope.

IRATA training courses shall include all mandatory training support tools provided by IRATA such as the IRATA ‘Edge and Rope Management Video’ (available at www.irata.org).

6.4.6.2.5 Assessors should look for the appropriate choice of method and that adequate protection is achieved.

6.4.7 Re-anchors

6.4.7.1 Overview

A re-anchor (commonly called a re-belay) is a secondary set of anchors installed at any distance below the primary anchors. Ropes may be re-anchored for a number of reasons, including positioning the ropes for work, avoiding hazards, or to reduce rope stretch. Basic requirements for strength and rigging methods are the same as for the primary anchors.

6.4.7.2 Assessment requirements and guidance

6.4.7.2.1 Level 2 and 3 candidates shall demonstrate the correct rigging of a re-anchor at height. For Level 2 candidates, the offset shall be less than 1.5 m. For Level 3 candidates, the offset may be any distance apart.

6.4.7.2.2 Trainers shall emphasize the consequences of failure of any one item of equipment. Rigging should consider ease of use and take account of options and methods for rescue. Generally, shallow re-anchor loops make both access and rescue more difficult, particularly where the offset is large.

6.4.7.2.3 Assessors should note that a variety of knots and methods is acceptable.

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6.4.8 Deviations

6.4.8.1 Overview

Deviations are a method of rigging which allows re-direction of the path of the ropes. Ropes may be deviated to provide more accurate positioning for the rope access Technician or to avoid hazards. Unlike re-anchors, deviations allow positioning with a system rigged for rescue. On a continuously overhanging structure, or to constrain movement, a series of deviations may be used. Deviations can be divided into two types:

a) single-anchor deviations are used to deviate the ropes (or the working line alone) by a small angle only. Single-anchor deviations are only appropriate where their failure would not result in serious consequences (such as a large swing into a structure, or contact with a sharp edge) and are normally rigged as a single anchor system.

b) double-anchor deviations may deviate the ropes by a greater angle and distance than a single-anchor deviation, and allow the ropes and user to be protected against more serious hazards such as a sharp edge or a large swing into a structure. Such a deviation utilizes a double anchor system, with suitably rated anchors and connection components, to provide protection against failure of any one item. Where a large angle is created, users should consider whether a re-anchor may be more appropriate.

6.4.8.2 Assessment requirements and guidance

6.4.8.2.1 Level 2 and 3 candidates shall demonstrate the correct rigging of either type of deviation described in **6.4.8.1**, with due regard to the angle and distance required to achieve the repositioning and ease of use when passing in both ascent and descent modes. For Level 2 candidates, the type of deviation required shall be specified. Level 3 candidates shall choose the appropriate type of deviation for a given situation.

6.4.8.2.2 Trainers shall explain which type of deviation is appropriate for which situation, and where other types of rigging (such as re-anchors) may be more appropriate. Anchor loading and required anchor strength in relation to the angle of deflection of the rope should be explained.

6.4.8.2.3 Assessors should note that a variety of knots and methods is acceptable.

6.4.9 Retrievable rigging

6.4.9.1 Overview

Retrievable rigging methods (often called ‘pull-throughs’) allow ropes to be installed or retrieved remotely. They should be considered to be temporary rigging for access or egress and, therefore, are not normally considered appropriate for rescues.

6.4.9.2 Assessment requirements and guidance

6.4.9.2.1 Level 2 and Level 3 candidates shall demonstrate the correct rigging of a pull-through from both the ground and from the anchor points.

6.4.9.2.2 Trainers shall emphasize the need to protect the ropes against potential abrasion. Good rope management shall be explained to ensure two independent systems are maintained and to avoid cross loading of connectors.

6.4.9.2.3 Assessors should note that candidates need only demonstrate one pull-through at assessment, at the Assessor’s discretion. A variety of methods is acceptable.

6.4.10 Work restraint lines

6.4.10.1 Overview

Work restraint is a technique whereby a person is prevented by means of personal fall protection equipment from reaching zones where the risk of a fall from height exists.

6.4.10.2 Assessment requirements and guidance

6.4.10.2.1 Level 2 and Level 3 candidates shall demonstrate appropriate rigging of work restraint lines. Candidates shall ensure that the restraint method does indeed prevent them from entering a fall hazard zone and shall demonstrate knowledge of work restraint equipment, including where and when it is appropriate to use it within rope access.

6.4.10.2.2 Trainers shall emphasize that this access method restrains users within a safe area where they remain supported by the structure. Trainers should explain that work restraint lines can be rigged in a variety of ways, from a simple fixed-length lanyard anchored to a single anchor, to a system including an adjustable lanyard running along a second horizontal line anchored at both ends. Allowance shall be made for any potential sag and stretch of the line, particularly when work restraint lines are long or when using a system running on a horizontal anchor line.

6.4.10.2.3 Assessors shall verify candidates' understanding and rigging of work restraint systems. The use of one point of attachment or single lines for work restraint may be appropriate.

6.4.11 Vertical fall arrest systems

6.4.11.1 Overview

On certain structures (e.g. fixed ladders) it may be appropriate to rig a temporary fall arrest system for ease of access.

6.4.11.2 Assessment requirements and guidance

6.4.11.2.1 Level 2 and Level 3 candidates shall demonstrate rigging a temporary fall arrest system to protect a vertical climb.

6.4.11.2.2 Trainers shall explain when it is appropriate to use such a system, the requirements for anchor strength and considerations for rescue.

6.4.11.2.3 Assessors shall ensure candidates take account of clearance distances and the number of users permitted by the manufacturer.

6.4.12 Tensioned lines

6.4.12.1 Overview

Ropes can be tensioned between two sets of anchors to facilitate horizontal or diagonal movement. Additional working and safety lines are required to control movement when using diagonal tensioned lines.

6.4.12.2 Assessment requirements and guidance

6.4.12.2.1 Level 2 and Level 3 candidates shall demonstrate rigging tensioned lines at any positional angle.

6.4.12.2.2 Trainers should emphasize that high loads may be placed on the anchors due to the creation of wide rigging angles and, therefore, ropes should be under as little tension as is practical. Trainers should explain how to share the rope access Technician's load across both ropes; this reduces loadings on equipment and minimizes sag. Care should also be taken to minimize the length of back-up lanyards; this reduces fall distances (and, therefore, impact loads) in the event of equipment failure. Options and methods for rescue should be discussed, particularly the incorporation of releasable rigging at one or both ends of the tensioned lines.

6.4.12.2.3 Assessors should note that a variety of rigging methods is acceptable.

6.5 Rigging for rescue and hauling

6.5.1 General

6.5.1.1 Overview

6.5.1.1.1 Options and methods for rescue should be considered at the planning stage and a site-specific rescue plan should be included in the safety method statement. Rope access Technicians should be provided with the training and equipment necessary to implement the rescue plan.

6.5.1.1.2 Rescue systems can be broadly divided into two types:

a) ‘rig-for-rescue’, where a team implements a pre-rigged lowering or hauling system;

b) ‘intervention’ rescues, where a rope access Technician is able to directly assist a casualty, and perform an accompanied ascent or descent, passing any obstructions he/she may encounter.

Rescue plans should consider using rig-for-rescue systems, where feasible. Some rescue plans may require a combination of the two types.

6.5.1.2 Assessment requirements and guidance

6.5.1.2.1 All candidates shall show awareness of rigging for rescue and of the benefits of doing so. Casualty care and the possibility of suspension intolerance should be taken into account. Care shall be taken in all rescues to maintain an effective back-up system, and to minimize tangled ropes and rope-against-rope abrasion.

6.5.1.2.2 Trainers shall emphasize that loading on equipment during rescues often exceeds one person. This reduces the factor of safety on equipment strength and may require more careful management of devices to reduce potential dynamic loads.

6.5.1.2.3 Trainers should explain how rigged-for-rescue systems can expedite rescue, avoid two-person loads and reduce the need for the rescuer to compromise their own safety. All users should understand the principles and operation of the system. Precautions to avoid accidental movement should be demonstrated.

6.5.1.2.4 Assessors shall satisfy themselves that the candidate has adequately addressed all teamwork, rescue management, communication and safety issues. Assessors should be aware that tangles, poor management of the back-up device or excess slack in the safety line would constitute a discrepancy.

6.5.2 Lowering systems

6.5.2.1 Overview

In many situations where the top anchors are easily accessible and a clear descent can be achieved, rescue can be expedited by rigging the ropes as a releasable lowering system.

6.5.2.2 Assessment requirements and guidance

6.5.2.2.1 All candidates shall demonstrate the operation of a simple pre-rigged-for-rescue system, to enable evacuation of a casualty by an unimpeded lower.

6.5.2.2.2 Level 2 and Level 3 candidates shall demonstrate rigging a lowering system.

6.5.2.2.3 Trainers shall emphasize the benefits of such a system to simplify and speed up rescue. Trainers shall demonstrate the addition of extra equipment to create a hauling system.

6.5.2.2.4 Assessors shall ensure the system functions as intended and that it remains secure when not in operation. Assessors should also look for careful control of both ropes during the lower.

6.5.3 Hauling systems

6.5.3.1 Overview

Where access to the structure is only possible from above, evacuation may require lifting a casualty. Where a need for a hauling type of rescue has been identified, the rescue plan should ensure equipment is in place to perform the lift quickly and efficiently. Depending on the situation, the hauling system may be either:

a) a lowering system as in **6.5.2**, plus extra equipment;

b) a complete system used throughout to lower, suspend and lift the rope access Technician;

c) a system that can be added to existing rigged ropes using a third rope and extra equipment.

NOTE Such techniques can also be used for lifting tools or materials. Before using rope access equipment for this purpose, potential consequences should be considered, e.g. overloading or increased wear.

6.5.3.2 Assessment requirements and guidance

6.5.3.2.1 All candidates shall show awareness of the use of hauling systems for rescue.

6.5.3.2.2 Level 2 and Level 3 candidates shall demonstrate rigging of all three hauling systems and their operation to allow evacuation of a casualty to a platform or stance. Hauling exercises may be conducted from platform(s) or suspended on equipment at height (hanging haul).

6.5.3.2.3 Trainers shall explain the advantages of a pre-rigged system and when an additional system may be appropriate.

6.5.3.2.4 Trainers shall emphasize the use of a pulley system, the need for a suitable back-up and an understanding of mechanical advantages and loads on the equipment. Trainers should explain how to haul the casualty to a platform stance and bring the casualty to rest on the platform. This may include moving the casualty over safety barriers and the use of a tag line.

6.5.3.2.5 Assessors shall look for the efficient implementation of the system and correct use of equipment.

6.5.3.2.6 Assessors shall be satisfied that the candidate has a general awareness of the potential difficulties that could be encountered and has an understanding of the mechanical advantages and loads on the equipment, in particular, those that could result in equipment failure.

6.5.3.2.7 Assessors should note that candidates need only demonstrate one hauling exercise at assessment, at the Assessor's discretion. A variety of methods is acceptable.

6.5.4 Cross haul

6.5.4.1 Overview

Moving a casualty around or through three-dimensional obstacles can be achieved with a cross-haul system.

6.5.4.2 Assessment requirements and guidance

6.5.4.2.1 Level 2 and Level 3 candidates shall demonstrate a cross haul of a casualty between two points.

6.5.4.2.2 Trainers should explain how two (or more) sets of haul/lower ropes and back-up systems are rigged and connected to the casualty. The casualty shall be transferred horizontally using the two systems.

6.5.4.2.3 Assessors should look for a cross haul that avoids the potential for an out-of-control swing, (e.g. one caused by the failure of a single item of equipment) by the use of an appropriate back-up. Where two persons are involved in the cross-haul rescue, Assessors should be satisfied that appropriate communication is maintained.

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6.5.5 Complex rescue systems (team exercise)

6.5.5.1 Overview

Moving a casualty to a safe area may require a rescue system which incorporates several elements. Careful planning is required and this exercise should incorporate the requirements and guidance given in **6.2.8**.

6.5.5.2 Assessment requirements and guidance

6.5.5.2.1 Level 3 candidates shall take into account:

a) **Team management**. Candidates shall make the most effective use of their given team, taking into account the skill level of each member. Candidates shall position themselves so that they are in the most suitable place to co-ordinate the work task and likely rescue scenario.

b) **Communication**. Candidates shall communicate their intentions within the team so that each team member is clear on his/her role for the planned method of work and rescue. Clear instructions shall be given to each team member during each stage of the team rescue. Consideration shall also be given to communicating with emergency services and other site personnel.

c) **Equipment**. Candidates shall select suitable and sufficient equipment for the given task, taking into consideration the competence of the individual team members and compatibility of components.

d) **Casualty management**. Candidates shall demonstrate best practice when managing the casualty's needs, including keeping the casualty upright, providing comfort measures (e.g. a work seat or stretcher) and limiting the time spent immobile in suspension**.**

6.5.5.2.2 Level 3 candidates shall demonstrate planning and rigging a complex rope access system, and then carrying out the associated team exercise. The system should allow evacuation of a casualty around three-dimensional obstacles.

6.5.5.2.3 Trainers should note that this exercise is designed to test the candidate's ability both to create and implement a rescue plan.

6.5.5.2.4 Assessors should plan this exercise to allow candidates between 45 and 60 minutes to plan and rig the exercise, and 15 to 30 minutes for the execution of the rescue. Assessors may use this exercise to check for a satisfactory completion of the Job Planning form [HS-061].

6.6 Rope manoeuvres

6.6.1 General

6.6.1.1 Overview

When working in suspension, Technicians are required to maintain two independent safety attachments. These attachments may be lanyards connected to anchors, or via devices installed on the ropes. In some situations, more than two points of safety attachment may be required to protect against any potential out-of-control swing (pendulum) or movement that may cause injury to personnel or damage to equipment or property. Likely situations include wide rope-to-rope transfers, wide re-anchors and double-anchor deviations, where failure of any one part of the safety system could lead to an out-of-control swing, even though the candidate has two other independent safety attachments.

6.6.1.2 Assessment requirements and guidance

6.6.1.2.1 Candidates shall maintain two independent safety attachments when employing rope access techniques, unless the candidate is:

a) in a safe area;

b) using a work restraint or travel restriction system;

c) using a fall arrest system;

d) using another type of fall protection system (e.g. fall arrest nets, airbags).

NOTE ICOP [TC-102] Part 3, Annex K covers basic rope access manoeuvres.

6.6.1.2.2 For Level 1 candidates, all manoeuvres should be completed on a pre-rigged course.

6.6.1.2.3 Level 2 and Level 3 candidates may be required both to rig ropes and then to perform manoeuvres on their own rigging.

6.6.1.2.4 Depending on the exact circumstances, failure to protect against an out-of-control swing shall be classed as a major discrepancy and, thus, the assessment would result in a failure.

6.6.2 Back-up devices

6.6.2.1 Overview

Although back-up devices are rarely required to prevent or arrest a fall in the workplace, correct management of these devices is essential at all times to ensure their successful deployment in the event of a fall.

6.6.2.2 Assessment requirements and guidance

6.6.2.2.1 All candidates shall demonstrate throughout the whole of the assessment the use of a back-up device (and device lanyard, where appropriate) in accordance with best practice, the IRATA Trainer member company's risk assessment and the manufacturer's instructions. This includes checking the position and function of the back-up device at appropriate times.

NOTE Some countries may have specific requirements for the selection of back-up systems.

6.6.2.2.2 Level 2 and Level 3 candidates shall demonstrate familiarity with a range of back-up devices and alternative systems, e.g. descent on two descending devices; controlling a safety line.

6.6.2.2.3 Trainers shall emphasize the need for correct use and handling of the back-up system including, where applicable:

a) device lanyard selection and use;

b) placement in a high position to minimize any potential fall;

c) avoiding unnecessary handling;

d) avoiding dropping the device;

e) avoidance of tangles;

f) clearance distance.

6.6.2.2.4 When using a back-up device during rescue, hauling and lowering, Trainers should stress the need to minimize potential fall distances and resultant impact loads.

6.6.2.2.5 Trainers shall explain alternative systems and when they may be appropriate.

6.6.2.2.6 Assessors shall emphasize the importance of the back-up system throughout the assessment.

6.6.3 Descent

6.6.3.1 Overview

The controlled descent of ropes is a core technique in rope access. Rope access Technicians must be able to control their speed and stop as required. See ICOP [TC-102] Part 3, Annex K.

NOTE The German term 'abseil', which translates as 'down rope', is often used as is, in some parts of the world, the French term 'rappel'.

6.6.3.2 Assessment requirements and guidance

6.6.3.2.1 All candidates shall demonstrate attaching a descending device and back-up device to a set of pre-rigged ropes. Before descending, candidates shall demonstrate checking the position and function of the back-up device. During descent, candidates shall demonstrate safe control of the rope exiting the descending device (the 'tail' rope). Candidates shall demonstrate stopping and locking off the descending device.

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6.6.3.2.2 Trainers shall pay particular attention to:

a) pre-descent safety and function checks;

b) safe control of the descending device and correct use of the back-up device;

c) the effects of differing conditions (e.g. environmental) on the rope's properties and their effect on controlling the descent;

d) awareness of obstructions and checking of anchor points prior to attaching equipment;

e) the correct threading of the descending device and the security of connector gates;

f) avoiding tangles in ropes and lanyards;

g) access to the ropes, which may be from a number of different positions, e.g. direct from a safe area, from an aid climb or from a work restraint system.

6.6.3.2.3 Assessors shall allow a variety of techniques and equipment for the manoeuvre, with the emphasis being on the correct attachment to ropes, a controlled descent and correct management of the back-up device.

6.6.4 Ascent

6.6.4.1 Overview

Climbing a rope (ascending an anchor line) is the second basic technique in rope access and is accomplished by the alternate use of two ascending devices, typically a chest ascender and a handled ascender with a foot loop. See ICOP [TC-102] Part 3, Annex K.

6.6.4.2 Assessment requirements and guidance

6.6.4.2.1 All candidates shall demonstrate attaching ascending devices and the back-up device to a set of pre-rigged ropes, then ascending the ropes and then detaching from the ropes to another system or safe area.

6.6.4.2.2 Trainers shall place emphasis on correct attachment to the rope using ascending devices, pre-ascent safety checks and the need to avoid impact loading of ascending equipment. It is important to note that an ascending device is only considered to be a point of attachment if it is loaded statically. Trainers should encourage candidates to use good technique to avoid unnecessary fatigue.

6.6.4.2.3 Assessors shall place emphasis on safe practice during ascents, including correct management of the back-up device.

6.6.5 Changeovers

6.6.5.1 Overview

Changing from ascent mode to descent mode, and vice-versa, is an essential basic technique in rope access and forms the basis of many other manoeuvres.

6.6.5.2 Assessment requirements and guidance

6.6.5.2.1 All candidates shall demonstrate changing from ascent mode to descent mode and vice-versa.

6.6.5.2.2 Trainers shall ensure that candidates are closely supervised while initially learning this manoeuvre and emphasize the handling skills required for their personal rope access equipment. Trainers should emphasize the need for correct management of the back-up device when changing direction.

6.6.5.2.3 Assessors shall look for cross loading of connectors and ease of installation and removal of personal rope access equipment.

6.6.6 Descent using ascending devices

6.6.6.1 Overview

With the correct technique, it is possible for a rope access Technician to descend a rope while in suspension on ascending devices.

6.6.6.2 Assessment requirements and guidance

6.6.6.2.1 All candidates shall demonstrate descending using ascending devices without releasing the ascending device from the rope.

6.6.6.2.2 Trainers shall explain that this is a repositioning technique for use over short distances (usually less than a few metres) and that ascending devices shall not be detached from the rope.

6.6.6.2.3 Assessors should check that the ascending devices are not removed during this manoeuvre.

6.6.7 Ascent using a descending device

6.6.7.1 Overview

With the correct technique, it is possible for a rope access Technician to ascend a rope while in suspension on a descending device.

6.6.7.2 Assessment requirements and guidance

6.6.7.2.1 All candidates shall demonstrate ascending using a descending device and an ascending device and foot loop.

6.6.7.2.2 Trainers shall explain that this is a repositioning technique over short distances while maintaining control of the 'tail' rope.

6.6.7.2.3 Assessors should look for appropriate control of the descent device.

6.6.8 Deviations

6.6.8.1 Overview

Deviations allow re-direction of the path of the ropes from the anchor points, either to provide more accurate positioning for the rope access Technician or to avoid abrasion and other potential causes of damage to the ropes. See **6.4.8** for rigging requirements.

6.6.8.2 Assessment requirements and guidance

6.6.8.2.1 All candidates shall demonstrate passing a single-anchor deviation in both ascent and descent modes.

6.6.8.2.2 All candidates shall demonstrate passing a double-anchor deviation in both ascent and descent modes.

6.6.8.2.3 Trainers shall ensure all candidates understand the two different types of deviations and the need for single or double protection as appropriate. Trainers shall stress the need to avoid out-of-control swings when passing deviations. Normally, no equipment needs to be removed from the working line or safety line in order to pass a deviation.

6.6.8.2.4 Assessors should note that a small out-of-control swing shall be considered a minor discrepancy. However, a swing that could cause injury to personnel or damage to equipment or property shall be considered a major discrepancy.

6.6.9 Rope-to-rope transfers

6.6.9.1 Overview

Horizontal movement while in suspension can be achieved by transferring from one set of ropes to another.

6.6.9.2 Assessment requirements and guidance

6.6.9.2.1 All candidates shall demonstrate transferring from one set of ropes to another set of ropes, which may be at any distance apart.

6.6.9.2.2 Trainers shall draw attention to the possibility of out-of-control swings, and the need for four points of attachment where necessary. Candidates may use two back-up devices but shall have the practical knowledge of using an appropriate knot as the secondary back-up.

6.6.9.2.3 Assessors should note that a variety of recognized techniques is acceptable, but failure to install or maintain appropriate back up on one side of a wide rope-to-rope transfer which leaves the possibility of a large out-of-control-swing shall be considered a major discrepancy.

6.6.10 Re-anchors

6.6.10.1 Overview

A re-anchor (commonly called a re-belay) is a secondary set of anchors installed at any distance below the primary anchors. See **6.4.7** for rigging requirements.

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6.6.10.2 Assessment requirements and guidance

6.6.10.2.1 All candidates shall demonstrate, in both ascent and descent modes, passing a re-anchor whose offset shall be less than 1.5 m.

6.6.10.2.2 Level 2 and Level 3 candidates shall demonstrate passing a re-anchor whose offset may be any distance apart.

6.6.10.2.3 Trainers shall emphasize that a back-up has to protect against any potential out-of-control swing or movement that may cause injury to personnel or damage to equipment or property. Therefore, a wide re-anchor (or 'loop') may require techniques similar to a rope-to-rope transfer and the use of two back-up devices.

6.6.10.2.4 Assessors should note that a variety of techniques is acceptable for this manoeuvre.

6.6.10.2.5 Assessors should note that a small out-of-control swing shall be considered a minor discrepancy. However, a swing that could cause injury to personnel or damage to equipment or property shall be considered a major discrepancy.

6.6.11 Passing mid-rope knots

6.6.11.1 Overview

Knots may be tied mid-rope, either to isolate minor damage or to join ropes of insufficient length.

6.6.11.2 Assessment requirements and guidance

6.6.11.2.1 All candidates shall demonstrate passing mid-rope knots in both ascent and descent modes. Knots shall be in both ropes, and may be level or offset.

6.6.11.2.2 Level 2 and Level 3 candidates shall demonstrate identifying, isolating and passing minor damage in a rope by tying appropriate knots (Level 1s should be capable of doing so under supervision). In addition, Level 2 and Level 3 candidates may be required to tie knots to join ropes. See also **6.4.3**.

6.6.11.2.3 Trainers shall emphasize that in the workplace damaged rope should be replaced as soon as possible. Knots may complicate rescue; therefore, knots joining ropes should be avoided wherever possible. Knots used to isolate damaged rope shall be considered an emergency temporary measure. Single knots used to isolate damage should not be used as a safety attachment.

6.6.11.2.4 Assessors should note that a variety of techniques and knots is acceptable for this manoeuvre. Damage to rope may be simulated with the use of marker tape or similar methods.

6.6.12 Edge obstructions at the top

6.6.12.1 Overview

The edges of roofs, platforms, cliffs, cavities and other drops may be unprotected or surrounded by edge protection such as guardrails or parapet walls. In many cases, the edge presents both an awkward obstruction for the rope access Technician and a contact hazard to the ropes.

6.6.12.2 Assessment requirements and guidance

6.6.12.2.1 All candidates shall demonstrate passing a top edge obstruction, where anchor points are at or near right angles to the line of descent, in both ascent and descent modes.

6.6.12.2.2 Trainers shall ensure candidates take care to attach their equipment correctly before approaching the edge and explain the use of appropriate rope protection. Trainers shall draw attention to hazards associated with edges, including rope stretch and the potential for impact loads.

6.6.12.2.3 Assessors should look for appropriate safe control during this manoeuvre, and avoidance of impact loads and cross loads on equipment.

6.6.13 Use of work seats (comfort seats)

6.6.13.1 Overview

Work seats are often added to a rope access harness to improve comfort while in suspension. See ICOP [TC-102] Part 2, 2.7.11.

6.6.13.2 Assessment requirements and guidance

6.6.13.2.1 All candidates shall demonstrate the correct attachment and use of a work seat.

6.6.13.2.2 Trainers shall emphasize that the work seat is not typically part of the personal fall protection system, but is intended to provide additional comfort only.

6.6.13.2.3 Assessors should note that a variety of seats and techniques is acceptable.

6.6.14 Passing mid-rope protection

6.6.14.1 Overview

Wrap-around canvas rope protectors may be installed mid-rope to protect the ropes against minor abrasive hazards.

6.6.14.2 Assessment requirements and guidance

6.6.14.2.1 All candidates shall demonstrate passing and replacing mid-rope protection in either ascent or descent mode. Normally, separate protectors should be used for each rope.

6.6.14.2.2 Trainers should ensure that candidates are able to pass the rope protectors and reinstate them in the appropriate place, including securing them either to the structure or the rope, as required. Trainers should ensure such exercises are carried out in a realistic practical setting, i.e. at a potential contact hazard on a structure.

6.6.14.2.3 Assessors should look for safe and appropriate use of rope protectors and their correct installation.

6.7 Climbing techniques

6.7.1 General

6.7.1.1 Overview

6.7.1.1.1 Various techniques exist for direct progression on a structure using personal fall protection equipment. These techniques can be broadly split into two methods:

a) ‘aid’ climbing suspended by work positioning lanyards (such as cow’s tails);

b) climbing with fall arrest equipment (such as energy-absorbing lanyards or pre-installed fall arrest systems).

In some situations, a combination of the two methods may be used. Guidance on other methods, such as lead climbing, is provided in ICOP [TC-102] Part 3, Annex L.

6.7.1.1.2 The different methods require specific training with particular reference to their application, and the type of equipment and attachment points used.

6.7.1.2 Assessment requirements and guidance

6.7.1.2.1 All candidates shall understand the principles of fall factors and clearance distances, and their relevance to the different methods of climbing. Guidance on fall factors, clearance distances and associated risks is provided in ICOP [TC-102] Part 3, Annex Q.

6.7.1.2.2 Level 3 candidates shall be able to apply their knowledge by assessing the suitability of the methods of climbing for a variety of scenarios and structures.

6.7.1.2.3 Assessors should note a variety of methods and equipment is acceptable.

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6.7.2 Horizontal aid climbing

6.7.2.1 Overview

Horizontal aid climbing is a technique which is commonly used by rope access Technicians to allow them to move across the underside of a structure such as a roof or bridge.

6.7.2.2 Assessment requirements and guidance

6.7.2.2.1 All candidates shall demonstrate horizontal aid climbing, progressing primarily in suspension by moving along:

a) a series of fixed anchors;

b) with the use of moveable anchors such as strops or slings.

6.7.2.2.2 Trainers shall emphasize the need for a minimum of two independent safety attachments at all times; therefore, the use of at least three lanyards is required. Trainers shall emphasize the need to select suitably positioned and unquestionably reliable anchors and also the need to minimize potential fall distances and impact loads.

6.7.2.2.3 Assessors should be aware that this exercise is intended to demonstrate the candidate's ability both to move across the structure and to change from aid climbing to ropes and vice versa.

6.7.2.2.4 Suitable aid climbs for assessment should cover at least 5 m of horizontal movement and, using movable anchors, should pass at least two separate obstructions.

6.7.3 Vertical aid climbing

6.7.3.1 Overview

Vertical aid climbing is a technique which allows rope access Technicians to climb a structure such as a steel lattice tower or a series of bolt anchors in a wall.

6.7.3.2 Assessment requirements and guidance

6.7.3.2.1 Level 2 and Level 3 candidates shall demonstrate vertical aid climbing, progressing primarily in suspension in an upward direction.

6.7.3.2.2 Trainers shall explain the suitability of different types of lanyards and emphasize the need to minimize potential fall factors, distances and impact loads.

6.7.3.2.3 Assessors should note that a variety of lanyards and techniques is acceptable.

6.7.3.2.4 Suitable aid climbs for assessment should cover a vertical distance of at least 3 m.

6.7.4 Climbing with fall arrest equipment

6.7.4.1 Overview

When it is not feasible to use a personal fall protection system that prevents a fall, fall arrest equipment can be used to mitigate the distance and consequences of a fall. In a fall arrest system, the user's primary attachment to the structure is via their hands and feet, with the equipment attached so as to prevent the collision of the user with the ground or structure in a fall. Fall arrest equipment can be divided into two broad categories: pre-installed systems and personal lanyards.

NOTE Some jurisdictions have specific requirements for fall arrest training.

6.7.4.2 Assessment requirements and guidance

6.7.4.2.1 All candidates shall demonstrate a vertical climb with the use of a pre-installed temporary or permanent fall arrest system.

6.7.4.2.2 All candidates shall demonstrate climbing using a twin-tailed fall arrest lanyard, maintaining appropriate attachments at all times. Candidates shall demonstrate changing to and from work positioning (i.e. supported by a work positioning lanyard such as a cow's tail) during this exercise.

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6.7.4.2.3 Trainers should ensure candidates understand the specific equipment requirements of fall arrest systems, including a full body harness, an energy absorber and appropriate connectors, which meet the requirements of recognized standards.

6.7.4.2.4 Trainers should ensure candidates are able to identify safe anchor points, that they connect to them correctly and that they understand the need for an adequate clearance distance below. Specific guidance on clearance distances is typically provided in manufacturers' instructions.

6.7.4.2.5 Assessors shall confirm the candidates' understanding of fall arrest techniques and equipment limitations and that the fall arrest equipment is used safely.

6.8 Rope rescues

6.8.1 General

6.8.1.1 Overview

6.8.1.1.1 If rigging a system for rescue is not considered feasible, intervention rescues may be considered in the rescue plan. Such rescues can often be simplified if an additional set of ropes and equipment is available. Required equipment should be specified in the rescue plan and prepared to enable rapid deployment. To test fully candidates' skills, assessment tends to concentrate on intervention rescues using existing ropes and rigging; however, rope access Technicians should be aware that pre-planned systems would normally be the first choice at work. Care should be taken in all rescues to maintain the back-up device in the correct position, and to minimize tangled ropes and rope-against-rope abrasion.

6.8.1.1.2 Trainers shall emphasize that loading on equipment during rescues often exceeds the loading normally allowed for one person. This reduces safety factors on equipment strength, and may require more careful management of devices to reduce the potential for high dynamic loads. The Trainer shall explain:

a) assessing the risk;

b) asking for assistance;

c) casualty management and first aid;

d) knowledge of suspension intolerance and related appropriate attachments and positioning of the casualty;

e) appropriate equipment and attachments, knowledge of increased loading of equipment and extra precautions required.

6.8.1.2 Assessment requirements and guidance

Assessors should be aware that a low position of the back-up device or excess slack in the safety line would constitute a discrepancy. This could be either minor, or major, where it would constitute a fail.

6.8.2 Rescue of a casualty who is in descent mode

6.8.2.1 Overview

Most rope access work is carried out while in descent mode; therefore, all rope access Technicians should be capable of carrying out a rescue of a co-worker suspended by a descending device.

6.8.2.2 Assessment requirements and guidance

6.8.2.2.1 All candidates shall demonstrate the rescue of an 'unconscious' casualty (i.e. feigning immobility) in descent mode, from an adjacent set of ropes.

NOTE It is essential that the person feigning immobility regularly moves the lower limbs to protect against the onset of symptoms of suspension intolerance.

6.8.2.2.2 Level 2 and 3 candidates shall demonstrate a descent rescue using the casualty's own ropes.

6.8.2.2.3 Trainers shall emphasize that candidates may be required to approach the casualty from above or below.

6.8.2.2.4 Assessors shall check that sufficient safety attachments are maintained for both casualty and rescuer, and that a controlled descent is made.

6.8.3 Rescue of a casualty who is in ascent mode

6.8.3.1 Overview

Rescues from ascent mode are strenuous, as the casualty has to be lifted to disengage the teeth of the ascending device's came from the rope. Where rope access Technicians vary in size and/or ability, the viability of this method needs to be carefully assessed before being accepted in a rescue plan.

6.8.3.2 Assessment requirements and guidance

6.8.3.2.1 Level 2 and Level 3 candidates shall demonstrate a mid-rope rescue of an 'unconscious' casualty, i.e. feigning immobility, while suspended on ascending devices. The rescuer should be able to ascend or descend to a casualty, de-weight the casualty and descend to the ground.

NOTE It is essential that the person feigning immobility regularly moves the lower limbs to protect against the onset of symptoms of suspension intolerance.

6.8.3.2.2 Trainers shall ensure that the candidate is able to demonstrate a rescue from ascent mode of an 'unconscious' casualty, using both of the following methods:

a) from a separate set of ropes;
b) using only the casualty's own ropes.

6.8.3.2.3 Assessors should note that candidates need only demonstrate one rescue from ascent mode during assessment, at the Assessor's discretion.

6.8.4 Passing a deviation with a casualty

6.8.4.1 Overview

Deviations may be rigged to position ropes or avoid obstructions. These may not be compatible with lowering systems, so the rescue plan needs to ensure sufficient competence within the team to deal with them. See **6.4.8** for more information on deviations.

6.8.4.2 Assessment requirements and guidance

6.8.4.2.1 Level 2 candidates shall demonstrate descending with a casualty through a single-anchor deviation.

6.8.4.2.2 Level 3 candidates shall demonstrate descending with a casualty through a double-anchor deviation.

6.8.4.2.3 Trainers should emphasize the avoidance of out-of-control swings and potential slack in the safety line.

6.8.4.2.4 Assessors should look for a safe and efficient passage through the deviation.

6.8.5 Rope-to-rope transfer with a casualty

6.8.5.1 Overview

Horizontal movement with a casualty can be achieved by performing a rope-to-rope transfer. Such a manoeuvre could be used during a rescue to avoid obstructions or to return to an access point from underneath a structure such as a platform or bridge.

6.8.5.2 Assessment requirements and guidance

6.8.5.2.1 Level 2 and Level 3 candidates shall demonstrate transferring, with a casualty, from one set of ropes to another set of ropes rigged more than 3 m apart.

NOTE This exercise should be started on one set of ropes, not with the casualty in the middle of the transfer: see 6.8.7 for rescues dealing with more complicated situations.

6.8.5.2.2 Trainers should emphasize:

a) good casualty management;
b) maintaining four appropriate points of attachment when required;
c) the potential for the use of the casualty's personal equipment.

6.8.5.2.3 Assessors should look for a rope-to-rope transfer that avoids the potential for an out-of control swing, e.g. one caused by the failure of a single item of equipment, by the use of appropriate back-ups.

6.8.6 Passing a small re-anchor with a casualty

6.8.6.1 Overview

Small re-anchors (commonly called re-belays) may be rigged to avoid obstructions or to reduce rope stretch on long drops. These may not be compatible with lowering systems, and the rescue plan needs to ensure sufficient competence within the team to deal with them.

6.8.6.2 Assessment requirements and guidance

6.8.6.2.1 With the casualty located above the re-anchor at the start of the exercise, Level 2 and Level 3 candidates shall demonstrate descending with a casualty through a small re-anchor, with an offset of no more than 1.5 m. See **6.8.7** for rescues dealing with more complicated situations.

6.8.6.2.2 Trainers should emphasize the avoidance of tangles with the re-anchor loops.

6.8.6.2.3 Assessors should look for a lack of tangles.

6.8.7 Mid-transfer rescue

6.8.7.1 Overview

A difficult rescue situation may arise where a casualty is suspended midway across a transfer manoeuvre.

6.8.7.2 Assessment requirements and guidance

6.8.7.2.1 Level 3 candidates shall demonstrate the rescue of an 'unconscious' casualty, i.e. feigning immobility, who is suspended:

a) at any point during a wide (more than 3 m apart) rope-to-rope transfer;

b) at any point whilst crossing a wide (more than 1.5 m offset) re-anchor (also known as a 'loop').

The candidate shall attend to the casualty, manoeuvre them out of the situation, and return them to a safe platform such as the floor.

NOTE It is essential that the person feigning immobility regularly moves the lower limbs to protect against the onset of symptoms of suspension intolerance.

6.8.7.2.2 Trainers shall stress the consequences of failure of any one item of equipment and the need for four safety attachment points.

6.8.7.2.3 Assessors should look for a rescue that avoids the potential for an out-of-control swing, e.g. one caused by the failure of a single item of equipment, by the use of an appropriate back-up.

6.8.7.2.4 Assessors should note that candidates need only demonstrate one mid-transfer rescue during assessment, at the Assessor's discretion.

6.8.8 Passing mid-rope knots with a casualty

6.8.8.1 Overview

Mid-rope knots are occasionally created either to extend ropes or to isolate small areas of damage. Such knots can complicate rescue. With proper planning, the complications can often be minimized or avoided.

6.8.8.2 Assessment requirements and guidance

6.8.8.2.1 Level 3 candidates shall demonstrate descending with a casualty passing a set of mid-rope knots, taking into account any stretch in the ropes. The rescuer may take full advantage of the casualty's personal equipment.

6.8.8.2.2 Trainers should ensure that knots are pre-tied in the working lines and safety lines. These knots may be offset or at the same level.

6.8.8.2.3 Assessors should look for efficiency in the use of the additional equipment provided via the casualty and in the execution of the exercise.

6.8.9 Use of tensioned ropes for rescue

6.8.9.1 Overview

Ropes can be tensioned between two sets of anchors to facilitate horizontal or diagonal movement, either for access or as part of a rig-for-rescue system.

6.8.9.2 Assessment requirements and guidance

6.8.9.2.1 Level 3 candidates shall demonstrate the use of tensioned ropes for rescue purposes.

6.8.9.2.2 Trainers should ensure that during this manoeuvre candidates keep the casualty above the ground during a horizontal or diagonal transfer, while using a pair of tensioned ropes. Anchors should be equalized and the load shared between the two ropes.

6.8.9.2.3 Assessors should note that tensioned ropes may be rigged as part of a planned evacuation procedure and that this exercise may be assessed as part of the complex rescue, see **6.5.5**.

6.9 Climbing rescues

6.9.1 Rescue from an aid climb

6.9.1.1 Overview

Where rope access Technicians are climbing directly on the structure, either by aid climbing techniques or with fall arrest equipment, planning needs to consider rescue methods. Team selection should take account of the time taken to reach and rescue a casualty. In some situations, techniques such as assisted aid climbing (rope access Technician suspended on remotely controlled work-positioning ropes) can allow straightforward lowering of a casualty.

6.9.1.2 Assessment requirements and guidance

6.9.1.2.1 Level 2 and Level 3 candidates shall demonstrate the rescue of a casualty who is suspended by work-positioning lanyards.

6.9.1.2.2 Trainers should note that the rescuer shall climb to the casualty with sufficient equipment, including ropes (this may be a kit pre-rigged by the rescuer). The rescuer may remain either on the structure and lower the casualty to safety or rig ropes and descend with the casualty.

6.9.1.2.3 Assessors should note that candidates need only demonstrate one climbing rescue during assessment, at the Assessor's discretion.

6.9.2 Rescue from fall arrest equipment

6.9.2.1 Overview

Wherever the use of fall arrest equipment has been selected as a suitable access method, planning needs to consider rescue methods. Fall arrest systems typically allow longer potential falls than rope access systems and, therefore, typically carry a greater risk of injury.

6.9.2.2 Assessment requirements and guidance

6.9.2.2.1 Level 2 and Level 3 candidates shall demonstrate the rescue of a casualty who is suspended either by a fall arrest system (temporary or permanent) or by twin-tailed fall arrest lanyards. When suspended by fall arrest equipment, casualties shall ensure they maintain a second safety attachment.

6.9.2.2.2 Trainers should note that the rescuer shall climb to the casualty with sufficient equipment, including ropes (this may be a kit pre-rigged by the rescuer). The rescuer may remain either on the structure and lower the casualty to safety or rig ropes and descend with the casualty. As with all IRATA rescues, two independent safety attachments shall be maintained at all times.

6.9.2.2.3 Assessors should note that candidates need only demonstrate one climbing rescue during assessment, at the Assessor's discretion.

6.9.3 Rescue from an aid climb with the casualty on a short connection

6.9.3.1 Overview

Aid climb rescues can be particularly complicated if the casualty is attached to the structure by a very short connection. This is especially so if the short connection consists of all-metal connections and only one connector is used (e.g. connecting the harness D-ring direct to a bolt anchor with a karabiner). For this reason, rope access safety supervisors should ensure rope access Technicians avoid the use of such attachments in the workplace. The short connection used in the assessment should be a two-connector attachment into a bolt anchor or a one-connector attachment into a short wire-strop anchor.

NOTE Rescue from a one-connector attachment into a bolt anchor may be discussed but is not required at assessment.

6.9.3.2 Assessment requirements and guidance

6.9.3.2.1 Level 3 candidates shall demonstrate the rescue of an 'unconscious' casualty, i.e. feigning immobility, from an aid climb, where the casualty is directly attached by a short connection and where there are no higher anchors.

NOTE It is essential that the person feigning immobility regularly moves the lower limbs to protect against the onset of symptoms of suspension intolerance.

6.9.3.2.2 Trainers should note that the casualty shall be directly attached to the anchor point with a short connection. The rescuer shall not use any higher anchor points.

6.9.3.2.3 Assessors should take into account the difficulty in carrying out this type of rescue and concentrate their assessment on safety aspects of the exercise.

7 Requirements and guidance for Trainers and Trainer member companies

7.1 General

7.1.1 The IRATA Training, Assessment and Certification Scheme [TC-101] and the IRATA International Code of Practice [TC-102] shall be followed during training operations.

7.1.2 Only full Trainer member companies or probationary Trainer member companies of IRATA may register candidates.

7.1.3 The IRATA Trainer member company shall take total responsibility for any training carried out in its name.

7.1.4 Only certified IRATA Trainer member companies are permitted to provide IRATA training and assessments.

7.2 Pre-course information

Candidates should be provided with information detailing the applicability and requirements of the course and this scheme. This should include:

a) the level of physical fitness required;

b) any medical contra-indications or disabilities that may prevent them from working safely;

c) the basic requirements of this scheme, i.e. a minimum four-day training course followed by pass/fail assessment by an external IRATA Assessor; logged working hours; supervision requirements and revalidation every three years; upgrade requirements.

7.3 Provision of training

7.3.1 Rope access training shall be delivered by an IRATA Level 3 rope access Technician, whose name and IRATA number shall be included on the assessment form. The Level 3 Trainer may have an assistant, who shall be an IRATA qualified rope access Technician.

7.3.2 Training programmes shall comprise at least 30 hours training over a minimum of 4 days. This time is specific to the level of course and will not normally include any refresher time for lower level requirements. Training member companies shall ensure that training programmes are suitable for the trainee's ability and be aware that the minimum requirements may not be sufficient.

7.3.3 Breaks in training, or between training and assessment, shall not be longer than 60 days, after which candidates are required to attend a further training course in full. Evidence of qualifying prior training must be presented to the Training member company prior to assessment.

7.3.4 Training member companies shall provide the Trainer with access to all the IRATA documentation included in the 'Trainer file' available on the IRATA website. This includes reference material, sample questions, additional guidance on training topics and assessments, and also amendments and reminders.

7.3.5 It is essential that candidates are properly trained in both the methods and the equipment they use at work. Candidates shall be made aware of a variety of available equipment, and the advantages and disadvantages of each shall be explained. The equipment used during practical training shall be noted on the assessment form in the box marked *Equipment used in training*.

7.3.6 Training member companies shall ensure that language issues are provided for in the delivery of training. Training programmes can be severely affected by language problems and additional time should be allowed for both training and assessment. Training manuals, manufacturer's user instructions and other course resources are essential training aids and also serve as reference material for Technicians and should be provided in a suitable language. Translations of the IRATA ICOP [TC-102] and other documents are available on the IRATA website. Training member companies should liaise with the Assessor regarding appropriate questions.

7.4 Candidate to Trainer ratios

7.4.1 All training shall be delivered by a Level 3 rope access Technician.

*NOTE Level 3 rope access Technicians with extensive training experience can gain additional certification as IRATA rope access Instructors, see clause **8**.*

7.4.2 A Level 3 rope access Technician may take sole responsibility for the training of up to four candidates, who may be at any IRATA level.

7.4.3 A Level 3 rope access Instructor may take sole responsibility for the training of up to six candidates, who may be at any IRATA level.

7.4.4 A Level 2 rope access Technician may not take sole responsibility for training but may assist the Level 3 rope access Technician or Instructor in training up to two additional Level 1 candidates.

7.4.5 A Level 1 rope access Technician may assist the Level 3 rope access Technician or Instructor in training. No additional candidates above the maximums specified in **7.4.2**, **7.4.3** and **7.4.4** are permitted.

7.4.6 Examples of training ratios in practice are:

a) a Level 3 rope access Technician with a Level 1 assistant may train up to four candidates, who maybe at any IRATA level;

b) a Level 3 rope access Instructor with a Level 1 assistant may train up to six candidates, who may be at any IRATA level;

c) a Level 3 rope access Technician with a Level 2 assistant may train up to six candidates, at least two of whom must be Level 1 candidates;

d) a Level 3 rope access Instructor with a Level 2 assistant may train up to eight candidates, at least two of whom must be Level 1 candidates;

e) two Level 3 rope access Technicians may train up to eight candidates, at any IRATA level;

f) two Level 3 rope access Instructors may train up to twelve candidates, at any IRATA level.

7.4.7 The ratios listed in **7.4.2** to **7.4.4** are maximums and are only recommended under ideal conditions. Where complicating factors such as mixed levels or language difficulties occur, or inexperienced Trainers or assistants are used, lower ratios should be used.

7.5 Third-party training

7.5.1 Third-party IRATA training permitted a non-member company to provide IRATA training under the membership certification of an IRATA Training member company. Third-party training is no longer permitted; therefore, all training must be provided by a certified IRATA Training member company at their audited and certified training venue(s).

7.5.2 Subject to clause 7.5.4, advertisements provided by IRATA members, and/or other parties, regarding the provision of IRATA training shall clearly state that such training is being provided by an IRATA certified member at their IRATA approved training venue(s). In such cases advertisements shall clearly stipulate the full IRATA member company name and full IRATA membership number of the member providing the training.

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7.5.3 Subject to clause 7.5.2 only IRATA member companies may use the IRATA logo.

7.5.4 It is not permissible for non-IRATA member companies, who undertake rope access activities, to advertise the provision of IRATA training or use the IRATA logo in any form.

7.6 Training venues

All training venues intended for the provision of IRATA training and assessment shall be subject to audit and approval by IRATA. Compliance with IRATA membership requirements will be verified at an IRATA audit and are subject to the approval of an IRATA audit panel. IRATA Training member companies shall ensure a pre-course risk assessment is carried out in accordance with the IRATA Pre-Training Course Checklist [FM-006] and is kept current. For further information refer to the Audit Checklist [FM-039] and the Training Venue Approval Policy [QP-314].

7.7 Assessment and training area

7.7.1 Training shall only be delivered if appropriate training facilities, sites and structure (meeting the requirements of the Pre-Training Course Checklist – internal audit [FM-006]) are available for the duration of the course. The training area shall be controlled to minimize risk to trainees. To assist in achieving this, Trainers shall complete and document a hazard identification and risk assessment for the training venue and shall explain this to candidates during the course induction. The Training member company shall ensure that this risk assessment is reviewed at appropriate intervals.

7.7.2 The Pre-Training Course Checklist [FM-006] shall be updated each time there is a significant change to the training resources that may give rise to a change in risk. It is mandatory for FM-006 to be updated each time a new lead trainer is used. The completed form shall be posted on the wall in the training venue for visiting Assessors, auditors and trainees to see.

7.7.3 IRATA Trainer member company insurance shall be in date and shall specify rope access training with the expiry date noted on the Pre-Training Course Checklist [FM-006].

7.7.4 IRATA certification for all rope access training personnel shall be in date with the expiry date noted on the Pre-Training Course Checklist [FM-006].

7.7.5 All IRATA Level 3 rope access Trainers and Instructors shall have attended appropriate first-aid training. Certification shall be in date with the expiry date noted on the Pre-Training Course Checklist [FM-006].

7.7.6 Appropriate emergency and first-aid provision shall be available during training.

7.7.7 Appropriate facilities for classroom theory and examination shall be available.

7.7.8 Normal welfare facilities shall be available.

7.7.9 The training area shall have adequate lighting levels.

7.7.10 Training courses shall be delivered without conflicting activities and excessive noise levels.

7.7.11 Provision to exclude third parties shall be made.

7.7.12 Up to date copies of the IRATA International Code of Practice [TC-102] and the IRATA Training, Assessment and Certification Scheme [TC-101] shall be made available to trainees in an appropriate language, where possible. This may be either in printed or electronic form.

NOTE The IRATA International Code of Practice [TC-102] is available in nine different languages from www.irata.org.

7.7.13 A specific risk assessment shall be made for the training venue. The venue's risk assessment, including assessment of foreseeable misuse of equipment, shall be available for visiting Assessors and trainees to see.

7.7.14 A live 'casualty' risk assessment shall be carried out prior to commencement of training. A work seat is recommended for all live casualties.

7.7.15 Rescue dummies weighing at least 70 kg shall be available for rescue exercises. Manual handling precautions shall apply. Rescue dummies are particularly useful for rescue exercises as they give the trainee rescuer experience of casualty handling without the risk of injuring a live 'casualty'.

7.7.16 Masses (e.g. specific load lifting bags or steel weights) weighing at least 70 kg shall be available for hauling exercises. Manual handling precautions shall apply.

7.7.17 Rescue plans with appropriate rescue equipment shall be available. These shall be included in the Trainer member company method statement/risk assessments. The rescue method for the generic situations shall be identified with considerations for two-person loads and use of live casualties, including equipment and techniques used for two-person loads.

7.7.18 A procedure to ensure sub-contracted Trainers are adequately briefed on training procedures and which acknowledges revisions prior to the course commencing shall be in place. This is particularly relevant where a Trainer has not worked at the venue previously.

7.7.19 Training procedures for the management of training shall be available on site.

7.7.20 The Trainer file shall be available with current IRATA documents for the Trainer during the training course and shall include:

a) IRATA International Code of Practice [TC-102];

b) IRATA Training, Assessment and Certification scheme [TC-101];

c) IRATA safety bulletins;

d) IRATA Trainer member company training manual;

e) Manufacturers' equipment user instructions for all types of equipment present during training.

NOTE The latest versions of IRATA documents are available from www.irata.org.

7.7.21 Suitable rope access equipment shall be available in sufficient quantities for all parts of the syllabus taught.

7.7.22 Rope access equipment shall be inspected at suitable intervals by a competent person. Records of equipment inspection shall be up to date, including load rating, lifespan etc. Declarations of conformity shall be kept if applicable, including those for sub-contractors' equipment.

7.7.23 Rope access equipment shall be stored properly and securely.

7.7.24 Rope access and lifting equipment shall be sufficiently marked to allow traceability to inspection records.

7.7.25 Anchors shall meet minimum static strength requirements. Detailed guidance is provided in ICOP [TC-102] Part 2, 2.11.2 and ICOP [TC-102] Part 3, Annex F.

7.7.26 Equipment such as anchors and scaffolds shall have inspection/testing records available.

7.7.27 Safety signage shall be present and clear demarcation of the training area shall be established.

7.7.28 Training structures used to support persons, e.g. steelwork or platforms, shall display signage indicating their loading capacity and loading direction (e.g. number of persons per beam or platform).

7.7.29 An area to ascend and descend against a flat wall/surface shall be made available. This area should have a working height of at least 6 m.

NOTE The term 'working height' means an area which is accessible during training, as opposed to the maximum height of the building.

7.7.30 An area to ascend and descend in free-hanging space shall be available. The working height of this area is recommended to be at least 7 m, but shall not be less than 6 m.

7.7.31 Obstructions such as re-anchors, deviations, mid-rope protection and rope-to-rope transfers should be rigged at least 3.5 m above the ground.

7.7.32 Platforms and stances near the top of the training area are required, including an area to simulate top edge obstruction, e.g. a parapet wall, a flat roof edge or the top of a cliff, so that the ropes pass through a 90-degree angle between the anchor points and the ground.

7.7.33 An area that allows aid climbing in suspension using work-positioning lanyards attached to fixed and mobile anchors is required. These exercises, which shall include the use of foot loops (étriers) shall be performed over a distance of at least 5 m (horizontal) and 3 m (vertical). Obstructions shall be in place (e.g. joints/junctions in steel) so that the trainee has to plan to remove their mobile anchors to allow them to pass by the obstructions safely.

7.7.34 An area is required with a height of at least 5 m, where climbing using fall arrest lanyards can be performed using a structure such as a simulated pylon, tower or lattice frame. This structure shall allow the trainee to be supported in a work position during the fall arrest climbing exercise.

7.7.35 The working line and safety line should each have its own separate anchor. However, both lines may be connected to both anchors for added security.

7.7.36 Suitable anchors shall be available to rig horizontal and diagonal tensioned lines.

7.7.37 Suitable anchors shall be available to rig three-dimensional exercises for team exercises (see **6.5.5**). For example, a team exercise may involve moving a load (casualty or object) over and/or through a series of obstacles, utilising techniques such as cross-hauls and tensioned lines. Team exercises shall be planned and managed so that they can be completed in one go, without the need to stop midway through to move to a different area.

7.8 Assessments

7.8.1 It is the responsibility of the IRATA Training member company to ensure that all relevant documentation relating to the candidate is appropriate, checked and available prior to assessment (e.g. adequate logged experience). If in doubt on any point, the Assessor should be consulted in advance.

7.8.2 The Training member company shall ensure a Level 3 Technician is in attendance throughout the assessment in order to provide rescue cover and first aid support; and shall have thorough knowledge of the training provided to the candidates being assessed.

7.8.3 During the assessment, Trainers shall not assist candidates in any way, unless instructed to do so by the Assessor.

7.9 Administration, including registration and certification

7.9.1 The Assessor shall make a note of any missing documentation in the comments box of the assessment form.

7.9.2 The Assessor shall pass the completed question papers and assessment forms, whether or not they are marked pass or fail, to the IRATA Trainer member company without delay. Spoiled forms shall be retained by the Assessor.

7.9.3 The IRATA Training member company shall process the forms through the IOS.

NOTE All completed assessment forms are processed through IRATA, including failures.

7.9.4 The Technician Assessment Form [FM-025] is valid for a period of 60 days. Subject to verification the IRATA Head Office will formally register the outcome of the assessment and provide a certificate for the candidate. During this 60-day period, the completed assessment form may be used as evidence of the assessment outcome.

7.9.5 The completed white copy shall be held securely by the Training member company for a minimum period of four years.

The Training member company shall issue the yellow copy to the candidate.

7.9.6 For the IOS, the required information for each candidate shall be entered by the IRATA Trainer member company. A colour digital portrait photograph shall be uploaded for each candidate, which meets the following requirements:

a) the photograph shall be clear and sharp and show a true likeness of the candidate;

b) the file name shall include the candidate's name;

c) the file shall be saved in jpeg format;

d) the file size shall be 300 pixels wide by 400 pixels high;

e) the photograph shall not display company names or branding;

f) hats or head coverings are not permitted except when worn for religious reasons and only if the full facial features are clearly visible.

Each completed IRATA Technician Assessment Form [FM-025] and the Assessment Day Form [FM-042] should be scanned by the IRATA Trainer member company and emailed to registrations@irata.org.

NOTE: Registrations entered online will not be processed until these forms have been received at IRATA Head Office.

7.9.7 Upon verification and approval of the documentation by IRATA Head Office, a certificate of competence, a photo identification card (ID card) and, for new technicians, a logbook is issued stating the level and type of certificate awarded and the expiry date. This documentation is issued directly to the candidate, unless requested otherwise by the IRATA Trainer member company.

7.9.8 The cost of registration includes a certificate, an IRATA logbook and an ID card stating the current level attained.

7.9.9 A fee is charged for all replacement documents.

7.9.10 Submission of documentation to the IRATA Head Office should be within 30 days after the assessment. Registration and the issue of certificates, logbooks and ID cards should be completed within a further 30 days. The period from the assessment date to the issue of a certificate is normally not more than 60 days.

7.9.11 Applications for registration submitted by the IRATA Trainer member company later than 30 days after assessment should be accompanied by a letter of explanation which will be reviewed by IRATA Head Office.

7.9.12 The registration of rope access Technicians may only be carried out by the IRATA Trainer member company which carried out the training.

7.10 Record keeping

7.10.1 All candidate assessment records are maintained within the IOS.

7.10.2 IRATA Training member companies may have access to the IRATA rope access Technician database to verify details of named employees or prospective named employees with regard to their IRATA certification and record of training.

7.10.3 Training member companies shall ensure all evidence used to meet training and assessment criteria is held for a minimum of four years. This shall include copies of:

- assessment forms;
- Candidate Disclaimer and Liability Release [FM-014] forms;
- written assessment question papers;
- evidence of language accommodations;
- conversion and accelerated entry supporting documentation;
- Trainers' first aid certification.

8 Requirements and guidance for IRATA International Instructors

8.1 Overview

8.1.1 The role of the Trainer is to ensure that all candidates are trained in accordance with this document. As a minimum requirement, rope access training shall be delivered by an IRATA Level 3 rope access Technician (see **7.3**). IRATA Level 3 rope access Technicians with sufficient training experience may gain additional certification as IRATA rope access Instructors (Level 3/I).

8.1.2 To become an IRATA L3/I the applicant first needs to register with IRATA as a trainee Instructor. Once sufficient experience has been gained as a trainee Instructor, candidates submit their completed trainee Instructor logbook for assessment to the IRATA Head Office, and complete an online examination.

8.1.3 It is strongly recommended that all Instructors have a formal external teaching qualification to assist them in the delivery of training.

8.1.4 IRATA Instructors are issued an Instructor logbook, which will be used to log training experience going forward, and must revalidate their status annually (see **8.7**).

8.2 Eligibility

8.2.1 All rope access Technicians wishing to become trainee Instructors are required to hold a current relevant first-aid qualification.

8.2.2 IRATA Level 3 rope access Technicians are eligible to register with IRATA as trainee Instructors.

8.2.3 IRATA Level 2 rope access Technicians may register with IRATA as trainee Instructors and begin to log their training experience, but may not teach or log Level 2 or Level 3 topics until they are qualified at IRATA Level 3.

8.2.4 IRATA Level 1 rope access Technicians are not eligible to apply for trainee Instructor status, but may assist an IRATA Level 3 Trainer or Instructor during a training course (see 7.4.5).

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8.3 Applying for trainee Instructor status

8.3.1 Eligible rope access Technicians should complete a Trainee Instructor Application form [FM-066], and return it to the IRATA Head Office. A registration fee will be charged in line with the published IRATA price list. Once the application has been received and processed, the IRATA Head Office will issue a uniquely numbered trainee Instructor logbook.

8.4 Requirements for Instructor status

8.4.1 Trainee Instructors must meet several criteria before they are eligible to apply for Instructor status:

a) hold a current IRATA Level 3 certificate;
b) hold a current relevant first aid certificate;
c) have been witnessed to competently deliver all TACS [TC-101] syllabus items;
d) have at least 400 hours total logged experience delivering IRATA training courses;
e) successfully train (i.e. pass at assessment) at least 30 candidates including at least 6 candidates at each IRATA level;
f) maintain an overall pass rate of at least 60% of candidates;
g) attend at least one Instructor/Assessor workshop per year;

Items c) to g) are recorded in the trainee Instructor logbook, see **8.5**. for further guidance.

After submitting the logbook candidates must then complete and pass the online Instructor examination, see **8.6**.

8.5 Trainee Instructor logbook

8.5.1 Trainee Instructor logbooks each carry a unique serial number, and include the trainee Instructor's photograph and details.

8.5.2 The logbook consists of the following three sections which shall be completed prior to application of Instructor status.

8.5.2.1 Record of Instructor/Assessor workshop attendance

Trainee Instructors shall attend a minimum of one Instructor/Assessor workshop per calendar year (taken to be 1st April to 31st March). The logbook shall be taken to the workshop and countersigned by the chairperson to validate attendance. Workshops are listed on the '*Event Calendar'* under '*News and Events'* at www.irata.org

*NOTE Trainee Instructors completing the requirements of **8.4.1** in less than a year may apply for Instructor status before attending an Instructor/Assessor workshop.*

8.5.2.2 Syllabus items

Trainee Instructors shall log each syllabus item they have taught. To verify the training has been delivered to a competent standard these must be countersigned by either the Level 3 Instructor (if present), or by the technical authority of the Trainer member company. All syllabus items must be completed to be eligible for application for Instructor status.

8.5.2.3 Training Experience

Trainee Instructors shall log the IRATA training courses they have delivered, including hours, number of candidates trained at each level and assessment result. To be eligible to apply for Instructor status, the trainee Instructor shall successfully train (i.e. pass at assessment) at least 30 candidates including at least 6 candidates at each IRATA level, over a minimum of 400 logged hours. The overall pass rate shall not be less than 60%. A maximum of 30 hours and 4 candidates shall be logged per course. Enter only candidates who have been directly trained by the trainee Instructor, not the overall numbers on the course. Hours spent delivering refresher training should be recorded but do not count towards the total.

NOTE There is no suggested time limit for completion of the trainee Instructor logbook.

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8.6 Applying for Instructor status

8.6.1 On completion of the requirements set out in the trainee Instructor logbook, trainee Instructors can apply for Instructor status by completing an Application for Instructor status [FM-067], returning it to the IRATA Head Office along with a copy of the completed trainee Instructor logbook. A registration fee will be charged in line with the published IRATA price list.

8.6.2 If satisfied with the logbook, IRATA will provide the trainee Instructor with instructions to complete an online examination, whereby they will be tested on knowledge of the TACS [TC-101] to verify that they have an understanding of the scheme process requirements.

8.6.3 On successful completion of this online examination, the trainee Instructor will be awarded Instructor status. The IRATA Head Office will issue a certificate, ID card and uniquely numbered Instructor logbook normally within 60-days, which shall be used to log training experience going forward.

8.6.4 If the IRATA Head Office does not consider that the trainee Instructor logbook meets the requirements, the candidate is notified in writing.

8.7 Maintaining Instructor status

8.7.1 IRATA Level 3 Instructors shall meet the requirements of an IRATA Level 3 as listed in **3.1.3**. In addition, IRATA Instructor status shall be revalidated annually. Instructors wishing to maintain their status shall:

a) train a minimum of six successful candidates between Instructor revalidations;

b) attend a minimum of one Instructor/Assessor workshop per year;

c) maintain an up-to-date record of the requirements of **8.7.1 a)** and **8.7.1 b)** in their Instructor logbook;

d) complete an IRATA Instructor revalidation form [FM-068], and return it to the IRATA Head Office. A fee is charged in line with the published IRATA price list.

8.7.2 If the requirements of **8.7.1** are not met annually, the Instructor shall automatically revert to trainee Instructor status until these requirements are met.

8.8 Instructor logbook

8.8.1 The Instructor logbook is a record of IRATA rope access training experience. The Instructor logbook is used to record:

a) the date training took place;

b) the Trainer member company on whose behalf the training has been carried out;

c) the location of the training carried out;

d) the levels to which they were trained;

e) the number of candidates trained;

f) the outcome of each assessment (pass/fail rate);

g) the name of the Assessor assessing the trained candidates.

8.8.2 The logbook also records any IRATA Instructor/Assessor workshops attended by the individual. Instructors shall attend at least one IRATA Instructor/Assessor workshop per calendar year.

8.8.3 It is the responsibility of the Instructor to ensure their logbook is kept up to date and is available on assessment day for the IRATA Assessor to sign.

8.8.4 If any Instructor loses their logbook, they shall replace it immediately by contacting the IRATA Head Office. It is suggested that candidates maintain either a scanned or photocopied back-up of their logbook.

NOTE A fee is charged for replacement logbooks in-line with the published IRATA price list.

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9 Requirements and guidance for IRATA International Assessors

9.1 General

9.1.1 The primary role of the Assessor is to ensure that each candidate demonstrates performance of the required tasks in a safe manner, in accordance with the IRATA Training, Assessment and Certification Scheme [TC-101].

9.1.2 An Assessor shall not direct candidates to perform tasks outside the current syllabus.

9.1.3 Assessors should make their instructions clear and remember they are there to assess the candidate, not to offer further training.

9.1.4 IRATA assessments shall only be carried out by IRATA Assessors who are currently independent of the candidate, the candidate's employer, and the organisation providing the training. The Assessor shall be on the list of Assessors valid to carry out assessments, as available on the IRATA website.

9.1.5 Assessors shall not register candidates they have assessed.

9.1.6 An Assessor shall not assess at more than one training venue in any one calendar day.

9.1.7 An Assessor shall not assess more than eight candidates in any one calendar day.

9.1.8 The Assessor shall be fully conversant with the requirements of the level being assessed, including any additional requirements for expired, accelerated or conversion entry candidates.

9.1.9 Assessors shall not conduct IRATA assessments in parallel with any non-IRATA assessment or evaluation. Assessors are not permitted to conduct IRATA assessments at the same time as performing an evaluation, assessment or examination for any other certification body or qualification. Therefore, no multiple assessments shall be undertaken nor can an IRATA Assessor, or an examiner from another organisation, carry out an assessment of the same technicians during an IRATA assessment.

9.1.10 Other activities taking place within a Training member company venue during an IRATA assessment are not precluded, providing these activities do not unduly influence the outcome of the IRATA assessment. It is the responsibility of the IRATA Assessor to make this determination.

9.2 Assessment area

9.2.1 The Assessor shall ensure that the assessment area and equipment are suitable, and that the Training member company has completed a hazard identification and risk assessment for the facility. The Pre-Course Checklist [FM-006] shall be verified before proceeding with the assessment. Where the assessment/training area falls short of the guidance criteria, the assessment shall not take place and a report shall be submitted to the IRATA Training Committee with a copy of the completed checklist.

9.2.2 It is the responsibility of the Trainer member company, Trainer and Assessor to ensure that the quality of the assessment is not compromised by the number of candidates being assessed at any one time and that extra time is allowed as necessary. Where there are communication difficulties or other factors which may affect the quality of the assessment, the Trainer member company and the Assessor shall liaise beforehand to agree an appropriate number of candidates, up to a maximum of eight.

9.2.3 The Trainer member company shall have a representative on site during the assessment. It is strongly recommended that this is the Trainer. This is for two reasons: to provide rescue cover during the assessment, and to sign off the assessment form to show that the training has been delivered in accordance with the requirements of this scheme. The Trainers' presence is also valuable to explain particular equipment and techniques used during training.

9.3 Assessment criteria and marking system

9.3.1 The Assessor shall explain the assessment marking system to the candidate before the assessment begins.

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9.3.2 Each of the sections on the assessment form, relevant for the level of assessment being undertaken, shall be marked in the appropriate box as follows:

P - if the assessment is completed to an acceptable standard (P = pass);

Dis - for minor discrepancies (Dis = discrepancy);

Fail - if the assessment is unacceptable, if there has been a major discrepancy, or if the assessment has not been completed to an acceptable standard.

9.3.3 There are two possible overall results: pass or fail. Two ways of failing are by committing three minor discrepancies or one major discrepancy during the assessment.

Minor discrepancy: A minor discrepancy is where a candidate has not committed a major discrepancy, but can still be seen to have compromised their safety or the safety of others. Three minor discrepancies constitute a fail.

Major discrepancy: A major discrepancy is a critical safety issue, where the candidate has put them self or others at risk. One major discrepancy constitutes a fail. This ends the assessment.

Discrepancies should be agreed and noted by the Assessor and candidate each time they occur.

9.3.4 Where a candidate has either a minor discrepancy or is very inefficient or confused, the Assessor should explore the situation more thoroughly by questioning the candidate and, if necessary, by asking the candidate to repeat the demonstration. The Assessor should make an entry in the comments box detailing the situation. As well as three minor discrepancies constituting a fail, so would, generally, a poor performance.

9.3.5 So far as is reasonably practicable, the Assessor should be satisfied that the candidate has the aptitude to work safely at heights.

9.3.6 Overall performance shall be indicated by the Assessor marking (ticking) one of the five overall attainment boxes on the assessment form. These are:

1 Unacceptable - this would constitute a fail;
2 Satisfactory - this would constitute a pass;
3 Good - this would constitute a pass;
4 Very good - this would constitute a pass;
5 Excellent - this would constitute a pass.

9.3.7 All candidates begin the assessment at an assumed ‘very good’ standard. To retain this standard, the assessment has to be completed in good time with no minor discrepancies. Candidates who show exceptional competency may merit the ‘excellent’ standard. Any one minor discrepancy moves the candidate down to the ‘good’ standard. Two minor discrepancies moves the candidate down to the ‘satisfactory’ standard. One major or three minor discrepancies constitutes a failed assessment.

9.3.8 For candidates who fail, the reasons for failure shall be explained by the Assessor. The Assessor shall write an explanation on the assessment form in the comments box. The explanation should highlight any additional experience or training needed in relevant aspects of the syllabus, and shall include any minimum time period before re-assessment can take place. Recommendations should be clear, directly relevant to the candidate and shall be fully explained to him or her.

9.3.9 All IRATA assessments shall be recorded in the rope access Technician’s logbook. The record shall include the date and outcome (pass/fail) and shall be signed by the Assessor.

9.4 Assessment outcome

9.4.1 All IRATA assessments shall be recorded in the rope access Technician’s logbook. The record shall include the date and outcome (pass/ fail) and shall be signed by the Assessor.

9.4.2 Where a candidate fails an assessment, the reasons for failure shall be explained by the Assessor. The Assessor shall write an explanation on the assessment form in the comments box and shall explain the options for re-assessment (see **4.7**). Any aspects of the syllabus relevant to the failure shall be discussed and recorded. Where appropriate, the Assessor should recommend further training (1-4 days) and/or experience before re-assessment.

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9.4.3 Where a candidate fails a revalidation assessment, the candidate's existing certification shall not remain valid. However, depending on the candidate's performance, the Assessor may continue the assessment to allow the candidate to attempt revalidation at a lower level.

9.4.4 Where a candidate fails an upgrade assessment, the candidate's existing certification should remain valid until expiry. However, depending on the candidate's performance, the Assessor may continue the assessment to allow the candidate to attempt revalidation at their current level.

9.5 Written paper

9.5.1 Criteria for the successful completion of the written paper are given in **9.5.2** to **9.5.7**.

9.5.2 Level 1 candidates shall achieve at least 15 correct answers from the possible maximum of 20 to gain an outright pass (P). Between 10 and 14 is a minor discrepancy (Dis) and less than 10 is a fail (Fail).

9.5.3 Level 2 candidates shall achieve at least 22 correct answers from the possible maximum of 30 to gain an outright pass (P). Between 14 and 21 is a minor discrepancy (Dis) and less than 14 is a fail (Fail).

9.5.4 Level 3 candidates shall achieve at least 15 correct answers from the possible maximum of 20 Level 2 questions and, in addition, shall achieve at least seven correct answers from the ten Level 3 questions to gain a pass (P) for the written questions. Between five and six correct Level 3 answers is a minor discrepancy (Dis). Less than 15 correct Level 2 answers, or less than five correct Level 3 answers, is a fail (Fail).

9.5.5 Level 3 candidates shall complete a written exercise (or exercises) covering the following planning and management topics (see **6.2**):

a) hazard identification and risk assessment (see **6.2.3**);

b) selection of access method (see **6.2.4**);

c) selection of personnel and competence (see **6.2.5**);

d) safety method statement (see **6.2.6**);

e) exclusion zones and protection of third parties (see **6.2.7**);

f) planning for emergencies, including evacuation and rescue (see **6.2.8**);

g) first aid and suspension intolerance (see **6.2.9**).

9.5.6 During an equipment inspection, candidates shall find any serious/dangerous fault in equipment with which they are familiar.

9.5.7 Assessors may only adjust the result if candidates have clearly misunderstood the question or more than one correct answer can be successfully argued to the Assessor's satisfaction. Assessors shall not prompt or assist candidates in any way.

9.6 Practical

9.6.1 Assessors should consider safety, technique, use of equipment, time taken, efficiency and overall competence to determine a candidate's outcome.

9.6.2 In any exercise or manoeuvre, Assessors should consider the time taken to complete each task. Where candidates remain entirely safe throughout the task, time taken may help to determine the overall standard awarded; e.g. the difference between gaining a 'good' or an 'excellent' pass. Where excessive time taken may place the candidate (and any casualty being rescued) in danger, excessive time taken may be considered a discrepancy, minor or major, depending on the circumstances and at the Assessor's discretion.

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9.6.3 Major discrepancies

The following is a non-exhaustive list of major discrepancies (Fail):

a) only one point of safety attachment while in suspension;

b) unable to complete the task;

c) excessive time period;

d) no back-up to protect against a potential out-of-control swing that may cause injury or damage in the event of failure of an item of equipment;

e) harness unsecured;

f) anchor lanyards and device lanyards, e.g. cow's tails, tied or attached dangerously;

g) no helmet at height;

h) critical harness connectors unfastened or unsecured, e.g. screw links (maillon rapides);

i) misuse causing damage to equipment;

j) unsuitable choice of rope protection measures;

k) uncontrolled descent during rescue;

l) descending device threaded incorrectly and used in that manner;

m) back-up or other devices used upside down;

n) no safety attachment close to an exposed edge;

o) excessive slack in connection to an ascending device used as a point of attachment;

p) critical safety issues as defined by the Assessor;

q) a swing that could cause injury to personnel or damage to equipment or property.

9.6.4 Minor discrepancies

The following is a non-exhaustive list of minor discrepancies (Dis):

a) descending device not locked off or no control of the tail rope;

b) attachment connectors not secured;

c) critical personal fall protection equipment dropped;

d) rope protection incorrectly placed;

e) no braking karabiner used when required;

f) harness incorrectly adjusted;

g) helmet chinstrap unfastened;

h) critical personal fall protection equipment missing from the harness set-up;

i) tangles of ropes;

j) poor management of back-up device (major if critical);

k) work positioning lanyards such as cow's tails positioned greater than fall factor 1;

l) excessive slack in connection to an ascending device used as a point of attachment (major if critical);

m) considerable time taken to perform the task;

n) unconventional or untrained techniques used;

o) a small out-of-control swing.

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9.7 Procedure to become an IRATA International Assessor, Assessor rules and maintenance of status

9.7.1 Candidates for Assessor status are selected by IRATA and are required to undergo further training and assessment before appointment. IRATA Level 3 rope access Technicians who have held certification for a minimum of six (6) years, have IRATA training and operational experience; and hold a valid first aid certificate may apply to be considered for selection by completing an Application to Become an Assessor [FM-002]. Assessor applications are accepted in response to current recruitment notices published on the IRATA website. Please see the Assessor Selection, Training & Certification scheme [TC-122] for more details.

9.7.2 IRATA regards Assessors as ambassadors for the association and, therefore, expects professional behaviour and integrity when they are carrying out IRATA assessments. Rules and guidance are contained in the Requirements and Guidance for IRATA Assessors [FM-044].

9.7.3 For Assessors to maintain their status, they are required to follow the requirements given on the Assessor Revalidation form [FM-027], which is available from IRATA.

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Training, Assessment and Certification scheme for personnel engaged in rope access methods

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