



Cathodic Protection

Personnel



CONTENT	PAGE
1.0 PURPOSE	4
2.0 SCOPE	4
3.0 REFERENCES	4
4.0 ABBREVIATIONS, TERMS AND DEFINITIONS	4
5.0 JOB AND TASK DESCRIPTION	5
5.1 General	5
5.2 Knowledge Required	5
5.3 Tasks to be fulfilled	6
5.4 Specific Tasks for On-Land Metallic Structures Application	6
6.0 LEVELS OF CERTIFICATION	8
6.1 Level 1, Cathodic Protection Data Collector (or Tester)	8
6.2 Level 2, Cathodic Protection Technician	11
6.3 Level 3, Cathodic Protection Senior Technician	11
7.0 PRE-REQUISITE	11
8.0 TRAINING REQUIREMENTS	13
8.1 General	13
8.2 Level 1	13
8.3 Level 2	13
8.4 Level 3	13
9.0 INDUSTRIAL EXPERIENCE	13
10.0 VISION REQUIREMENTS	14
10.1 Requirements	14
10.2 Administration	14

10.3 Near-Vision Acuity	14
10.4 Color Contrast Differentiation	14
11.0 CONDUCT OF EXAMINATION	14
12.0 EXAMINATION	15
12.1 General Examination	15
12.2 Specific Examination	16
12.3 Practical Examination	16
13.0 GRADING	17
14.0 RE-EXAMINATION	17
15.0 QUALIFICATION ASSESSMENT	18
16.0 IPCS CERTIFICATION	18
17.0 CERTIFICATION VALIDITY	19
18.0 CONDITION OF CERTIFICATION	19
19.0 CERTIFICATION OF VERIFICATION	19
20.0 SUSPENSION AND WITHDRAWAL	19
21.0 CERTIFICATION RENEWAL	20
22.0 RECERTIFICATION	20
23.0 CERTIFICATION LEVEL UPGRADE	21
24.0 RECORDS	22

1.0 PURPOSE

The purpose of this International Personnel Certification Schemes (IPCS) is to define RSA minimum qualification and certification requirements of Cathodic Protection (CP) personnel working on on-land metallic structure in accordance with The International Standard ISO 15257.

2.0 SCOPE

- 2.1 This IPCS has been developed to assist in meeting the minimum requirements for qualification and certification of personnel seeking for Cathodic CP personnel certification working on on-land metallic structure in accordance with ISO 15257:2017.
- 2.2 The Levels of CP personnel covered by this IPCS are listed in Section 6.0 as used in accordance with the applicable codes, standards, specifications and regulations referenced below.
- 2.3 Certification to this IPCS provides an attestation of general competence of the CP personnel. It does not represent an authorization to operate, since this remains the responsibility of the employer, and the certified personnel may require additional specialized knowledge of parameters such as equipment, procedures, materials and products specific for the employer.
- 2.4 Authorization to operate shall be given in writing by the employer in accordance with a quality procedure that defines any employer-required job-specific training and examinations designed to verify the certificate holder's knowledge of relevant industry code(s), standard(s), procedures, equipment, and acceptance criteria for the inspected products.

3.0 REFERENCES

- a. ISO 15257:2017, Cathodic Protection - Competence Levels of Cathodic Protection Persons - Basis for Certification Scheme.
- b. RSA-QM-1001 Revision 0, Quality Manual - RSA Certification Body Quality Management System.

4.0 ABBREVIATIONS, TERMS AND DEFINITIONS

For the purposes of this document, the abbreviations, terms and definitions given in the reference documents listed in 3.0 above shall apply.

5.0 JOB AND TASK DESCRIPTION

5.1 General

5.1.1 All CP personnel shall be knowledgeable in the topics in Table 1 and competent to undertake the tasks detailed in Table 2. CP personnel shall have the knowledge and skill to properly and safely undertake these tasks, to understand their purposes, to recognize possible problems with their execution and the significance of the data arising from them.

5.1.2 All work by Level 1 and Level 2 CP personnel shall be according to technical instructions issued by CP personnel of Level 3 or higher.

5.1.3 CP personnel of a particular level may assist in tasks at higher levels than defined in Table 2 corresponding to their application sector and competence level for their level alongside and under the direct supervision of a CP person of the higher level. The higher level person retains the responsibility for the work performed by the lower-level person.

5.1.4 CP personnel of a particular level may undertake without direct supervision tasks at one level higher than defined in Table 2 for their level provided they shall have received additional documented training and assessment for the particular task by a CP person of the higher level. This assessment and documentation may be undertaken within a corporate system. Each defined level of competence shall include also the competence of the corresponding lower levels.

5.2 Knowledge Required

5.2.1 The knowledge detailed in Table 1 constitutes a common core for all levels.

5.2.2 The level of knowledge in Table 1 shall be progressively increased from Level 1 to Level 3 to conform to the levels of competency.

Table 1: Knowledge required by CP personnel

Knowledge Number	Description of Knowledge
1	Electricity relevant to CP application and measurements
2	Corrosion, electrochemistry and coatings relevant to CP
3	Theory, principles and criteria of CP
4	Requirements related to application of CP
5	Application methods of CP, galvanic anodes, impressed current
6	CP measurements and test procedures
7	Relevance of voltage gradient errors and influence on structure to electrolyte potential measurement
8	Factors influencing the correct selection of reference electrodes for potential measurements
9	Effects of excessive CP on coatings, high-yield strength steels and corrosion-resistant alloys
10	Diagnostics of CP systems
11	Interference conditions (alternating current and direct current)
12	Standards and codes of practice in the relevant application sector

5.3 Tasks to be Fulfilled

5.3.1 Table 2 details the tasks for each level of competence from 1 to 3. Personnel shall be competent in these tasks.

5.3.2 Work on the AC mains, side of transformer rectifiers is specifically excluded from the competence requirements of all levels of personnel. Regulations, training and specific certifications apply for work on mains voltage equipment.

5.4 Specific tasks for on-land metallic structures application

Table 3 details the specific tasks for each competence level from 1 to 3 in the on-land metallic structures application sector.

Table 2: Tasks to be fulfilled by the various competence levels

Task number	Description of task	Competence Level		
		1	2	3
1	Prepare technical instructions	No	No	Yes
2	Collect general information for design purposes based on technical instructions for simple CP systems.	No	Yes	Yes
3	Collect detailed information and data for design purposes	No	No	Yes
4	Check calibration validity of CP measuring and testing equipment based on documentation	Yes	Yes	Yes
5	Measure structure to electrolyte potential	Yes	Yes	Yes
6	Perform verification test of working portable reference electrode against master electrode of the same type based on measurement	Yes	Yes	Yes
7	Perform verification test of working portable reference electrode against another type of reference electrode	No	Yes	Yes
8	Perform verification test of stationary reference electrode against a portable reference electrode	No	Yes	Yes
9	Perform pre-commission testing	No	Yes	Yes
10	Check whether the positive output of the rectifier is connected to the anode and the negative output is connected to the structure	No	Yes	Yes
11	Identify a wrong polarity of the CP system by structure to electrolyte potential measurement	Yes	Yes	Yes
12	Perform start-up and commissioning	No	No	Yes
13	Record and report results of the measurements in a comprehensible format	Yes	Yes	Yes
14	Classify the results of the measurements	No	Yes	Yes
15	Define the limitations of application of the testing method according to established procedures	No	No	Yes
16	Interpret commissioning or performance verification data and prepare commissioning report, performance verification report or system review report for simple CP systems	No	No	Yes
17	Measure current and voltage in the CP circuit	Yes	Yes	Yes
18	Carry out basic maintenance work on CP systems	Yes	Yes	Yes
19	Inspect and measure of DC power supply output current and voltage	Yes	Yes	Yes
20	Inspect and verify DC power supply overall operations	No	Yes	Yes
21	Inspect and maintain DC power supply output terminations if accessible without exposing personnel to live AC equipment	Yes	Yes	Yes
22	Inspect and maintain DC power supply components	No	Yes	Yes

23	Verify DC power supply voltage and current outputs with portable calibrated meter	Yes	Yes	Yes
24	Routine and expected adjustment of current output to maintain pre-determined performance	No	Yes	Yes
25	Determine the validity of the data and analyse anomalies detected	No	No	Yes
26	Determine increase/decrease in current output to maintain optimum performance including remedial actions to correct anomalies and interferences	No	No	Yes
27	Ensure compliance with safety requirements related to application of CP in the application sector, task and competence level	Yes	Yes	Yes
28	Perform risk assessment of safety requirements related to application of CP in the application sector, task and competence level	Yes	Yes	Yes
29	Translate CP measuring and testing standards and specifications into technical instructions for CP measuring and testing, routine maintenance, and installations procedures	No	No	Yes
30	Investigate material weight loss corrosion when application of CP may be involved	No	No	Yes
31	Set up measuring and testing equipment and verify equipment settings	Yes	Yes	Yes
32	Write technical instructions for lower-level personnel, supervise and train them in the practice of their tasks	No	No	Yes
33	Interpret and evaluate results in accordance with established standards, codes and specifications	No	No	Yes
34	Undertake, without supervision, simple CP system design works according to established procedures in a known environment	No	No	Yes
35	Establish technical instructions including definition of CP test procedure and equipment to be used and the format for reporting data for tasks covered in standards, codes and specifications	No	No	Yes

6.0 LEVEL OF CERTIFICATION

6.1 Level 1, Cathodic Protection Data Collector (or Tester)

6.1.1 Level 1 CP personnel shall be competent to collect CP performance data of simple CP systems and perform other basic CP tasks in accordance with technical instructions and procedures produced by Level 3 or higher personnel and record the data to a format produced by Level 3, or higher personnel and under their responsibility.

6.1.2 Level 1 personnel shall not be responsible for analysing the data.

6.1.3 Level 1 personnel shall understand the fundamentals of the measurements that they are required to undertake, the common causes of errors in these measurements and the related safety issues. The measurements shall include routine system function measurements, as well as a limited number of specific measurements to determine the performance effectiveness of CP systems.

Table 3 — Specific tasks for on-land metallic structures application

Task number	Description of task	Competence Level		
		1	2	3
1	Measure metal to electrolyte natural (free corrosion) potential	Yes	Yes	Yes
2	Measure resistivity: four-pin Wenner	Yes	Yes	Yes
3	Measure resistivity: soil box methods	No	Yes	Yes
4	Measure resistivity: Schlumberger method	No	No	Yes
5	Calculate vertical resistivity distribution	No	No	Yes
6	Design simple CP systems. Examples are galvanic anode systems for small tanks in known soil conditions not affected by AC or DC stray current	No	No	Yes
7	Supervise the preparation of metallic surface for making cable connections and for repairing coating	No	Yes	Yes
8	Supervise the installation of cable connections: bolting, compression and conductive adhesive	No	Yes	Yes
9	Supervise the installation of cable connections: soldered, exothermic welded, pin brazed	No	Yes	Yes
10	Supervise the installation of galvanic anodes	No	Yes	Yes
11	Supervise the installation of DC power supply (electrical AC supply excluded)	No	Yes	Yes
12	Supervise the installation of deep anode impressed current groundbeds	No	Yes	Yes
13	Supervise the installation of shallow impressed current anode groundbeds	No	Yes	Yes
14	Supervise the installation of isolation devices	No	Yes	Yes
15	Supervise the installation of reference electrodes (including calibration) and coupons	No	Yes	Yes
16	Supervise the installation of AC mitigation earthing electrodes and DC decoupling devices	No	Yes	Yes
17	Verify the electrical continuity of all parts of the structure to be protected	No	Yes	Yes
18	Locate protected structure and of foreign metallic structures including buried steel-reinforced concrete and electrical earthing systems	No	Yes	Yes
19	Inspect and test electrical isolation	No	Yes	Yes
20	Measure structure to electrolyte ON potential	Yes	Yes	Yes
21	Measure structure to electrolyte instant OFF potential	No	Yes	Yes
22	Measure structure to electrolyte potential depolarization	No	Yes	Yes
23	Report measurements including comparison of measurement results to a selected CP criteria according to procedure	No	Yes	Yes
24	Perform close interval potential survey (ON or natural)	No	Yes	Yes

25	Perform potential measurement of structure to remote earth	No	Yes	Yes
26	Perform close interval polarized potential survey (ON/instant OFF)	No	Yes	Yes
27	Establish synchronization of current interruptions for instant OFF measurements	No	Yes	Yes
28	Confirm synchronization of current interruptions for instant OFF measurements	No	Yes	Yes
29	Measure ON and IR free potential as well as DC and AC current on coupons	No	Yes	Yes
30	Measure potential gradients in soil	No	Yes	Yes
31	Intensive measurements (see ISO 15589-1)	No	No	Yes
32	Perform AC frequency current signal attenuation measurements	No	No	Yes
33	Perform direct Current Voltage Gradient (DCVG), non-recording	No	No	Yes
34	Perform direct Current Voltage Gradient (DCVG), with recording of digital measurements	No	No	Yes
35	Perform Pearson surveys (ACVG)	No	No	Yes
36	Perform interference testing and measurement under interference conditions from a static (not time variant) DC source	No	Yes	Yes
37	Perform interference testing and measurement under interference conditions from a dynamic (time variant) DC source	No	Yes	Yes
38	Analyse and treat DC interferences from a static (not time variant) source	No	No	Yes
39	Supervise cable and connection repair	No	Yes	Yes
40	Test casings for isolation from carrier pipe	No	Yes	Yes
41	Perform visual inspection of simple components of CP systems (e.g. test posts)	Yes	Yes	Yes
42	Perform visual inspection of coating for physical damage	No	Yes	Yes
43	Perform detailed inspection of coating and structure for damage	No	No	Yes
44	Test CP effectiveness under disbanded coating	No	No	Yes
45	Collect soil samples and deposits from the structure for laboratory corrosion analysis	No	Yes	Yes
46	Perform basic chemical and microbiological field test	No	No	Yes
47	Measure extent of corroded area	No	No	Yes
48	Perform potential surveys of buried pipelines across bodies of water (lakes, rivers, estuaries)	No	Yes	Yes
49	Perform current requirement test for pipelines, plants, horizontal directional drilling, etc.	No	No	Yes

6.1 Level 2, Cathodic Protection Technician

- 6.2.1 In addition to the competencies for Level 1 CP personnel, Level 2 CP personnel shall be competent to undertake a range of CP measurement, inspection and supervisory activities in accordance with technical instructions and procedures produced by Level 3 and collate and classify the data under their responsibility.
- 6.2.2 Level 2 personnel shall have knowledge of the fundamentals of electricity, corrosion, coatings, CP and measurement techniques, safety issues and applicable standards related to CP.
- 6.2.3 Level 2 personnel shall be competent to check the calibration validity of the CP measuring and testing equipment, supervise and perform inspection and testing during installation of CP systems and carry out routine maintenance work on CP systems.
- 6.2.4 Level 2 personnel shall not be responsible for the choice of test method, the technique to be used, preparing the technical instructions or the interpretation of test results.

6.2 Level 3, Cathodic Protection Senior Technician

- 6.3.1 In addition to the competencies for Level 2 personnel, Level 3 personnel shall have knowledge of the general principles of corrosion and CP, the principles of electricity, the significance of coatings and their influence on CP and a detailed knowledge of CP test procedures and safety issues.
- 6.3.2 Level 3 personnel shall understand and be competent to perform CP tasks according to established or recognized procedures.
- 6.3.3 Level 3 personnel shall be competent to carry out and supervise all Level 1 and Level 2 duties, provide guidance for personnel at Level 1 and Level 2.
- 6.3.4 Level 3 personnel shall be competent to prepare technical instructions for all CP personnel of lower-level competence and assess all data collected from these tasks.

7.0 PRE-REQUISITE

- 7.1 Applicants seeking CP personnel certifications shall meet the applicable education and experience requirements as described in Table 4. The time in these tables refers to a minimum of 20% activity in CP.

- 7.2 The CP personnel documents required include a listing of all educations, relevant work and employment. The documents shall include:
- an education background with relevant supporting documents,
 - a listing of all relevant employers and their contact information when available,
 - the nature of the work performed, the dates of employment, and
 - a letter of verification from the employer or client.
- 7.3 The educations, relevant work and employment documentation is subject to verification by Certification Department and false information is caused to reject the application and can disqualify the applicant from testing to become a Cathodic Protection Level 1, Level 2 or Level 3.
- 7.4 Table 4 is for candidates without previous CP certification.

Table 4: Minimum education and experience requirements for candidates with no previous certification

Target level	Education	Minimum experience in CP (years)
1	Relevant engineering or scientific discipline degree (BSc, BEng or equivalent) and specialized education in the corrosion field (significant corrosion content at BSc or BEng level or significant post graduate corrosion study or research)	0
	Technical education	0
	Other education (requires basic mathematical skills)	0
2	Relevant engineering or scientific discipline degree (BSc, BEng or equivalent) and specialized education in the corrosion field (significant corrosion content at BSc or BEng Level or significant post graduate corrosion study or research)	1
	Technical education	1
	Other education (requires basic mathematical skills)	1
3	Relevant engineering or scientific discipline degree (BSc, BEng or equivalent) and specialized education in the corrosion field (significant corrosion content at BSc or BEng level or significant post graduate corrosion study or research)	2
	Technical education	3
	Other education (requires basic mathematical skills)	4

“Other education” includes candidates who may have had no formal post-school education or whose post-school education does not include relevant scientific or engineering content.

8.0 TRAINING REQUIREMENTS

8.1 General

- 8.1.1 CP persons shall provide documentary evidence, acceptable to RSA, that he has satisfactorily completed training in the subjects and level for which the certification is sought.
- 8.1.2 The training period, method and syllabus shall be sufficient in order to deliver the knowledge and skill as detailed in sections 5 and 6.
- 8.1.3 Training may be by the employer or through recognized course(s) at a training centre.
- 8.1.4 The training may include instructor-led training, personalized instruction, virtual instructor-led training, computer-based training, or web-based training.
- 8.1.5 At all levels, training days shall include both practical and theory components.

8.2 Level 1

Sixteen (16) hours of formal or documented on-the-job training in each particular application sector.

8.3 Level 2

Forty (40) hours of formal or documented on-the-job or documented moderated selfstudy.

8.4 Level 3

8.4.1 Forty (40) hours of formal or documented on-the-job or documented moderated selfstudy training.

8.4.2 CP persons without Level 2 competences shall undertake a minimum of eighty (80) hours training for Level 3.

9.0 INDUSTRIAL EXPERIENCE

- 9.1 For all levels, experience may be sought following successful examination, the results of the examination shall remain valid for three (3) years after examination.
- 9.2 Documentary evidence of experience shall be confirmed by the employer and submitted to RSA.

10.0 VISION REQUIREMENTS

10.1 Requirements

The applicant shall provide documentary evidence of satisfactory vision in accordance with the requirements described in Sections 10.2 through 10.4 below.

10.2 Administration

The vision examinations shall be administered by an optometrist or a qualified person authorized by the employer. The tests of near visual acuity shall be carried out at initial certification and subsequent annually and verified by the employer.

10.3 Near-Vision Acuity

The examination shall ensure natural or corrected near-distance acuity in at least one eye such that the applicant is capable of reading a minimum of Jaeger Number 1 or Times Roman N4.5 or equivalent letters (having a height of 1.6mm) at the distance not less than 30.5cm.

10.4 Color Contrast Differentiation

The examination shall demonstrate the capability of distinguishing and differentiating contrast among colors or shades of gray used in the method, as specified by the employer.

11.0 CONDUCT OF EXAMINATION

11.1 The applicant shall fulfil the minimum requirements of Training and Vision prior to the qualification examination.

11.2 All examinations shall be conducted in examination centers established, approved, and monitored by Certification Department.

11.3 At the examination, the applicant shall have in his possession valid proof of identification and an official notification of the examination, which shall be shown to the examiner or invigilator upon demand.

11.4 Any applicant who, during the course of the examination, does not abide by the examination rules or who perpetrates, or is an accessory to, fraudulent conduct shall be excluded from all further qualification examinations for a period of at least one (1) year.

11.5 Applicant shall not be permitted to bring into the examination area personal items, unless specifically authorized to do so by the examiner.

11.6 During the examination, applicants will be expected to choose the best answer from the options provided.

- 11.7 The Examination Department shall be responsible for the administration and initial grading of examinations. However, practical examination shall be invigilated by a person certified as CP personnel Level 2 or Level 3.
- 11.8 All qualification examination questions shall be approved by the Certification Department. The examination shall include only questions selected in an unpredictable way from RSA collection of questions valid at the date of examination.
- 11.9 Written examination (whether e-assessment or conventional) shall be invigilated by an examiner or by one or more trained invigilators placed under an examiner's responsibility.
- 11.10 An examiner shall not be permitted to examine any applicant:
- that he has trained for the examination for a period of two years from the date of the conclusion of the training activities.
 - who is working (permanently or temporarily) in the same facility as the examiner
- 11.11 Final grading shall be the responsibility of Certification Department.

12.0 EXAMINATION

12.1 General Examination

12.1.1 The General portion of the examination shall cover the common-core of quality assurance and CP works. The General examination shall enable candidates to demonstrate the general knowledge that are applicable to CP personnel.

12.1.2 The applicant shall be required, as a minimum, to give answers to multiple choice questions and closed-book examination in accordance with Table 5.

12.1.3 The General Examination shall be completed within the time listed in Table 6.

Table 5: CP Personnel Examination

No.	Examination	Number of Questions/Samples		
		Level 1	Level 2	Level 3
A	General			
1	Common-core of quality assurance and CP works to enable candidates to demonstrate the general knowledge	40	40	80
B	Specific			
1	Specific CP works for the candidates to demonstrate their knowledge and competence to undertake tasks used within on-land metallic structures application	20	20	50
C	Practical			
1	Organized and structured or simulated structures and systems for the candidates to demonstrate their competence and fulfil the requirements of sections 5 and 6.	2	2	2
2	Writing inspection report	1	1	1
3	Writing work instruction		1	
4	Writing procedure			1

Table 6: Examination Duration

Examination	Duration (minutes)		
	Level 1	Level 2	Level 3
General	90	90	180
Specific	60	60	120
Practical	90	150	210

12.2 Specific Examination

12.2.1 The Specific portion of the examination shall cover specific CP work in on-land metallic structures application. The specific examination shall require candidates to demonstrate their knowledge and competence to undertake tasks used within on-land metallic structures application.

12.2.2 The specific examination shall include a series of written questions on the processes and testing procedures used within the sector.

12.2.3 The applicant shall be required, as a minimum, to give answers to multiple choice questions and opened-book examination in accordance with Table 5.

12.2.4 The require procedures, codes, standards and specifications will be provided by the examiner.

12.2.5 The Specific Examination shall be completed within the time listed in Table 6.

12.3 Practical Examination

12.3.1 The Practical portion of the examination shall organize on structures or simulated structures and systems shall be provided. Candidates shall be required to demonstrate their competence to fulfil the requirements of sections 5 and 6.

12.3.2 The applicant shall be required, as a minimum, to give answers to practical questions in accordance with Table 3.

12.3.3 The require procedures, codes, standards and specifications will be provided by the examiner.

12.3.4 The Practical Examination shall be completed within the time listed in Table 4.

13.0 GRADING

13.1 Each examinations shall be graded separately. When conventional pre-prepared paper-based examinations are used, an examiner shall be responsible for the grading of the examinations by comparison with model answers. E-assessment systems that automatically score applicant responses against stored data and grade the completed written examination according to prepared algorithms may be used.

13.2 To be eligible for certification, the applicant shall obtain a minimum grade of 70% in each portion of examinations (General, Specific and Practical). In addition, the composite grade of all three (3) portions for each Level shall be minimum 70%.

13.3 The examination are graded by comparing the replies given by the applicant against answer keys approved by RSA. Each correct reply scores 1 point and the mark attributed to the tests is the sum of the points obtained. For the final calculation, the mark of each test is expressed as a percentage.

14.0 RE-EXAMINATION

14.1 Applicant failing for reasons of unethical behaviour shall wait at least twelve (12) months before reapplying.

14.2 Applicant who fails to obtain the pass grade for any examination part, may be re-examined three (3) times in the failed part(s), provided that the re-examination takes place not sooner than thirty (30) days, unless further training acceptable to RSA is satisfactorily completed, nor later than three (3) years after the original examination.

14.3 Applicants may take the first retest(s) of the failed parts(s) without additional training. Only one retest without documented evidence of additional training is permitted.

14.4 Applicant failing all permitted re-examination shall apply for and take the examination in accordance with the procedure established for new personnel.

- 14.5 CP Personnel taking 2nd or 3rd retests shall require documented evidence of additional training as applicable to Level 1, Level 2 or Level 3 in accordance with Table 7.

Table 7: Training Requirements for 2nd and 3rd Retest

No.	Retest	Required Training Hours			
		Level 1	Level 2	Level 3	Level 3 without Level 2
1	Full three (3) parts	16	40	40	80
2	Two (2) parts	12	24	24	48
3	One (1) part	8	16	16	24

15.0 QUALIFICATION ASSESSMENT

- 15.1 The applicant shall fulfil the minimum requirements of education, training, experience, examinations and vision prior to certification.
- 15.2 The applicant shall provide documentary evidence, acceptable to RSA, the following:
- education,
 - experience,
 - satisfactorily completed training, and
 - recent vision test.
- 15.3 Certification Department shall verify the examination grades given by the Examination Department.

16.0 IPCS CERTIFICATION

- 16.1 Certification of IPCS CP personnel shall be based on demonstration of satisfactory qualification in accordance with Section 15.0 on a serialized (unique number) certificate and a wallet card stating that the applicant has met the IPCS certification requirements.
- 16.2 Certification certificates and wallet cards shall contain the following:
- the family name and forename of the certified personnel,
 - the date of issue of the certification,
 - the date upon which certification expires,
 - a reference to ISO reference document and year of revision,
 - the level of certification,
 - the name of RSA,
 - if applicable, the scope of limitations to the certifications and the special applications,
 - a unique inspector identification number,
 - the signature of the certified personnel,
 - a photograph of the certified inspector in the case of the wallet card,
 - a device to prevent falsification of the wallet card, e.g. use of a cold seal, welding into plastic, and
 - the signature of Certification Manager.

16.3 Qualification certificates shall be fully completed at the time of signing by the Certification Manager. No fill-in-the-blank data remains to be completed by others.

17.0 CERTIFICATION VALIDITY

Certification becomes effective from the date of completion of the initial examination and shall be valid for five (5) years unless revoked for reasons defined in Sections 18.0 and 20.0.

18.0 CONDITION OF CERTIFICATION

The period of validity shall commence (date of issue of the certification) when all of the requirements for certification (education, training, experience, satisfactory vision test, success in examination) are fulfilled. Certification becomes invalid:

- a. at the discretion of RSA, e.g. after reviewing evidence of behaviour incompatible with the certification procedures or failure to abide by a code of ethics,
- b. if the CP personnel becomes physically incapable of performing his duties based upon failure of the visual acuity examination taken annually under the responsibility of his employer,
- c. if the CP personnel has not been actively engaged in the performance or supervision of coating and lining work inspection for a period of one (1) year or more during the certification period, and
- d. if the inspector fails recertification, until such time he/she meets the requirements for recertification or initial certification.
- e. if examination or certification fees are not paid when due.

19.0 CERTIFICATION VERIFICATION

19.1 RSA shall release certification test results only to the CP personnel, or to a person or agency designated by the CP personnel upon written request, and with notarized and witnessed release.

19.2 Requests for verification of status and certification number of CP personnel shall be provided to the requestors. Only the certification number, date certified, expiration date, photo, current status (current, revoked, etc.), and certification limitations (corrected vision, etc.) shall be provided by the RSA staff members without the express written approval of the inspector or certificate holder.

20.0 SUSPENSION AND WITHDRAWAL

20.1 The Certification Committee shall have the power to suspend, refuse renewal, revoke, place on probation, or reprimand the CP personnel certification for misrepresentation of facts regarding personal qualifications, status, assignments, etc., relating to personnel certifications whether such misrepresentation was made at the time of application or on subsequent applications (renewal, etc.).

20.2 The Certification Committee may suspend, refuse renewal, revoke, place on probation, or reprimand a certificate holder, if found guilty of any unauthorized practice as outlined in Code of Ethics, Rules of Conduct, and Practice.

20.3 Reinstatement of a revoked certificate shall be allowed with no penalty or prejudice to the individual provided the reason for such revocation has been rectified to the Certification Committee's satisfaction.

21.0 CERTIFICATION RENEWAL

21.1 The renewal application shall be presented within six (6) months before the date of expiration of the certification. Application presented within twelve (12) months after the date of expiration shall require recertification in accordance with Section 22.0 below. Over this period, no exception is admitted and the inspector shall take full examination in accordance with the procedure established for new applicant.

21.2 Certification may be renewed for a new period of five (5) years on production of:

- a. documentary evidence of a satisfactory visual acuity examination taken within the preceding 12 months.
- b. actively engaged as CP personnel within the most recent five-year (5) certification period.
- c. taken a twenty (20) multiple choice questions Quiz relating to the latest revision of procedures, standards and codes, and shall pass minimum 70%.

21.3 "Actively engaged as a CP personnel" shall be defined as "no time period the inspector not performing or supervising of coating and lining work inspection for a period of one (1) or more years during the certification period".

21.4 The Inspectors are allowed to attempt two (2) Quiz re-tests and shall not beyond the expiry of the certificate. Inspectors failing all permitted Quiz re-tests shall be recertified in accordance with Section 22.0 below.

22.0 RECERTIFICATION

22.1 Recertification by written examination is required for any one of the following factors:

- a. Inspectors who satisfy requirement 21.2a but have not satisfy requirements 21.2b and/or 21.2c, and
- b. Every ten (10) years renewal from the date of initial certification, and satisfy requirements 21.2a.

22.2 The Inspectors are allowed to attempt two (2) re-tests and shall not exceed one (1) year after the expiry of the certificate.

22.3 Inspectors failing all permitted recertification examination re-tests shall apply for and take full examination in accordance with the procedure established for new applicant.

22.4 All CP personnel shall be given Quiz in accordance with Section 21.2c and Practical Examination in accordance with Section 12.4 and shall pass minimum 70% for both Quiz and Practical Examination.

23.0 CERTIFICATION LEVEL UPGRADE

- 23.1 IPCS Painting Inspector Level 1 may upgrade to Level 2 by satisfying the Level 2 requirements for education and experience (Table 8), training, vision test and examination.
- 23.2 IPCS Painting Inspector Level 2 may upgrade to Level 3 by satisfying the Level 3 requirements for education and experience (Table 8), training, vision test and examination.

**Table 8: Minimum education and additional experience requirements for level up-
grading**

Starting level	Target level	Education	Minimum additional experience in CP following previous certification (years)
1	2	All levels of education	1
1	3	Relevant engineering or scientific discipline degree (BSc, BEng or equivalent) and specialized education in the corrosion field (significant corrosion content at BSc or BEng level or significant post graduate corrosion study or research)	2
		Technical education	3
		Other education (requires basic mathematical skills)	4
2	3	Relevant engineering or scientific discipline degree (BSc, BEng or equivalent) and specialized education in the corrosion field (significant corrosion content at BSc or BEng level or significant post graduate corrosion study or research)	1
		Technical education	2
		Other education (requires basic mathematical skills)	3

24.0 RECORDS

Personnel certification records shall be maintained and updated for the duration of 10 years after expiry and shall include the following:

- a. Name of certified individual.
- b. Level of certification and limitations (if any), as applicable.
- c. Educational background and experience of certified individuals.
- d. Records indicating satisfactory completion of training.
- e. Results of the vision examinations for the current certification period.
- f. Current examination copy(ies) or evidence of successful completion of examinations.
- g. Composite grade(s) or suitable evidence of grades.
- h. Dates of certification and/or recertification.
- i. Certification expiration date.

