

# SECTION **K**

Grading

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Grading

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## K1. The Grade Card

- K1.1 Since 1969 the SJIB has administered the Grading system for Electrical Operatives. More recently, the Grade Cards were incorporated into the Electrotechnical Certification Scheme (ECS). The SJIB Grade (ECS) Card continues to show the holder's Grade.
- K1.2 The purpose of the Grade Card is to ensure that Operatives in the construction industry are assessed as technically competent to defined industry standards, and have a required level of competence in Health & Safety awareness.
- K1.3 Health & Safety is an increasingly important issue within the construction industry. Major contractors are taking this very seriously by requiring that ALL Operatives on site pass the ECS Technical Knowledge and Health & Safety Awareness assessment.

## K2. Guidance on Grading

- K2.1 These notes deal with the grading of Operatives by employers for subsequent confirmation (or amendment) by the SJIB and are subject to amendment in the light of experience and decisions of the SJIB.
- Any Operative or registered Apprentice who satisfies the following criteria may be graded or up-graded.
  - Operatives must fully complete, sign and return an SJIB application form for grading or up-grading along with the appropriate fee and any supporting certificates. The SJIB may request that the application be supported with references from previous employers or clients whom he has worked for over the previous twelve months.
  - Employers are encouraged to check the correctness of each grading application form and, where appropriate, recommend the appropriate grading for his Operatives.
  - The grading process will be delayed if the Operative submits his form either incompletely or incorrectly, or does not sign it, or if the employer does not indicate a grade for an Operative according to the grading definitions, or if a photograph, or photocopies of certificates or fee (where appropriate) are not enclosed.
  - The SJIB will assess each Operative's form and ensure that the correct grading is awarded.
  - Provided the necessary paperwork is in order, the SJIB will send confirmation of initial grading to the Operative and the employer. The SJIB Grade (ECS) Card will be sent directly to the Operative.
  - Thereafter, the Operative will be entitled to his appropriate graded rate of pay, without retrospection, having received confirmation from the SJIB of his grade.
  - If an Operative or an employer wishes to appeal against the grade which has been determined by the SJIB, he should do so in writing after he has received the SJIB Grade (ECS) Card or confirmation of Grading.

- (i) If an Operative submits forged certificates to the SJIB when applying for his card he will have his existing card removed and no further applications will be considered for a period of six years, i.e. the lifetime of two cards.
- (j) An Operative with a genuine SJIB Grade (ECS) Card who submits a false application for upgrading will be allowed to retain his existing grade, however no further applications for upgrading will be considered for a period of six years.

K2.2 These rules will be applied if, after a thorough investigation, an individual is found to be in breach of either rule.

### K3. Declaration

K3.1 It is important that Operatives read this declaration as it represents their application to become an employee-participant of the SJIB.

### K4. Signing and Dating Form

K4.1 The application form will not be complete and cannot be used as the basis for grading by the SJIB until it is signed and dated by the Operative applying for grading.

### K5. Change of Address

K5.1 Operatives are required to inform the SJIB in writing of any change of address, always quoting their National Insurance Number.

### K6. Grading

K6.1 The recommended grading must be indicated on the application form.

K6.2 When the application form is fully completed and signed, it must be returned (if applicable) to the employer. The employer must satisfy himself that it is correct and complete insofar as the Operative's employment with his firm is concerned and must check each Operative's application form. Any incorrect, incomplete or unsigned form must be returned to the Operative as quickly as possible.

K6.3 The employer should recommend, where appropriate, the appropriate grading of each Operative on the basis of the information contained on the application form, supplemented by his personal knowledge of the applicant. Grading must always be carried out in accordance with the definitions, technical qualifications (if any), experience and merits of the Operative.

## K6. Grading continued

- K6.4 Only if an employer is satisfied that an Operative complies with the appropriate definition should he recommend a particular grade. If an employer is in any doubt about the capabilities of an Operative, he should select the next lower grade. Any Operative can improve his technical qualifications and experience and apply to the SJIB to upgrade. Indeed, Operatives should be encouraged to do so.
- K6.5 Employers are advised that an Operative can appeal against his grading after confirmation (or amendment) by the SJIB. Subsequent employers, if they consider that a new recruit does not fulfill the requirements of his original grading, can request that the Operative be downgraded.

## K7. Appeals on Grading

- K7.1 The method of appeal by an employer or Operative is set out below in outline and is subject to Regulations made by the SJIB.
- (a) The appellant must lodge an appeal in writing detailing his reasons for the appeal. He must quote his National Insurance Number and state the name and address of his present employer or, if different, the name and address of the employer with whom he was originally graded. Employers appealing against the grade awarded should detail in writing their reason for the appeal.
  - (b) The grounds for the appeal must be clearly stated, with supporting documents such as authenticated Certificates or evidence of courses, practical experience and years of service in the Industry. A copy of the appeal must be passed (if applicable) to the employer in the case of an appeal by an Operative or to the Operative in the case of an appeal by an employer.
  - (c) Unjustified, unsupported, vexatious or frivolous appeals will not be entertained. Appeals supported by both employer and Operative will be permissible but will not necessarily receive recommendation except where an Operative, with his present employer's support, applies on justifiable grounds for upgrading (although a separate procedure will normally be followed for upgrading).
  - (d) Appeals will be dealt with impartially by the SJIB Grading Committee, comprising an employer representative and a Regional Officer of the Union. The Grading Committee will consider the written evidence, statements by the appellant and supporting or opposing statements. The Grading Committee may question the Operative and employer to establish that the facts presented are completely true, and will call for any oral or documentary evidence which they feel is necessary to substantiate the validity of any statement. If necessary, they will call for evidence from a former employer(s) and/or inspect the Operative's work or carry out a standard SJIB trade test of the Operative.
  - (e) If appropriate, the employer and/or Operative will be given due notice of the place and time where the appeal will be held and either may be represented by SELECT or the Union, as appropriate, or another nominated representative.
  - (f) The appellant may be required to attend in person, or, in the case of an employer, to be appropriately represented.

- (g) The decision of the Grading Committee is final and binding and will be communicated in writing to the applicant and/or his employer. The Operative's record will be amended. The Board may or may not award the costs of an appeal to a successful appellant, but not damages, and there will be no retrospection of any increased payments in the case of upgrading, or return of wages in the case of downgrading. Any increase in wages consequential upon an appeal shall take place from the commencement of the pay week specified by the Board.

## K8. Electrical Grading Definitions

### K8.1 Labourers

- (a) Labourers shall be employed only within the general labouring field under supervision and in accordance with the National Working Rules (Cable and Traywork Agreement).

### K8.2 Electricians

- (a) Electricians must have satisfactorily completed a recognised apprenticeship in electrical installation.
- (b) They must be able to carry out electrical installation work efficiently in accordance with relevant statutory regulations and industry codes of practice.
- (c) They must have knowledge of the National Working Rules for the Electrical Contracting Industry, relevant statutory regulations and industry codes of practice, including specifically The Electricity at Work Regulations 1989, The Electricity Safety, Quality & Continuity Regulations 2002 (as amended) (so far as they deal with consumers' installation), and BS 7671 (as amended) IET Wiring Regulations.
- (d) They must have achieved the SVQ Level 3 Certificate in electrical installation jointly awarded by Scottish Qualifications Authority (SQA) and the SJIB or an approved equivalent.
- (e) Further information and details of the SJIB Apprentice and Adult Training Schemes for Electrical Installation can be found in Section J of the SJIB Handbook.
- (f) Operatives who are in employment on a directly-employed basis will have their CompEx initial training course and renewal costs (provided that the Operative is working at the time of renewal) paid by the employer. This is provided that the employer requires holding a CompEx qualification as a specific requirement of the Operative's role.
- (g) For Operatives already holding a CompEx qualification on this date, there is no obligation for the employer to pay the renewal costs upon expiration of the existing CompEx qualification unless it is a specific requirement of the Operative's role.

## k8. Electrical Grading Definitions continued

### K8.3 **Provisional Electricians**

- (a) Provisional Electricians must be registered on the Crediting Electrotechnical Competence (CEC) Scheme and must have completed the following training:
  - (i) The ECS Health and Safety Assessment or a valid approved equivalent (completed within the last 30 months); and
  - (ii) Scottish Building Standards (completed within the last three years); and
  - (iii) SQA [SELECT] Customised Award in Requirements for Electrical Installations to BS 7671 (completed within the last five years)
  - (iv) City and Guilds IET Wiring Regulations to BS 7671 (full course, completed within the last five years); or
  - (v) EAL Level 3 Award in Requirements for Electrical Installation BS 7671 (completed within the last five years) (code 601/5321/0); or
  - (vi) LCL Level 3 Award in Requirements for Electrical Installations (completed within the last five years) (Code: 601/5665/x).
- (b) A Provisional Electricians Grade (ECS) Card is only valid for 18 months during which time an Operative must have completed the CEC Scheme and achieved an SVQ Level 3 in Electrical Installation.

### K8.4 **Approved Electricians**

- (a) Approved Electricians must have satisfactorily completed a recognised apprenticeship in electrical installation.
- (b) They must have two years experience as a graded Electrician immediately prior to application for this grade.
- (c) They must have successfully passed the Advanced Competence Assessment (ACA), 1995 apprentice training scheme or an approved equivalent.
- (d) Approved Electricians must possess particular practical, productive and electrical installation skills with adequate technical knowledge, to work on their own proficiently and carry out electrical installation work without detailed supervision in the most efficient and economical manner.
- (e) They must have knowledge of the National Working Rules for the Electrical Contracting Industry, relevant statutory regulations and industry codes of practice including specifically The Electricity at Work Regulations 1989, The Electricity Safety, Quality & Continuity Regulations 2002 (as amended) (so far as they deal with consumers' installation), and BS 7671 (as amended) IET Wiring Regulations.
- (f) They must have supervisory knowledge and the ability to set out jobs from drawings and specifications, and requisition the necessary installation materials.



**K8.5 Responsibility Money for Approved Electricians**

- (a) Approved Electricians in charge of work who undertake the supervision of other Operatives shall be paid responsibility money, the amount of which shall be specified by the SJIB.

**K8.6 Technician Electricians**

- (a) Technician Electricians must have experience as an Approved Electrician for a minimum of 3 years.
- (b) They must have knowledge of the most economical and effective layout of such installations together with the ability to achieve a high level of productivity in the work they control. In addition they must have exceptional technical skill, ability and experience beyond that expected of an Approved Electrician.
- (c) They must have knowledge of the National Working Rules for the Electrical Contracting Industry, relevant statutory regulations and industry codes of practice including specifically The Electricity at Work Regulations 1989, The Electricity Safety, Quality & Continuity Regulations 2002 (as amended) (so far as they deal with consumers' installation), and BS 7671 (as amended) IET Wiring Regulations.
- (d) Technician Electricians must have completed either:
  - (i) The SQA [SELECT] Tailored Award in Design and Verification of Electrical Installation (BS 7671) (completed within the last five years); or
  - (ii) A HNC in Electrical Engineering; or
  - (iii) A HNC in Contracting Management; or
  - (iv) The City & Guilds of London Institute Electrical Installation Work Course 'C'; or
  - (v) EAL Level 4 Award in the Design and Verification of Electrical Installations (completed within the last five years) (Code: 601/8231/3).
- (e) In addition they must complete the following training courses (available from SELECT), approved by the SJIB (within the last three years):
  - (i) Asbestos Awareness (assessed)
  - (ii) Ashton Supervisory Management Course (or the approved equivalent)
  - (iii) Managing Health and Safety - An Introduction
  - (iv) Risk Assessment
  - (v) Safe Isolation (assessed)
  - (vi) Scottish Building Standards (assessed)

**K8.7 Panel Builders**

- (a) Panel Builders must have completed an EAL Level 3 Diploma in Installation and Commissioning, Pathway ICA: Equipment Installation (Units QICM3/001, QICM3/002, QICM3/003, QICM3/004, and QICM3/006).
- (b) They must be able to carry out panel building work efficiently in accordance with relevant statutory regulations and industry codes of practice.
- (c) They must have knowledge of the SJIB National Working Rules for the Electrical Contracting Industry, relevant statutory regulations and industry codes of practice including specifically The Electricity at Work Regulations 1989, The Electricity Safety, Quality & Continuity Regulations 2002 (as amended) (so far as they deal with consumers' installation), and BS 7671 (as amended) IET Wiring Regulations.

## k8. Electrical Grading Definitions continued

- (d) In addition they must:
  - (i) Enclose a statement from an SVQ Assessor which confirms that the scope of the EAL Level 3 Diploma in Installation and Commissioning (Equipment Installation Pathway) has been met using evidence collected from the workplace by the candidate.
  - (ii) Complete the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent; and
  - (iii) SQA [SELECT] Customised Award in Requirements for Electrical Installations (completed within the last five years); or
  - (iv) City and Guilds IET Wiring Regulations to BS 7671 (full course, completed within the last five years); or
  - (v) EAL Level 3 Award in Requirements for Electrical Installation BS 7671: June 2008 (2015) (completed within the last five years) (Code: 601/5321/0); or
  - (vi) EAL Level 4 Award in the Design and Verification of Electrical Installations (completed within the last five years) (Code: 601/8231/3); or
  - (vii) LCL Level 3 Award in Requirements for Electrical Installations (completed within the last five years) (Code: 601/5665/x).

### K8.8 **Wiremen**

- (a) Wiremen must have completed an EAL Level 3 Diploma in Installation and Commissioning, Pathway ICA: Equipment Installation (Units QICM3/001, QICM3/002, QICM3/003, QICM3/004, and QICM3/006).
- (b) They must be able to carry out work efficiently in accordance with relevant statutory regulations and industry codes of practice.
- (c) They must have knowledge of the SJIB National Working Rules for the Electrical Contracting Industry, relevant statutory regulations and industry codes of practice including specifically The Electricity at Work Regulations 1989, The Electricity Safety, Quality & Continuity Regulations 2002 (as amended) (so far as they deal with consumers' installation), and BS 7671 (as amended) IET Wiring Regulations.
- (d) In addition they must:
  - (i) Enclose a statement from an SVQ Assessor which confirms that the scope of the EAL Level 3 Diploma in Installation and Commissioning (Equipment Installation Pathway) has been met using evidence collected from the workplace by the Operative.
  - (ii) Complete the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent; and
  - (iii) SQA [SELECT] Customised Award in Requirements for Electrical Installations (completed within the last five years); or
  - (iv) City and Guilds IET Wiring Regulations to BS 7671 (full course, completed within the last five years); or
  - (v) EAL Level 3 Award in Requirements for Electrical Installation BS 7671: June 2008 (2015) (completed within the last five years) (Code: 601/5321/0); or

- (vi) EAL Level 4 Award in the Design and Verification of Electrical Installations (completed within the last five years) (Code: 601/8231/3); or
- (vii) LCL Level 3 Award in Requirements for Electrical Installations (completed within the last five years) (Code: 601/5665/x).

#### K8.9 **Electrical Fitters (ECITB)**

- (a) Electrical Fitters (ECITB) must have satisfactorily completed a recognised four year apprenticeship and hold one of the following qualifications:
  - (i) ECITB Diploma in Installing Engineering Construction Plant and Systems Electrical at SCQF Level 7; or
  - (ii) NQF/SQA equivalent accompanied with the applicable technical certificates etc., for those ECITB frameworks; or
  - (iii) ECITB NVQ Level 3 in Installing and commissioning Electrotechnical Systems and Equipment (Plant); or
  - (iv) ECITB NVQ Level 3 IN Maintaining Plant and Systems (Electrical).
- (b) In addition they must provide certificates proving they have completed the following training:
  - (i) ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent; and either the
  - (ii) SQA [SELECT] Customised Award in Requirements for Electrical Installations (completed within the last five years)
  - (iii) City and Guilds IET Wiring Regulations to BS 7671 (full course, completed within the last five years); or
  - (iv) EAL Level 3 Award in Requirements for Electrical Installation BS 7671: June 2008 (2015) (completed within the last five years) (Code: 601/5321/0); or
  - (v) EAL Level 4 Award in the Design and Verification of Electrical Installations (completed within the last five years) (Code: 601/8231/3); or
  - (vi) LCL Level 3 Award in Requirements for Electrical Installations (completed within the last five years) (Code: 601/5665/x).
- (c) Electrical Fitter (ECITB) shall receive the appropriate rate of pay for an SJIB graded Installation Electrician.

#### K8.10 **Approved Electrical Fitters (ECITB)**

- (a) Approved Electrical Fitters (ECITB) must have completed a recognised four year ECITB apprenticeship.
- (b) They must have two years experience as a graded SJIB Electrical Fitter (ECITB).
- (c) Approved Electrical Fitters (ECITB) must possess practical, productive and electrical engineering skills with additional technical and supervisory knowledge so as to be able to work on their own proficiency, connect and test and locate faults.
- (d) Approved Electrical Fitters (ECITB) shall receive appropriate rate of pay for an SJIB graded Approved Electrician.

## K8. Electrical Grading Definitions continued

### K8.11 **Installation Electricians**

- (a) Individuals who wish to apply for the grade of SJIB Installation Electricians must have satisfactorily completed the requirements described for Electrical Fitters (ECITB).
- (b) They must then register on the Crediting Electrotechnical Competence (CEC) Scheme and complete the following bridging assessment of competency, knowledge and skill:
  - (i) SJIB 2nd Stage Electrical Installation Project
  - (ii) SJIB Stage 3 SVQ week
  - (iii) SJIB Stage 3 Log Book entries (11)
  - (iv) The FICA (Final Integrated Competence Assessment)
- (c) Having successfully completed the CEC Scheme they will be awarded an SVQ Level 3 in Electrical Installation.

### K8.12 **Winders/Electrical Fitters**

- (a) Winders / Electrical Fitters must have been registered Apprentices for at least four years, and must have had practical training in electrical winding and/or fitting work.
- (b) They must be able to carry out armature and stator winding on a.c., d.c., or machine assembly and test efficiently in accordance with accepted trade practice.
- (c) In addition they must have completed the following training:
  - (i) SQA Course Certificate Parts 1 and 2; or
  - (ii) Equivalent course of study approved by the SJIB; and
  - (iii) The ECS Health and Safety Assessment (completed within the last 30 months) or hold a valid approved equivalent.
- (d) It is accepted that there may be a few exceptional cases of apprentices with outstanding ability who could qualify as Winders or Fitters in less than four years. The Grading Committee will consider applications for grading in such cases from applicants who have obtained the SQA Certificate and completed at least three years training.
- (e) Winders/Electrical Fitters shall receive appropriate rate of pay for an SJIB graded Electrician.

### K8.13 **Approved Winders/Approved Electrical Fitters**

- (a) Approved Winders/Approved Electrical Fitters must have satisfactorily completed a registered apprenticeship and have had practical training in winding or electrical fitting work. They must have obtained the SQA Parts 1 and 2 Certificate. They must have had two years subsequent Journeyman experience working as a chargehand and/or Winder/Electrical Fitter immediately prior to application for this grade. Approved Winders/Electrical fitters must possess particular practical productive and electrical engineering skills with additional technical and supervisory knowledge so as to be able to work on their own proficiently, connect and test windings and locate faults on windings on both a.c. and d.c. machines or assembly, and test and locate faults on a wide range of both a.c. and d.c. machines.

- (b) Approved Winders/Electrical Fitters shall receive the appropriate rate of pay for an SJIB graded Approved Electrician.

## K9. Instrumentation Grading Definitions

K9.1 The instrumentation site erection and testing/commissioning industry involves mechanical, electrical, electronic and pneumatic work, which very often occur together on most projects. The agreed grading scheme is intended to provide opportunities for personnel engaged on this work to develop the necessary multicraft skills and to provide opportunities for advancement.

K9.2 In brief, personnel who have completed apprenticeship or other approved courses would enter the industry normally as Electricians, Pipefitters or Instrument Mechanics, dependent on training and interest. Electricians and Pipefitters would follow the established course progressing to Approved Grade. In addition, the achievement of appropriate academic qualifications would enable personnel to transfer to testing/commissioning work, with the ultimate goal of Instrument Technician. Similarly, an Instrument Mechanic would be able to progress through an Approved Grade to Instrument Technician.

### K9.3 Instrument Technicians

- (a) Instrument Technicians must have completed an approved apprenticeship course.
- (b) Have had a minimum of five years experience as a Senior Instrument Mechanic or Instrument Artificer.
- (c) They must be fully conversant with all aspects of erection and testing techniques of instrumentation systems in process and production control of industrial plant.
- (d) Instrument Technicians must have:
  - (i) obtained Industrial Measurement and Control Technicians Certificate Part 3 (City and Guilds) or an HNC in approved subjects; or
  - (ii) have technical skill, ability and experience significantly beyond that expected of a Senior Instrument Mechanic or Instrument Artificer, and whose value to the employer would be as if they were qualified as an Instrument Technician and, with the support of his employer, is granted this grade by the SJIB.
- (e) They must have a working knowledge of the legal requirements covering all aspects of site work, including the Health and Safety at Work Act 1974 and in particular:
  - (i) The Construction (Design and Management) Regulations, 2015
  - (ii) The Construction (Head Protection) Regulations, 1989
  - (iii) The Control of Asbestos Regulations, 2012
  - (iv) The Control of Substances Hazardous to Health Regulations, 2002
  - (v) DSEAR 2002 (Dangerous Substances and Explosive Atmosphere Regulations)
  - (vi) LOLER 1998 (Lifting Operations and Lifting Equipment Regulations)
  - (vii) The Management of Health and Safety at Work Regulations, 1999
  - (viii) Personal Protective Equipment at Work Regulations, 2002
  - (ix) The Electricity at Work Regulations, 1989
  - (x) Work at Height Regulations, 2005

## K9. Instrumentation Grading Definitions continued

- (f) They must also have knowledge of:
  - (i) BS 7671 (as amended) IET Wiring Regulations
  - (ii) The Atex Directive
  - (iii) BS EN 60079 series of standards (as amended)
  - (iv) Terms and Definitions of Automatic Control BS 1523
- (g) It is anticipated that the Instrument Technician will become an employee.

### K9.4 Instrument Mechanics

- (a) Instrument Mechanics must have completed an approved apprenticeship course and, have had adequate training in instrumentation maintenance and servicing.
- (b) Instrument Mechanics must have:
  - (i) obtained Industrial Measurement and Control Technicians Certificate Part 1 (City and Guilds); or
  - (ii) completed an approved craft apprenticeship course, have obtained an equivalent academic qualification and have adequate practical training in instrumentation maintenance and servicing; and
  - (iii) be able to carry out instrumentation maintenance and servicing work efficiently in accordance with drawings and manufacturers' instructions.
- (c) Instrument Mechanics shall receive the appropriate rate of pay for an SJIB graded Electrician.

### K9.5 Approved Instrument Mechanics

- (a) Approved Instrument Mechanics must have completed an approved apprenticeship and qualified as an Instrument Mechanic.
- (b) Approved Instrument Mechanics must have:
  - (i) two years' experience working as an Instrument Mechanic subsequent to the completion of the apprenticeship; or
  - (ii) an equivalent academic qualification and also have passed an approved manufacturer's training course or other approved course such as at a Government Training Centre; and
  - (iii) obtained practical experience in techniques of instrumentation maintenance and servicing on industrial process plant control systems and be able to work on his own proficiently and in accordance with associated safety codes and practices.
- (c) Approved Instrument Mechanics shall receive the appropriate rate of pay for an SJIB graded Approved Electrician.

**K9.6 Senior Instrument Mechanics**

- (a) Senior Instrument Mechanics must have completed an approved apprenticeship course, have qualified as an Approved Instrument Mechanic with at least two years' practical experience in all aspects of instrumentation maintenance and servicing, i.e. mechanical, electrical, electronic and pneumatic.
- (b) Senior Instrument Mechanics must have:
  - (i) obtained Industrial Measurement and Control Technicians Certificate Part 2 (City and Guilds); or
  - (ii) an equivalent academic qualification and have had a minimum of three years' comparable experience in techniques of instrumentation maintenance and servicing after completing an approved instrumentation training course; and
  - (iii) be familiar with correct application of measurement and control systems, interpretation of drawings and associated safety codes and practices.
- (c) This grade will be an endorsement on the Grade Card of an Approved Instrument Mechanic and there is a corresponding additional payment equivalent to the maximum Responsibility Money contained within the SJIB Agreement.
- (d) Whether or not an Operative who has this endorsement is entitled to receive the additional payment will be determined by the job title and the engagement terms stipulated in his Statement of Employment Particulars.

**K9.7 Instrument Artificers**

- (a) Instrument Artificers must have completed an approved apprenticeship course, have qualified as an Approved Instrument Electrician or an Approved Instrument Pipefitter.
- (b) Instrument Artificers must have:
  - (i) at least two years' practical experience in all aspects of instrumentation installation i.e. mechanical, electrical, electronic and pneumatic, and have obtained Instrument Maintenance Craft Certificate Part 2 (City and Guilds); or
  - (ii) the technical skill, ability and experience beyond that expected of an Approved Grade Craftsman and whose value to the employer would be as if he were qualified as an Instrument Artificer and with the support of his employer, is granted this grade by the SJIB; and
  - (iii) have the ability to work proficiently without detailed supervision, be able to interpret instrumentation drawings and requisitions and be familiar with instrumentation installation techniques.
- (c) This grade will be an endorsement on the Grade Card of an Approved Instrument Electrician or an Approved Instrument Pipefitter and there is a corresponding additional payment equivalent to the maximum Responsibility Money contained within the SJIB Agreement.
- (d) Whether or not an Operative who has this endorsement is entitled to receive the additional payment will be determined by the job title and the engagement terms stipulated in his Statement of Employment Particulars.

## K9. Instrumentation Grading Definitions continued

### K9.8 Instrument Pipefitters

- (a) Instrument Pipefitters must have completed the ECITB Diploma in Installing Engineering Construction Plant & Systems Small Bore Tubing Assemblies. They must be able to carry out pipefitting work efficiently in accordance with statutory regulations and industry code of practice.
- (b) The size of work this discipline covers is up to a maximum of 15mm nominal bore.
- (c) In addition Instrument Pipe Fitters must have completed at least one of the relevant ECITB Technical Small Bore Tubing (TSBT) Tests:
  - (i) TSBTO1 – Assemble and Install Small Bore Tubing Assemblies – Twin Ferrule; or
  - (ii) TSBTO2 – Disassemble and Reinstall Small Bore Tubing Assemblies; or
  - (iii) TSBTO3 – Assemble and Install Small Bore Tubing Assemblies – Cone and Threaded; or
  - (iv) TSBTO4 – Hydrotest SBT Assemblies; and
  - (v) Complete the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.
- (d) A graded Electrician or Approved Electrician who has passed the relevant ECITB Technical Test can have Small Bore Tubing added as an Occupation on to his SJIB Grade (ECS) Card.
- (e) An Instrument Pipe Fitter shall receive the appropriate rate of pay for an SJIB graded Electrician.

### K9.9 Approved Instrument Pipefitters

- (a) Approved Instrument Pipefitters must have qualified as an Instrument Pipefitter and gained experience in small bore stainless steel and mild steel pipe work and PVC-covered copper tubing installation and termination.
- (b) They must be able to set out jobs from drawings and specifications, and requisition the necessary materials and have a thorough knowledge of the National Working Rules for the Electrical Contracting Industry.
- (c) Approved Instrument Pipefitters shall receive the appropriate rate of pay for an SJIB graded Approved Electrician.

## K10. Datacomms Grading Definitions

### K10.1 Datacomms Specialists

- (a) Datacomms Specialists are responsible for installing and maintaining structured cabling systems for datacomms systems.
- (b) They must be able to carry out an installation of structured cabling, including UTP, STP, FTP, Co-AX, general common cables, single-mode fibre cables with all necessary containment and associated connection units and installation of earthing and bonding cables. In addition they must be able to fit out enclosures with structured cable termination equipment (connection units, hubs, switches, routers and panel patches).
- (c) Datacomms Specialists must have completed:



- (i) A Level 2 Datacomms Specialist apprenticeship; or
- (ii) An NVQ Level 2 in Structured Cabling Systems; or have
- (iii) At least two years' experience of the requirements listed above; and have
- (iv) The employers endorsement and recommendation; and have
- (v) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

#### K10.2 **Datacomms Specialists – Certified Network Cable Installers (CNCI)**

- (a) Datacomms Specialists (CNCI) are responsible for the installation and commissioning of data network structured cabling, as part of a team or independently. The structured cabling must be installed in accordance with national and international standards for both fibre-optic and copper data networks.
- (b) They must have a working knowledge of network pathways, use of containment, spaces and segregation for installing cables, along with the safe termination and testing of structured cable termination equipment, connection units, hubs, switches, routers, patch panels and similar equipment.
- (c) Datacomms Specialists (CNCI) must have completed:
  - (i) A BTEC Level 3 Advanced Award in Data Communications Cable Installation (Copper and Fibre Optics) - Certified Network Cable Installer (CNCI) with three years' experience; and have
  - (ii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

#### K10.3 **Advanced Datacomms Specialists**

- (a) Advanced Datacomms Specialists are responsible for the installation, commissioning and maintenance of structured cabling systems for datacomms systems. They must be able to conduct testing of structured cabling, including all necessary containment as well as any associated connection units; installation and testing and bonding cables. In addition, they must be able to work as part of a team or independently.
- (b) Advanced Datacomms Specialists must have completed:
  - (i) A Level 3 Datacomms Specialist apprenticeship; or
  - (ii) The City & Guilds Level 2 Award in Communications Cabling (3667); or
  - (iii) EAL Level 3 NVQ Diploma in Cabling Installations (601/3023/4)
  - (iv) EAL Level 3 NVQ Diploma in Cabling Installations (QCF); or
  - (v) A BTEC Level 3 Diploma in Professional Competence for IT and Telecoms Professionals; and have
  - (vi) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

#### K10.4 **Datacomms Technicians**

- (a) Datacomms Technicians are responsible for the installation, commissioning and maintenance of structured cabling systems for datacomms systems. They must be able to demonstrate a wide knowledge and experience of the working environment and regulatory standards that work is carried out in.

## K10. Datacomms Grading Definitions continued

- (b) In addition Datacomms Technicians must have Supervisory experience, knowledge of emerging technologies and be capable of designing network modifications. They must know the most effective and economical way to do a job and know how to apply the Electricity at Work Regulation 1989, 22-29 & 31 and the Construction Industry Regulations.
- (c) Datacomms Technicians must have:
  - (i) Been graded as an Advanced Datacomms Specialist; and have at least three years' experience; or
  - (ii) Successfully completed an NVQ Level 3 in Electrotechnical Services Installation and Inspection Structured Cabling Systems and have three years post qualification experience; and have
  - (iii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

### K10.5 **Datacomms Technicians – Certified Network Infrastructure Technician (CNIT)**

- (a) Datacomms Technicians (CNIT) are expected to manage structured cabling installation teams including operational planning and leadership. They must be able to conduct surveys for network infrastructure, project design and operational delivery management activities including the requirements for CDM, H&S documentation quality assurance, customer liaison and final handover activities.
- (b) Datacomms Technicians (CNIT) must have:
  - (i) Been graded as a Datacomms Specialist (CNCI) or an Advanced Datacomms Specialist; and have at least three years' experience; or have
  - (ii) A BTEC Level 4 Professional Award – Certified Network Infrastructure Technician (CNIT); and have
  - (iii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

### K10.6 **Datacomms Designers – Certified Network Infrastructure Design Professionals (CNIDP)**

- (a) Datacomms Designers (CNIDP) are responsible for the design of networking solutions in all types of structured cabling solutions, including complex network infrastructure projects. They must be able to interpret customer requirements using the appropriate tools to produce compliant design solutions in accordance with national and international standards.
- (b) Datacomms Designers (CNIDP) must have completed:
  - (i) A BTEC Level 5 Professional Award - Certified Network Infrastructure Design Professional (CNIDP); and have
  - (ii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

**K10.7 Datacomms Engineers**

- (a) Datacomms Engineers are responsible for the design, specification, estimation and documentation of large scale data or telecoms projects. They must be able to demonstrate extensive knowledge of appropriate European Directives and British, European and World Standards.
- (b) In addition Datacomms Engineers must have experience in designing all parts of data and (b) telecommunication jobs systems on large scale projects and can specify equipment, produce project documentation including drawings for large scale cabled LANs and wireless network systems.
- (c) Datacomms Engineers must have:
  - (i) Been graded as an Advanced Datacomms Specialist; and have at least three years' experience; or have
  - (ii) A degree in Datacomms Installation and Management; or have
  - (iii) An NVQ Level 3 in Electrotechnical Services Installation and Inspection Structured Cabling Systems and have six years post qualification experience; and have
  - (iv) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

**K10.8 Datacomms Managers - Certified Telecommunications Project Manager (CTPM)**

- (a) Datacomms Managers (CTPM) are responsible for complex infrastructure projects, particularly in the database environment, with a focus on pure project management activities. They must be able to monitor and maintain the progress of all projects with effective risk management and issue resolution.
- (b) Datacomms Managers must have:
  - (i) Been graded as a Datacomms Technician (CNIT); and have at least three years' experience; or have
  - (ii) A BTEC Level 4 Professional Award – Certified Telecommunications Project Management (CTPM); and have
  - (iii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.
- (c) If the formal Datacomms qualifications listed above are not held then ECS Related Discipline Cards for Datacomms Installer, Field Services Engineer or Telecoms Installer can be issued to individuals if they have the following:
  - (i) The employers endorsement and recommendation; and have
  - (ii) Completed the ECS Health and Safety Assessment (within the last 30 months) or hold a valid approved equivalent.

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## K11. Other Grades

K11.1 The following grades are also awarded by the SJIB from time to time to accommodate members working in areas allied to the industry. Please note the SJIB conditions need not necessarily apply to these grades:

- (a) Electrician (Marine)
- (b) Radio/Television Operative
- (c) Refrigeration Operative
- (d) Service Fitter
- (e) Telecommunications Operative
- (f) Approved Electrician (Instrumentation Artificer)
- (g) Approved Electrician (Marine)
- (h) Approved Instrument Pipefitter (Instrumentation Artificer)
- (i) Approved Panel Builder
- (j) Approved Radio/Television Operative
- (k) Approved Refrigeration Operative
- (l) Approved Service Fitter
- (m) Approved Telecommunications Operative
- (n) Electrical Machinery Technician
- (o) Panel Builder Technician
- (p) Radio/Television Technician
- (q) Refrigeration Technician
- (r) Technician (Marine)
- (s) Technician (Winder)
- (t) Telecommunication Technician