

## Qualification File

Revised Application Documentation: Version 3 Final /4 March, 2015

### QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Deputy Director General (Apprenticeship Training)  
Government of India,  
Ministry of Skill Development and Entrepreneurship  
Shram Shakti Bhavan, Rafi Marg  
New Delhi-110001

**NSDA Reference**

*To be added by NSDA*

**\* Note: The training and Apprenticeship verticals of Directorate General of Employment & Training (DGE&T) Ministry of Labour & Employment, has been transferred to the Ministry of Skill Development and Entrepreneurship as per the recent Government order.**

### Name and contact details of individual dealing with the submission

Name: Dr. T. C. Saravanabava  
Position in the organisation Deputy Director General (AT)  
Address if different from above

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e-mail address tcsbava\_2001@yahoo.com

### List of documents submitted in support of the Qualifications File

1. Competency-based curriculum (Annexure 1)

## SUMMARY

<b>Qualification Type</b>	National Certificate in Modular Employable Skills																											
<b>Qualification Title</b>	Arc & Gas welder under Skill Development Initiative Scheme (SDIS) in Modular Employable Skills (MES) format																											
<b>Classification code</b>																												
<b>Body/bodies which will assess candidates</b>	Independent Agency empanelled as Assessing Bodies (ABs)																											
<b>Body/bodies which will award the certificate for the qualification</b>	National Council for Vocational Training (NCVT)																											
<b>Body which will accredit providers to offer the qualification</b>	Concerned department of the respective State/UT Govts.																											
<b>Legal and/or other basis of the qualification</b>	<p>i) NCO-2004: 7212.10            ii) NCO-2004: 7212.20            iii) NCO-2004: 7212.40            iv) NCO-2004: 7212.50</p> <p>NOS:-            i) Oxy Fuel Gas Cutter:            Qualification Pack Code: CSC/Q 0203            ii) Senior Manual Metal Arc welder/Shielded Metal Arc welder:            Qualification Pack Code: CSC/Q 0204</p>																											
<b>Occupation(s) to which the qualification gives access</b>	<ol style="list-style-type: none"> <li>1. Perform routine jobs of setting the machine and components for cutting, welding, brazing and allied operations.</li> <li>2. Perform practical skills to cut/ weld metal pieces in different positions by using, Gas welding, with appropriate equipments/ consumables and ensure quality weld joints.</li> <li>3. Perform manual Gas cutting operation for carrying out repair works or stock removal.</li> <li>4. Perform joining of metals by brazing process to the required quality.</li> <li>5. Perform practical skills to prepare and weld metal pieces in different positions by using Arc welding, with appropriate equipment/ consumables and ensure quality weld joints.</li> <li>6. Perform inspection of welded joint by visual inspection, and measure weld parameters using weld gauges.</li> </ol>																											
<b>Proposed level of the qualification in the NSQF.</b>	Level 3																											
<b>Notional Learning Hours</b>	700 hrs. + 100* hrs.																											
	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Broad Practical components to be covered</th> <th>Duration (in Hrs)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>OSH &amp; Safety Practices</td> <td>40</td> </tr> <tr> <td>2.</td> <td>Setting up of Arc &amp; Gas welding plant</td> <td>60</td> </tr> <tr> <td>3.</td> <td>Gas welding in Flat, Horizontal &amp; Vertical Positions</td> <td>200</td> </tr> <tr> <td>4.</td> <td>Gas cutting</td> <td>80</td> </tr> <tr> <td>5.</td> <td>Arc welding in Flat, Horizontal &amp; vertical Positions</td> <td>200</td> </tr> <tr> <td>6.</td> <td>Visual Inspection &amp; correction</td> <td>80</td> </tr> <tr> <td>7.</td> <td>Dimensional Inspection</td> <td>40</td> </tr> <tr> <td>8.</td> <td>Soft &amp; Entrepreneurship Skills</td> <td>100</td> </tr> </tbody> </table>	Sl. No.	Broad Practical components to be covered	Duration (in Hrs)	1.	OSH & Safety Practices	40	2.	Setting up of Arc & Gas welding plant	60	3.	Gas welding in Flat, Horizontal & Vertical Positions	200	4.	Gas cutting	80	5.	Arc welding in Flat, Horizontal & vertical Positions	200	6.	Visual Inspection & correction	80	7.	Dimensional Inspection	40	8.	Soft & Entrepreneurship Skills	100
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8.	Soft & Entrepreneurship Skills	100																										

<b>Entry requirements/ recommendations.</b>	Passed 8th Class		
<b>Progression from the qualification.</b>	<ol style="list-style-type: none"> <li>1. Qualifying trainee can take admission as per Apprenticeship Training Scheme</li> <li>2. This qualification shall enable the trainee to find employment as a skilled worker.</li> </ol>		
<b>Planned arrangements for RPL.</b>	<ul style="list-style-type: none"> <li>• Testing centres are registered by States on the same line as for VTPs. Candidates desire to get the skills certified have to apply on line or through Testing Centres. Assessing Bodies /assessors will be allotted automatically by the IT application. This facility is being provided on the web-portal of SDI scheme. Until then following procedure will be adopted for direct assessment:</li> <li>• Assessing Bodies are responsible for registration of candidates for testing. It may do so directly or through its designated centres or VTPs.</li> <li>• Candidates are allowed to get registered themselves either directly on the portal or through Testing Centre concerned.</li> <li>• Assessing Bodies apply online list of candidates to be assessed to respective RDAT who, in turn, acknowledge the same by allotting ABN. RDAT make schedule of trade test, including date, time, list of candidates and location of designated Testing Centre under intimation to AB.</li> <li>• AB inform in advance about the courses, candidates list, and requirement of raw material to Testing Centre in advance.</li> <li>• ABs are responsible for preparation of question papers both for theory and practical test based on the approved criteria etc.</li> </ul>		
<b>International comparability where known.</b>	1. Existence of any official document suggesting the comparability of the qualification with the qualifications in other countries is not known.		
<b>Formal structure of the qualification</b>			
<b>Title of unit or other component: Arc and Gas Welder</b>	<b>Mandatory/ Optional</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
Practical	Mandatory	700	3
Soft & Entrepreneurship Skills	Mandatory	100	3

Please attach any document giving further detail about the structure of the qualification – e.g., a Curriculum or Qualification Pack.

Give details of the document here:

Competency-based curriculum (Annexure 1)

## QUALIFICATION FILE SECTION 2 ASSESSMENT

**Electrical Winder/Unit/Component:** Details are attached. (Annexure 3)

### **Name of assessment body:**

DGET empanelled Assessing Bodies (ABs)

### **If there will be more than one assessment body for this qualification, give details.**

Refer Appendix I.

### **Criteria for selection of Assessment body**

#### Minimum Eligibility Criteria

- The applicant shall be a legal entity, registered in India.
- The applicant should have in last two years carried out competency / skill assessment for minimum 1000 persons or should have trained minimum 1000 persons and got tested by some agencies such as NCVT, Sector Skill Council, State, board/ council and reputed industry Association. Organizations having experience in testing of competencies would be preferred.
- In case more number of applications is received, preference will be given to those organizations that have trained/assessed larger number of persons.
- The applicant is not a Vocational Training Provider in the same sector and in same State in SDI scheme but it can be VTP in other States, other Sectors or other scheme.
- The applicant shall have access to technically qualified personnel of repute and integrity in different industrial trades and technology.
- The applicant shall develop dedicated human resource for handling the processes in SDIS assessment process.
- The applicant shall declare its linkages with other organization(s), if any to ensure independence and avoid any conflict of interest.
- Institutions/ Firms blacklisted by any Government Department shall not be considered in this RFP.
- The Applicant shall provide the information and supporting documents towards their claims.
- Initially provisional empanelment will be awarded to the organizations based on the evaluation of eligibility of the Assessing Body based on the criteria.
- Based on the module and sector that will be handled by the assessor, the assessing body shall send its assessor for competency evaluation in the institutions which will be notified by DGE&T time to time. The assessor will be assessed to ascertain the competency to carry out competency based assessment under SDIS.
- Final empanelment would be granted subject to the Assessing Body fulfilling the following conditions of getting the competencies of 2 assessors of each module per State evaluated in the institutes notified by the DGE&T. Testing charges for evaluating the competencies of the assessors will be borne by the Assessing Bodies.

### **Will the assessment body be responsible for all assessments and for all candidates?**

Yes. The assessing body is responsible for all assessments and for all candidates.

### **Explain how assessment for the qualification will be carried out and quality assured to achieve consistency.**

#### **(1) Assessment process:**

The assessment process under SDI Scheme aims to test and certify the competency of the persons through Assessing Bodies who seek certification of their skills acquired informally or the persons who have been trained at the registered VTPs. The competency assessment of the candidate is being done the Assessor Competency Evaluation (ACE) qualified assessor of the independent Assessing Bodies (AB) which is not involved in training delivery, to ensure an impartial assessment. In the assessment process of SDIS, identification of competency, ways to measure the competency and deciding on the type of evidence that has to be collected are the responsibility of the Assessing bodies whereas administering the assessment and collecting the evidence and reporting the results are the responsibility of the assessors. The assessment process consists of following components:

### Theory Test:

- It must assess the knowledge which is essential for a person to do the job. Without this knowledge, the person cannot be able to do the job.
- The questions shall be normally of objective type involving selection of correct response rather than writing sentences.
- The question paper should contain sketches/ diagrams/ photographs/ drawing to overcome the problems of reading comprehension.
- The test shall be of short duration.

### Practical Test: It shall be able to test

- Manipulative skills to handle tools and equipment.
- Speed in doing work.
- Accuracy maintained
- Quality in workmanship.
- Sequence of performance.
- Economical use of material.
- Neatness & housekeeping.
- All the competencies prescribed in the course curriculum.

### The Assessment Parameters adopted during assessment:

- Knowledge of equipment, limitation of use of tools and equipment, and methods & procedure.
- Understanding of functioning of equipment & tool, criteria to be used in selecting tools for given job, and the process of measurement.
- Skill in finishing to required measurement, handling measurement & calculations, handling tools and equipment with ease, finishing neatly.
- Abilities to take corrective steps, use correct work habits, take measurements, complete the job within stipulated time, and adopt safe practices.
- Attitude towards the work, accurate & precise work and co-workers and supervisor.

### (2) Duration of Test:

The duration of test vary according to the task. Theory test shall of 1 hour duration and practical test for engineering trade shall be 6 to 8 hours minimum and non-engineering it shall be of 4 hours minimum. Assessing Bodies while preparing practical test shall ensure that candidate shall be tested on all the competencies prescribed in the course module.

The marking pattern and distribution of marks for the qualification are as under:

Terminal competency	Maximum marks
Application of knowledge	30
Care for tools & equipment	15
Economic use of materials	15
Safety consciousness	10
Speed	10
Accuracy	15
Quality of workmanship	20
Amount of work	15
No. of attempts	10
Attitude	10
Total maximum marks for Practical	150
Maximum marks for theory	50

### (3) **Minimum pass mark:**

Minimum passing marks for Practical is 60%

Minimum pass marks for theory is 40%

### (4) **Testing and certifications process for the course:**

#### **Pre- Assessment**

- RDAT allot batches to the Assessing Bodies on rotational basis depending on the presence of

assessing body in that region sector wise and the assessing body in coordination with VTP and assessor should confirm and schedule the assessment.

- The Assessing Body confirm the date of assessment in consultation with VTP and communicate to the RDAT/State.
- The Assessing Body forms a panel of ACE qualified assessors of high repute and integrity SDIS sector wise and location wise.
- The assessment of the candidates is done by the Assessing Bodies in designated Testing Centre (TC). The Testing Centre where the assessment is carried out and Testing Centre can be VTP also. The Assessing Body select the TC based on the location, accessibility and the infrastructure facilities available for conducting the test.
- The Assessing Body provide details of selected TC along with skill areas in which assessment can be done at the TC, to the RDAT and respective States/UTs.
- The Assessing Bodies depute ACE qualified assessors for assessments whose details are furnished by Assessing Bodies to DGE&T in advance.
- Assessing Body has to communicate to the Testing Centre following:
  - Details of the candidates to appear for assessment in various MES courses.
  - Details of Assessors selected with their contact details.
  - Requirement of infrastructure, raw material etc.
  - Testing charges to be reimbursed to Testing Centre

#### **Preparation of assessment tools and prerequisites:**

- The assessment tools contain components for testing the knowledge, application of knowledge and demonstration of skill. The knowledge test is objective paper based test or short structured questions based. The application of knowledge is verified based on questioning or seeking response for a case. Demonstration of skill is verified based on practical demonstration by the candidate by using competency checklist.
- The type of assessment tools to be used for assessment are to be prepared in advance by the assessing body in accordance to the guidelines as prescribed below:
  - Define the performance objective – This is based on the course objectives and competency in workplace as prescribed by MES curriculum. The written tests and practical tests assess all the competencies mentioned in course curriculum.
  - In case of practical test, the operations which are to be observed in case of process test (how a particular task is being carried out) are clearly mentioned and the specifications of the final product in case of product test (the task in itself).
  - List of tools, infrastructure, and equipment to carry out the assessment are prepared based on the test instruments that are planned to be used.
  - Written directions are given to the candidates before the task is attempted.
  - Scoring system, observational checklist and rating scale is prepared for each competency which is going to be assessed.
  - The checklist and rating scale have sufficient space to record observations.

#### **Pre-assessment activities for Assessor at the Testing Centre**

- Verification of student credentials: The assessor check the application form submitted by the candidates and verify the photo pasted on the forms with candidates who are taking assessment in accordance with checklist at [Annexure1](#).
- Verification of testing centre for adequate infrastructure, tools and equipment: The assessor verifies the availability of infrastructure, tools and equipment for carrying out both theory and practical assessments. The minimum requirement prescribed under the MES modules is used as benchmark.
- Verification of qualification of instructor: The assessor verifies the qualification and experience of the instructors in the training centre
- Attendance verification: The assessor checks the attendance register of candidates and instructors until the time biometric attendance system is put in place. Once the biometric attendance system is in place, the biometric attendance of assessors along with that of trainees/candidates has to be captured during the assessment at the start as well as end of theory and practical test.
- Attendance during assessment: The assessor takes the attendance of all the students who appear for assessment after the successful verification of the student credentials and before the start of the assessment. The assessor also provides his/her attendance during start and end of the practical and theory test.

- Pre-Assessment checklist: The assessor fill the pre-assessment checklist along with the start time and end time of assessment after verifying all the above tasks as per checklist at [Annexure2](#).
- Verification of the documents related test carried out by VTP/ Testing Centre (TC) for candidates who were not able to produce document in support of having passed the qualification.

#### **Assessment activities**

- Before the start of assessment, read out the instructions to the students.
- The written test & practical test is for fixed duration as prescribed.
- It is ensured that individual attention is given to all the candidates during the practical test.
- The assessor takes photographs during the assessment process of all the students in the testing centre, the students during theory and practical tests, practical lab/workshop showing the equipment to be used for assessment, the assessor along with the students appearing for the assessment.

#### **Post-assessment activities**

- The assessor consolidates all the theory and practical test papers and ensures that all the mandatory information is filled. The total score for each student should be calculated and recorded in Result sheet as given in Annexure.3.
- The assessor send the attendance sheet, Result sheet, answer papers by courier/post to the assessing body immediately after the completion of assessment
- Uploading outcome of the assessment and photos in portal by assessing body
- Assessing body upload the results within one week of the assessment date.
- Photos taken by the assessors during assessment are sent to respective RDATs through e-mail only. Non dispatch of photos of assessment to RDAT makes assessment void. Re-assessment of such batch is done by the Assessing Bodies on their own expenses.
- Details of assessors as per Annexure.4 are emailed to RDAT at the time of uploading the outcome of the assessment. Outcome of the assessment is not accepted in case details of assessors are not emailed to respective RDAT. This procedure is applicable till automatic selection of assessors is provided on the web-portal of SDIS.
- Maintaining assessment records
- Publishing of results and Certificate issue
- RDAT verifies the outcome of the assessment, details of assessors, photos and print and sign the certificates for successful candidates and send it to the respective candidates. In case of direct candidate's assessment, the Certificates are sent to the Assessing Body.
- Certificates which will be issued carry photograph of the trainee, name of VTP, start date & end date of training and duration of training once the systems for the same are put in place.
- The certificate is issues under the aegis of NCVT.

#### **Will the assessment body be responsible for RPL assessment?**

**Give details of how RPL assessment for the qualification will be carried out and quality assured.**

#### **Direct Assessment:**

- Testing centres are registered by States on the same line as for VTPs. Candidates desire to get the skills certified have to apply on line or through Testing Centres. Assessing Bodies /assessors will be allotted automatically by the IT application. This facility is being provided on the web-portal of SDI scheme. Until then following procedure will be adopted for direct assessment:
- Assessing Bodies are responsible for registration of candidates for testing. It may do so directly or through its designated centres or VTPs.
- Candidates are allowed to get registered themselves either directly on the portal or through Testing Centre concerned.
- Assessing Bodies apply online list of candidates to be assessed to respective RDAT who, in turn, acknowledge the same by allotting ABN. RDAT make schedule of trade test, including date, time, list of candidates and location of designated Testing Centre under intimation to AB.
- AB inform in advance about the courses, candidates list, and requirement of raw material to Testing Centre in advance.
- ABs are responsible for preparation of question papers both for theory and practical test based on the approved criteria etc.

**ASSESSABLE OUTCOME WITH ASSESSMENT CRITERIA**

**GENERIC ASSESSABLE OUTCOME:**

<b>ASSESSABLE OUTCOMES</b>	<b>ASSESSMENT CRITERIA</b>
1. Recognize & comply safe working practices, environment aspect and housekeeping.	1.1 Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements and according to site policy.
	1.2 Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures.
	1.3 Report supervisor/ Competent of authority in the event of accident or sickness of any staff and record accident details correctly according to site accident/injury procedures.
	1.4 Identify Personal Productive Equipment (PPE) and use the same as per related working environment.
	1.5 Identify basic first aid and use them under different circumstances.
	1.6 Take opportunities to use energy and materials in an environmentally friendly manner
	1.7 Avoid waste and dispose waste as per procedure
	1.8 Recognize different components of 5S and apply the same in the working environment.
2. Understand and practice soft skills, working with Computer and communicate with required clarity.	2.1 Recognize & practice soft skills in day to day work.
	2.2 Conduct appropriate discussions with within the team and report to higher authority.
	2.3 Present facts and circumstances and use appropriate terminology related to work.
	2.4 Conduct written communication.
	2.5 Use computers and access internet for day to day activity
3. Demonstrate knowledge of concept and principles of basic arithmetic calculation, co-ordinate system and apply knowledge of specific area to perform practical operations.	3.1 Apply basic arithmetic calculations for arriving dimensional parameters as per drawing.
	3.2 Use co-ordinate system for part programming.
4. Explain time management,	4.1 Ascertain appropriate time for the assigned task.
	4.2 Execute the assigned task within time frame.



entrepreneurship and manage/organize related task in day to day work for personal & social growth.	4.3 Manage own work within specified time.
	4.4 Explain importance & factors affect the development of entrepreneurship.
	4.5 Identify service providers for developing Entrepreneur /business establishment.

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**SPECIFIC ASSESSABLE OUTCOME:**

OUTCOME	ASSESSABLE ASSESSMENT CRITERIA
5. Carry out routine jobs of setting the machine and	5.1 Acquaintance of Arc & Gas welding plants parts, operational features hand tools, safety devices and its uses.
	5.2 Ascertain and select tools and materials for the welding job and make this available for use in a timely manner.

components for cutting, welding, brazing and allied operations.	5.3 Set and check arc welding machine connections.
	5.4 Check gas welding cylinders, Regulators and welding & cutting torches for leak proof operation
	5.5 Plan and perform the job as per drawing.
6. Perform practical skills to weld metal pieces in different positions by using, Gas welding, with appropriate equipments/ consumables and ensure quality weld joints.	6.1 Plan and select the nozzle size, set working pressure of gases, set type of flame, select filler rod as per requirement.
	6.2 Prepare, set and tack the pieces as per drawing.
	6.3 Set up the tacked joint in specific position.
	6.4 Deposit the weld following proper welding technique and safety aspect.
	6.5 Carry out visual inspection to ascertain quality weld joint.
7. Perform manual Gas cutting operation for carrying out repair works or stock removal.	7.1 Plan and mark on MS plate surface for straight/bevel cutting.
	7.2 Select the nozzle size and working pressure of gases as per requirement.
	7.3 Set the marked plate properly on cutting table.
	7.4 Perform the cutting operation maintaining proper techniques and all safety aspects.
	7.5 Clean the cutting burrs and inspect the cut surface for soundness of cutting.
8. Perform joining of metals by brazing process to the required quality.	8.1 Plan and select the nozzle size, set working pressure of gases, set type of flame, select filler rod & Fluxes per requirement.
	8.2 Prepare, set, apply flux and tack the pieces as per drawing.
	8.3 Set up the tacked joint in specific position.
	8.4 Deposit the brazing filler rod following proper brazing technique and safety aspect.
	8.5 Carryout quality check
9. Perform practical skills to prepare and weld metal pieces in different positions by using Arc welding, with appropriate	9.1 Plan and select the type welding power source, Polarity, welding current, & type & size of electrode, type of edge preparation etc. as per requirement.
	9.2 Prepare, set and tack the pieces as per drawing.
	9.3 Set up the tacked pieces in specific position.
	9.4 Deposit the weld maintaining appropriate arc length, electrode angle, welding speed, weaving technique

equipments/ consumables and ensure quality weld joints.	and safety aspects.
	9.5 Clean the welded joint thoroughly.
	9.6 Carry out visual inspection for appropriate weld joint.
	9.7 Inspect the weld using weld gauge.
10. Perform inspection of welded joint by visual inspection, and measure weld parameters using weld gauges.	10.1 plan and perform visual inspection with appropriate gauges
	10.2 Plan and perform dimensional Inspection using appropriate gauges
	10.3 Record the values in the check sheet.

3. Produce Pipe welding on mild steel pipe in 5G position (uphill) by MMAW (pipe axis horizontally fixed)	3.1 Plan and select (Wall Thickness > 8MM) mild steel pipe beveled, set the welding machine, select the type & size of electrode, welding current etc. as per requirement.
	3.2 Prepare, set and tack the pieces as per drawing.
	3.3 Set up the tacked pieces in 5G position.
	3.4 Deposit the root pass, intermediate passes and cover pass weld maintaining appropriate arc length, electrode angle, welding speed, weaving technique and safety aspects.
	3.5 Clean the welded joint thoroughly.
3. Produce Pipe welding on mild steel pipe in 6G position (uphill) by MMAW (pipe axis 45degree inclined) – fixed	3.1 Plan and select (Wall Thickness > 8MM) mild steel pipe beveled, set the welding machine, select the type & size of electrode, welding current etc. as per requirement.
	3.2 Prepare, set and tack the pieces as per drawing.
	3.3 Set up the tacked pieces in 6G position.
	3.4 Deposit the root pass, intermediate passes and cover pass weld maintaining appropriate arc length, electrode angle, welding speed, weaving technique and safety aspects.
	3.5 Clean the welded joint thoroughly.
4. Make Root welding of pipes in 5G position by TIG Welding and weld intermediate and cover passes by MMAW	4.1 Plan and select (Wall Thickness > 8MM) mild steel pipe beveled, set the TIG welding machine, select the type & size of Tungsten electrode, filler rod and set welding current, Argon gas flow rate etc. as per requirement.
	4.2 Prepare, set and tack the pieces as per drawing.
	4.3 Set up the tacked pieces in 5G position.
	4.4 Deposit the root pass by TIG welding adapting proper technique and safety aspects.
	4.5 Clean and weld intermediate and cover passes by MMAW And inspect the welded joint thoroughly.
5. Make Root welding of pipes in 6G position by TIG Welding and weld intermediate and cover passes by MMAW welding	5.1 Plan and select (Wall Thickness > 8MM) mild steel pipe beveled, set the TIG welding machine, select the type & size of Tungsten electrode, filler rod and set welding current, Argon gas flow rate etc. as per requirement .
	5.2 Prepare, set and tack the pieces as per drawing.
	5.3 Set up the tacked pieces in 6G position.
	5.4 Deposit the root pass by TIG welding adapting proper technique and safety aspects.
	5.5 Clean and weld intermediate and cover passes by MMAW And inspect the welded joint thoroughly.

NCVT issues certificate of skills acquired through informal means/competence assessed.

### QUALIFICATION FILE SECTION 3 EVIDENCE OF NEED

**What evidence is there that the qualification is needed?**

Skill Development Initiative on Modular Employable Skill (MES) has been developed in close consultancy with Industry, State Governments & Experts in pursuance of excellence in vocational training. MES is 'Minimum Skill Set' which is sufficient to get an employment in the world of work. MES allows skills up gradation/formation, multi entry and exist, vertical and horizontal mobility and lifelong learning opportunities in a flexible manner and allows recognition of prior learning.

**What is the estimated uptake of this qualification and what is the basis of this estimate?**

**What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?**

The qualification is originally designed and approved by NCVT for the Modular Employable Scheme. NCVT has been entrusted with the responsibilities of prescribing standards and curricula for Skill Development Initiative Scheme (SDIS) in Modular Employable Skills (MES) format, advising the Government of India on the overall policy and programmes, conducting All India Trade Tests and awarding National Trade Certificates.

**In the research and/or development, what steps were taken to identify potential barriers to access (eg related to education, race, caste, religion, gender or disability) and eliminate or overcome these?**

There is no barrier imposed in taking up this training programme on the basis of race, caste, religion, gender or disability, except for the visually-impaired.

**Has the qualification been through a formal approval procedure(s)?**

(If so, explain the process and the outcome.)

1. The qualification was prepared by a core group having experts from Industry, DGET institutes, and ITIs.
2. It was approved by Mentor Council having representatives from Industry, Academic institutions and skill experts.
3. The qualification has been approved by the sub-committee of NCVT dealing with norms and courses.

**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?**

- In a recent initiative, a Mentor Council (MC) for the Power sector has been formed to review the curriculum of this qualification under the sector.

- CSTARI, the research wing of DGE&T, reviews and updates the qualification, in consultation with industries and other stakeholders, on a regular basis.
- NOS approved by NSDA will also be referred to from time to time.

**What arrangements are in place to inform people about the qualification(s) and the advantages it offers?**

- Central and State Governments & Private institutions issue notifications for admission to the qualification in print & e-media from time to time.
- State, Regional & National level skill competitions are organized on a regular basis to promote the qualification.
- Recently, under a new initiative, a 12 episode TV serial entitled as '*Hunnarbaaz*' has been telecast on National Channel & the same is available in YouTube.

Please attach any documents giving further information about any of the topics above.  
Give details of the document(s) here: Advertisements calling for employment. (Annexure 4)

**QUALIFICATION FILE SECTION 4  
SUMMARY EVIDENCE OF LEVEL**

**Level of qualification:**

NSQF Level 2

Summary of Direct Evidence (from learning outcomes):

The evidence of the competence obtained by:

- Conducting theory examinations,
- Conducting practical examinations,
- observing the trainees at work,
- asking questions and initiating formative discussions to assess understanding, and
- evaluating records and reports.

Summary of other evidence (if used): Nil

QUALIFICATION FILE SECTION 4, EVIDENCE OF LEVEL (Continued)  
**LEVELLING SCORECARD**

**RECORD OF ANALYSIS –Arc & Gas welder**

Learning outcome	Comment	Level 2	Level 3	Level 4
<b>GENERIC OUTCOME</b>				
1. Recognize & comply safe working practices, environment regulation and housekeeping.	Trainee will acquire knowledge of the safe working practices, natural environment & housekeeping and will be responsible for implementation in his own work.		✓	
2. Recognize and practice soft skills, OSH&E, working with Computer and communicate with required clarity.	Trainee will be able to communicate written or oral with minimum required clarity and practice in day to day work.		✓	
3. Demonstrate knowledge of concept and principles of basic arithmetic calculation, co-ordinate system and apply knowledge of specific area to perform practical operations.	Trainee will be able to do basic mathematical calculations viz., arithmetic and co-ordinate system and apply in practical applications.		✓	

Learning outcome	Comment	Level 2	Level 3	Level 4
4. Explain and display sensitivity towards time management, entrepreneurship and manage/organize related task in day to day work for personal & social growth.	<p>i) Trainees will have understanding of factual knowledge of time management, entrepreneurship and display sensitivity towards same.</p> <p>ii) The trainees will have understanding to manage personal finance and further growth to be an entrepreneur and display sensitivity towards same.</p>		✓	
<b>SPECIFIC OUT COME</b>				
5. Carry out routine jobs of setting the machine and components for cutting, welding, brazing and allied operations.	Trainees will be able to demonstrate practical skills on carry out routine jobs of setting the machine and components for cutting, welding, brazing and allied operations repetitive in nature and limited range of application by using appropriate tools & equipment.		✓	
6. Perform practical skills to weld metal pieces in different positions by using, Gas welding, with	Trainees will be able to weld metal pieces in different positions by using, Gas welding operations which is routine &repetitive in		✓	



Learning outcome	Comment	Level 2	Level 3	Level 4
appropriate equipments/ consumables and ensure quality weld joints.	limited range of operations and ascertain desired quality result.			
7. Perform manual Gas cutting operation for carrying out repair works or stock removal.	Trainees will be able to demonstrate practical skills to Gas cutting operation for carrying out repair works or stock removal which are routine and repetitive.		✓	
8. Perform joining of metals by brazing process to the required quality.	i) Trainees will be able to demonstrate practical skills, in limited range of operations to perform joining of metals by brazing process by using different tool & equipment. ii) Trainee will be able to perform the work within defined limit. Trainee will acquire skill with limited service skill to Perform joining of metals by brazing process with no variables differentiates good and bad quality.		✓	
9. Perform practical skills to prepare and weld metal pieces in different positions by using Arc welding, with appropriate equipments/ consumables and ensure quality	i) Trainees will be able to demonstrate practical competencies to prepare and weld metal pieces in different positions by using Arc welding, with appropriate equipments/ consumables. ii) He has to work under close supervision.		✓	

Learning outcome	Comment	Level 2	Level 3	Level 4
weld joints				
10. Perform inspection of welded joint by visual inspection, and measure weld parameters using weld gauges	Trainees will have factual knowledge in related area and able to demonstrate practical competencies to perform inspection of welded joint by visual inspection, and measure weld parameters using weld gauges.		✓	

**QUALIFICATION FILE SECTION 5  
EVIDENCE OF RECOGNITION OR PROGRESSION**

**In the course of the research and/or development was there any direct evidence that the qualification(s) will be recognised by particular bodies – eg for entry to work or further study?**

The qualification enjoys the recognition of major employers in Government/ Public / Private sector.

**List any agreements which have been reached with regulatory bodies on recognition.**

NCVT itself is working as the regulatory body.

**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**

SUMMARY

Please attach any documents giving further information about any of the topics above.  
Give details of the document(s) here: (Annexure 4)

**QUALIFICATION FILE SECTION 6  
EVIDENCE OF INTERNATIONAL COMPARABILITY**

**List any comparisons which have been established.**

Nil