

**QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY**

**Name and address of submitting body:**

**Construction Skill Development Council of India**

**Address:-** 204, Aashirwad Complex, D-1, Green Park, New Delhi - 110016

**Tel:** +91-11-46584466

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

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

1. Career Map of Fabrication Occupation - Annexure 1
2. QP CON/Q01207- Annexure 2

## QUALIFICATION FILE SUMMARY

<b>Qualification Title</b>	Plasma Cutter - QP CON/Q01207		
<b>Body/bodies which will assess candidates</b>	<ul style="list-style-type: none"> <li>• MCG</li> <li>• Star Projects</li> </ul>		
<b>Body/bodies which will award the certificate for the qualification.</b>	CSDCI		
<b>Body which will accredit providers to offer the qualification.</b>	CSDCI		
<b>Occupation(s) to which the qualification gives access</b>	Fabrication		
<b>Proposed level of the qualification in the NSQF.</b>	4		
<b>Anticipated volume of training/learning required to complete the qualification.</b>	600 hrs		
<b>Entry requirements / recommendations.</b>	Preferably 10 <sup>th</sup> standard		
<b>Progression from the qualification.</b>	CNC Cutter - L-5		
<b>Planned arrangements for RPL.</b>	Work is under progress		
<b>International Comparability</b>	Comparable with UK Standard and New Zealand Standard		
<b>Formal structure of the qualification</b>			
<b>Title of unit or other component</b> (include any identification code used)	<b>Mandatory/ Optional</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
<b>CON/N1212: Carry out cutting operations on structural steel elements using plasma cutting</b>	Mandatory	520	4
<b>CON/N8001: Work effectively in a team to deliver results at a construction site</b>	Mandatory	24	4
<b>CON/ N9001: Work according to personal health, safety and environment protocol at construction site</b>	Mandatory	56	4

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

Give details of the document here:

1. QP CON/Q01207- Annexure 2

## SECTION 1

### ASSESSMENT

**Name of assessment body:**

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

- MCG
- Star Projects

**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.

The RPL assessment will be carried out through screening, identifying the skills gaps, provide bridge training to cover the competency gap and then conduct final assessment of the candidates.

**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:**

Assessment is done through third parties who are affiliated to CSDCI as Assessment Body. Assessors are trained & certified by CSDCI through Training of Trainers program. The assessment involves two processes. The first process is gathering the evidence of the competency of individuals. The second part of the assessment process is the judgement as to whether a person is competent or not. The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgements and
- Where appropriate, any supplementary criteria used to make a judgement on the level of performance.

The assessment is conducted through theory, viva voce and practical.

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

**Not Applicable**

### ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.

## CRITERIA FOR ASSESSMENT OF TRAINEES

### Plasma Cutter

### CON/Q 01207

### Construction Skill Development Council Of India

#### Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

				Marks Allocation	
Assessable Outcome	Assessment criteria	Total Marks	Out Of	Theory	Practical Skills
CON/N1212: Carry out cutting operations on structural steel elements using plasma cutting	PC1. ensure that the surface is clean and free from any oxides, paints, oils dust etc.	100	2	1	1
	PC2. confirm the compliance of markings on the elements with dimensions as shown in drawings		2	1	1
	PC3. ensure that the gas used is compatible with the process		2	1	1
	PC4. check gas pressure gauges prior to beginning the process		2	1	1

PC5. confirm that all auxiliary units are working as required	2	1	1
PC6. confirm that the plasma tip used is clean, and undamaged	2	1	1
PC7. test the gas flow before beginning cutting procedures	2	1	1
PC8. check the settings on the equipment and set them as per requirement	2	1	1
PC9. read and interpret the fabrication shop drawings to identify cut sections	4	1	3
PC10. estimate the quantity of consumable required for cutting	5	2	4
PC11. identify any hazardous conditions in the work place relevant to work	2	1	1
PC12. avoid wearing loose clothing and wear welding jumpsuits or any other uniform issued on site	2	1	1
PC13. ensure that there is no leakage in gas pipelines	2	1	1
PC14. avoid presence of moisture in vicinity of the working area and work piece	5	2	4
PC15. strike the flame with prescribed lighters and not using open flames	5	2	4
PC16. avoid any unsafe act by self particularly while working in workplace	2	1	1
PC17. identify and use the fire protection tools and equipment based upon the type of fire	2	1	1
PC18. participate in safety drills organized in workplace	2	1	1
PC19. participate in tool box talks as organized in workplace	2	1	1
PC20. set the machine at required current setting depending upon the thickness of section and type of element	2	1	1
PC21. start the flow of ionized gas or plasma	2	1	1
PC22. avoid starting the cut at 90° to the base metal	2	1	1
PC23. cut the metal at an angle (e.g. 60 degrees from horizontal, 30 degrees from vertical) and then rotate the torch to the vertical position	5	2	4
PC24. confirm the gas flow rate by consulting the gauges in the equipment	5	2	4
PC25. confirm the current settings by consulting the display on the equipment and make the necessary changes	5	2	4
PC26. avoid touching the tip of the nozzle to the base metal to increase the life of the tip	2	1	1
PC27. employ drag cups where ever possible	2	1	1
PC28. adjust the travel speed in relation to the heat settings and thickness of the materials	5	2	4
PC29. maintain appropriate distance of the torch from the base material to ensure cutting in correct profile and minimizing wastage	5	2	4
PC30. ensure that cut is terminated properly and cleanly by employing push angle particularly in the	5	2	4

	higher thickness sections				
	PC31. employ correct tools and tackles as required during the cutting operations		5	2	4
	PC32. clean any dross formed on the top and bottom surface and clean the cut		2	1	1
	PC33. avoid formations of ripples in the cut		2	1	1
	PC34. disconnect the equipment, clean the tip of torch, and store the equipment as per manufactures guidelines		2	1	1
		<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	100	7	2	5
	PC2. inform co-workers and superiors about any kind of deviations from work		7	2	5
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		10	3	7
	PC4. receive instructions clearly from superiors and respond effectively on same		7	2	5
	PC5. communicate to team members/subordinates for appropriate work technique and method		10	3	7
	PC6. seek clarification and advice as per requirement and applicability		7	2	5
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		27	8	19
	PC8. work together with co-workers in a synchronized manner		27	8	19
			<b>Total</b>	<b>100</b>	<b>30</b>
CON/N9001: Work according to personal health, safety and environment protocol at construction site	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	100	7	2	5
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		7	2	5
	PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable		10	3	7
	PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site		7	2	5
	PC5. identify near miss , unsafe condition and unsafe act		7	2	5
	PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including: <ul style="list-style-type: none"> <li>• Head Protection (Helmets)</li> <li>• Ear protection</li> <li>• Fall Protection</li> <li>• Foot Protection</li> <li>• Face and Eye Protection</li> <li>• Hand and Body Protection</li> <li>• Respiratory Protection (if required)</li> </ul>		10	3	7
	PC7. handle all required tools, tackles , materials		7	2	5

&equipment safely				
PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines		7	2	5
PC9. install and apply properly all safety equipment as instructed		13	4	9
PC10. follow safety protocol and practices as laid down by site EHS department		13	4	9
PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes		7	2	5
PC12. apply ergonomic principles wherever required		7	2	5
	<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>

## SECTION 2

### EVIDENCE OF NEED

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

Please refer to the attached list of job roles and occupations identified in construction sector. These job roles have been derived through extensive industry interactions facilitated from 10 workshops and various site visits conducted and interaction with 500+ representatives from different construction sector organizations all over the country.

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

As per survey the incremental Manpower Gap between 2008 and 2022 found out to be 459000 under Fabrication Occupation

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

QPs for Job Roles of various related SSC's were studied to ensure that there is no duplicity.

**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?**

Standards department of CSDCI will do periodic review and monitor the industry feedbacks, Training Partners feedback on the qualification and will incorporate them appropriately at the designated revision time.

The revision of this qualification is scheduled after 2 years i.e. 14/08/2017

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

1. List of job roles

## SECTION 3

### SUMMARY EVIDENCE OF LEVEL

Summary of Direct Evidence:



Justify the NSQF level allocated to the QP by building upon the five descriptors of NSQF. Explain the reasons for allocating the level to the QP.

Generic NOS is/are linked to the overall authority attached to the job role.

Plasma Cutter QP CON/Q01207					
Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
The job holder is expected to perform works related to preparation of equipment and material, roughly estimate required quantity of consumables, they are also expected to cut the material in required dimensions, these works are repetitive in nature as they involve following of laid down procedures and are repeated many times in a single project.	Job holder is expected to have factual knowledge of different types of consumables, their properties and areas of applications. They are expected to possess factual knowledge of operation of different type of cutting torches used for plasma cutting. They should also be aware of the safety rules and regulations to be observed in the fabrication yard and emergency procedures laid down at site	The job holder demonstrates quality awareness such as use of proper accessories to avoid ripples, dross, shrinkage, cracks etc. while carrying out routine and repetitive works of cutting structural steel elements in required dimensions. These skills are acquired over a period of time and find applications over a narrow range of activities included in plasma cutting which is repetitive.	The job holder is expected to have command in at least one language like English for reading and writing. They must be able to read fabrication drawings and interpret required technical details like orientation, location of cutting and dimensions of required assemblies etc. They must be able to listen and interpret work instructions and other communications and pass on the same to co-workers.  They are also expected to be able to apply arithmetic principles for computing material requirements	The job holder is responsible for own work such as ensuring the completion of assigned work in expected time and with required quality, they are responsible for optimising the use of consumable and to preserve the equipment from wear and tear. They are also responsible for offering the completed work for quality inspections.	4
Level 4	Level 4	Level 4	Level 4	Level 4	

**OTHER EVIDENCE OF LEVEL** [This need only be filled in where evidence other than primary outcomes was used to allocate a level] (Optional)

Summary of other evidence (if used): **Not applicable.**

## SECTION 4

### EVIDENCE OF RECOGNITION OR PROGRESSION

**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?**

Please refer to attached career path as per annexure 1 which clearly define the clear career path.

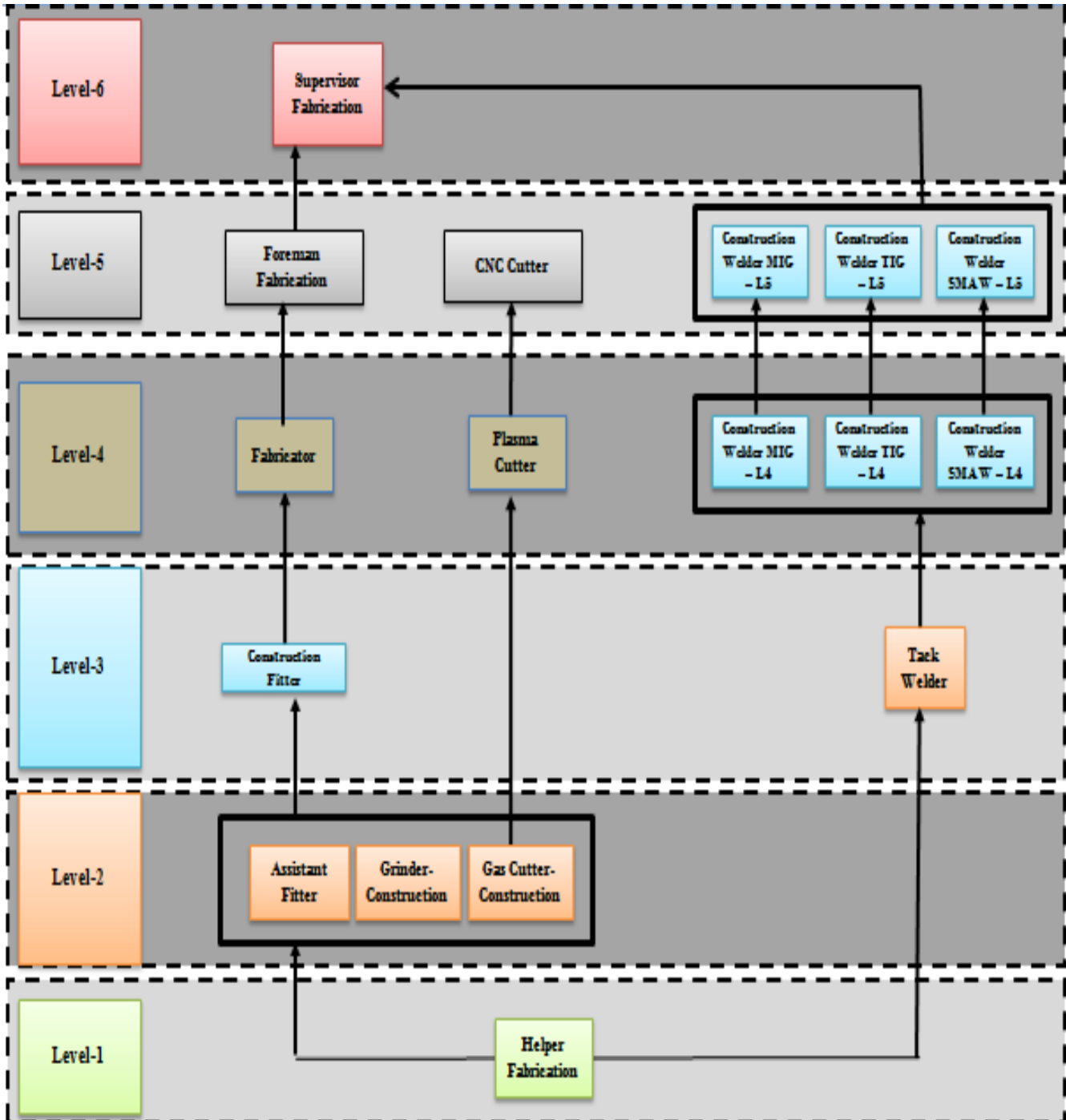
Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

1. Annexure 1
  - Overall Career map
  - Career map of Fabrication Occupation
2. QP CON/Q 01207- Annexure 2

Annexure 1

Career Map



Annexure 2- QP CON/Q01207