CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Indian Iron and Steel Sector Skill Council - IISSSC

Karigari Bhawan, 5th Floor, Room No-509, Plot No-B/7, Action Area-III, New Town, Rajarhat, Kolkata-700160

Name and contact details of individual dealing with the submission

Name: Mr. Sushim Banerjee

Position in the organization: Chief Executive Officer

Address if different from above: Same as above

Tel. number(s): 033 23247559

E-mail address: ceo@iisssc.org, sushim_banerjee@yahoo.com

List of documents submitted in support of the Qualifications File

- 1. Qualification Pack:- ISC/Q0911
- 2. Documents related to QP Development (Refer to folder "Common Files")
 - (i) Labour Market Survey
 - (ii) About the sector
 - (iii) Occupational Map
 - (iv) List of Companies participating in QP Development Process
 - (v) Model Curriculum

SUMMARY

1	Qualification Title: Welder - (GTAW)
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2	Qualification Code, if any: ISC/Q0911
3	NCO code and occupation: NCO-2015/7212.0105
	Mechanical Maintenance
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term):
	Performing GTAW welding process and other welding activities such as inspection of equipment condition, gauging, testing and inspection of welded work pieces
5	Body/bodies which will award the qualification: Indian Iron and Steel Sector Skill Council - IISSSC
6	Body which will accredit providers to offer courses leading to the qualification: Indian Iron and Steel Sector Skill Council - IISSSC
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy): Yes
8	Occupation(s) to which the qualification gives access:
	Mechanical Maintenance
9	Job description of the occupation:
	The individual in this role is expected performing GTAW welding process and other welding activities such as inspection of equipment condition, gauging, testing and inspection of welded work pieces
10	Licensing requirements: N/A
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided): N/A
12	Level of the qualification in the NSQF: Level 4
13	Anticipated volume of training/learning required to complete the qualification: 600 Hours
14	Indicative list of training tools required to deliver this qualification:
	Laptop, white board, marker, projector
	Sanitization kit, disinfectants, alcohol-based sanitizers, different types of face masks, shields etc. Different type of waste bins to collect and segregate waste for disposal
	Welding Machines, Hand Tools, Gas Cutting equipment, Personal Protective Equipment etc.
15	Entry requirements and/or recommendations and minimum age:
	10th Class Pass with 2 years of relevant experience OR

	10th Class Pass + ITI (Welder trade or in related trade) Or 12th Class Pass with 6 months of relevant experience And 18 years						
16	Progression from the qualifi and academic progression):		w Professional				
	Safety Supervisor Level - 5						
17	Arrangements for the Recog	nition of Prior learr	ning (RPL):				
	RPL will be based on the s Assessment Criteria mentione and Steel Sector Skill Council	• •					
18	International comparability where known (research evidence to be provided):						
	No						
19	Date of planned review of th	e qualification: 1st	July 2026				
21	Formal structure of the qual	ification					
	Mandatory components						
(i)	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level				
1	ISC/N0911: Perform GTAW welding and post-welding operations						
2	ISC/N0910: Perform oxy- gas cutting and post-cutting operations	, I					
3	ISC/N0008: Use basic health and safety practices at the workplace	ISC/N0008: Use basic health and safety practices 4					
4	ISC/N0009: Work effectively with others						
	Sub Total (A)	600					

SECTION 1 ASSESSMENT

1 Body/Bodies which will carry out assessment:

Indian Iron and Steel Sector Skill Council Proposed Body/Bodies which will carry out assessment:

S.No	Name of the Assessment Agency
1	ACE Foundation
2	Brisk Mind Pvt. Ltd.
3	Demorgia Consulting Services
4	EduVantage Private Limited
5	GLOCAL THINKER'S PRIVATE LIMITED
6	IRIS Corporate Solutions Private Limited
7	MS Certification Services Pvt. Ltd.
8	Nitya Skill Development Organization Samiti
9	Palmary Project & Services Pvt. Ltd.
10	STAR PROJECTS SERVICES PVT. LTD.
11	Vedokt Skill & Consulting Pvt. Ltd.
12	Vistaskills Pvt Ltd
13	Vsquare Techsolutions Pvt. Ltd.

2 How will RPL assessment be managed and who will carry it out? The RPL assessment will be managed by selected assessment partners from the applications received

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

The emphasis is on practical demonstration of skills and knowledge based on the performance criteria. The assessment papers are developed by Subject Matter Experts (SME) available with the Assessment Agency as per the performance and assessment criteria mentioned in the Qualification Pack. The assessment papers are also checked for the various outcome-based parameters such as quality, time taken, precision, tools & equipment requirement etc. The assessment results are backed by evidences collected by assessors.

1. The assessor needs to collect a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the In-charge / Head of the Training Centre.

- 2. The assessor needs to verify the authenticity of the candidates by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same needs to be mentioned in the attendance sheet. In case of suspicion, the assessor should authenticate, and cross verify trainee's credentials in the enrolment form.
- 3. The assessor needs to punch the trainee's roll number on all the test pieces.
- 4. The assessor can take a photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back as evidence.
- 5. The assessor also needs to carry a photo ID card.

The assessment agencies are instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidences

Title of Component: Welder - (GTAW)

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Welder - (GTAW)

Qualification Pack ISC/Q0911

Sector Skill Council Indian Iron and Steel Sector Skill Council

Guidelines for Assessment

- Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (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 theory part will be based on knowledge bank of questions created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.
- 5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
- 6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

ISC/N0911: Perform GTAW welding and post-welding operations

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparing for welding operations	12	17	-	11
PC1. identify the work to be done and product specifications by interpreting the engineering drawing, Welding Procedure Specification (WPS) and job orders	1	2		1
PC2. identify the tools, welding machines, measuring instruments, accessories, consumables and input materials as per	3	2		2

	the requirements mentioned in WPS or drawing				
PC3.	select and arrange the right material, equipment, fixtures, accessories such as welding torch and consumables such as electrode, filler wire, shielding gas etc. as per the SOP and job requirements	1	2		2
PC4.	check the input material, tools and equipment for any defects and that they are as per the required quality standards	1	2		1
PC5.	plan the welding activities before starting the actual process as per WPS		1		
PC6.	set the GTAW welding machine and its parameters as per the WPS and SOP	1	2		1
PC7.	prepare the materials and joint for welding process	1	1		1
PC8.	install the work pieces and fixture on the apparatus and align them with the electrodes as per the job requirements	1	1		1
PC9.	ensure that electrodes distance, contact area, pressure, application etc. are maintained as specified in Work Instructions (WI)	1	1		
PC10.	set pre-purge with shielding gas as required	1	1		1
PC11.	prepare tungsten electrode by sharpening or balling to desired tip shape	1	2		1
Perfo	rm GTAW welding operations	9	16	-	5
PC12.	start the GTAW welding machine for welding operations	1	1		
PC13.	use correct technique for starting the arc	1	1		1
PC14.	perform GTAW welding process as per SOP and tack weld the joint at appropriate intervals	2	4		1
PC15.	ensure correct angle of torch and filler wire, direction of weld and feed and travel speed during the welding operation	1	1		1
PC16.	monitor the welding process parameters (air pressure, electrode force, electrode distance, gas flow etc. are within	1	2		

standards by reading the various gauges and correct them if not within standards				
PC17. produce joints of the specified dimensional accuracy and required weld quality which is equivalent to level B of ISO 5817	1	1		1
PC18. measure the final welded piece and compare with the dimensions as prescribed in the WPS and engineering drawing	1	2		1
PC19. remove extra material by using chipping hammers, grinders etc., from the welded piece	1	2		
PC20. hammer the work piece to get the desired shape, if there are any welding bulges/distortions		2		
Perform post-welding operations	9	17		4
PC21. check the work pieces as per the work instructions for product quality	2	3		1
PC22. conduct destructive and non-destructive tests on the work pieces	2	4		2
PC23. separate the defective pieces which can be repaired/ reworked and pieces which are beyond repair and maintain records of each category	1	2		
PC24. tag and store the right quality pieces by following organisational policies and procedures	1	2		1
PC25. clean and store all the tools, machine and equipment after completion of work	1	2		
NOS Total	30	50	-	20

ISC/N0910: Perform oxy-gas cutting and post-cutting operations

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparing for cutting operations	13	19	-	10
PC1. identify the cutting work to be done by interpreting the engineering drawing, Welding Procedure Specification (WPS) and job orders	1	2		1
PC2. identify the tools, cutting torch, machine, measuring instruments, accessories, consumables and input materials as per the requirements mentioned in WPS or	3	2		2

	drawing			
PC3.	select and arrange the right material, equipment, fixtures, accessories such as regulators, hoses and valve and consumables such as shielding gas etc. as per the SOP and job requirements	2	3	2
PC4.	select the correct type of nozzle, consumables, gases and oxy-gas cutting equipment required for the job by following the WPS and drawing	1	2	1
PC5.	check the input material, tools, equipment and accessories for any defects, leakages and that they are as per the required quality standards	1	2	1
PC6.	set the oxy-gas cutting apparatus and its parameters as per the WPS and SOP	1	2	1
PC7.	ensure that a flashback arrestor is fitted with the apparatus	1		1
PC8.	use correct technique for lighting, adjusting and extinguishing the arc	1	2	1
PC9.	adjust torch valve for type of flame such as neutral, carburizing and oxidizing	1	2	
PC10.	mark the correct measurements on the workpiece by using appropriate tools and measuring instruments as specified in drawing or WPS	1	2	
Perfo	rm oxy-gas cutting operations	8	15	6
PC11.	start the gas cutting machine for cutting operations	1	2	1
PC12.	adjust cylinder valves and regulator for operating pressure to achieve required specifications	1	2	1
PC13.	perform oxy-gas cutting process as per SOP and produce items/cut shapes to the dimensions and profiles specified in WPS and drawing	2	4	1
PC14.	perform various cutting operations correctly and produce thermal cuts in various forms of material (metal of 3mm and above)	2	4	2
PC15.	recognize and correct burn-back and flashback	1	1	1
PC16.	measure the final workpiece and compare with the dimensions as prescribed in the WPS and engineering drawing	1	2	

Perform post-cutting operations	9	16		4
PC17. check the work pieces as per the work instructions for product quality	2	3		1
PC18. identify defects in the completed workpiece by using appropriate methods and equipment	1	2		1
PC19. separate the defective pieces which can be repaired/ reworked and pieces which are beyond repair and maintain records of each category	1	2		
PC20. tag and store the right quality pieces by following organisational policies and procedures	1	2		
PC21. clean and store all the tools, machine and equipment after completion of work	1	2		1
PC22. check the machine operations for any malfunctions/defects in the component and immediately inform the supervisor/maintenance team for correction	1	2		1
PC23. remove chips from different machine areas and dispose scrap or waste material in accordance with the company policies and environmental regulations	1	2		
PC24. report to the supervisor about any problems faced or anticipated during the complete process	1	1		
NOS Total	30	50	-	20

ISC/N0008: Use basic health and safety practices at the workplace

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Maintain safe and secure working environment	10	14	-	6
PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace	2	2	-	1
PC2. follow safe working practices while dealing with hazards to ensure safety of self and others	2	3	-	1
PC3. use appropriate protective clothing/ equipment for specific tasks and work	1	2	-	1

PC4.	follow appropriate safety practices while working in and around trenches, elevated places and confined areas	2	1	-	-
PC5.	lift heavy objects safely using correct procedures	1	2	-	1
PC6.	carry out routine check of the machine for identifying potential hazards	1	2	-	1
PC7.	report any identified breaches in health, safety and security policies and procedures to the designated person	1	2	-	1
Emei	rgencies, rescue and first aid procedures	6	9	-	5
PC8.	use appropriate type of fire extinguisher	1	1	-	1
PC9.	apply appropriate rescue techniques during fire hazard	1	2	-	1
PC10	. provide appropriate first aid procedure to victims wherever required eg.in case of bleeding, burns, choking, electric shock etc.	2	2	-	1
PC11	. follow emergency procedures such as raising alarm, safe evacuation etc.	1	2	-	1
PC12	. attend safety training and fire drills to respond promptly during an emergency	1	2	-	1
Heal	th and hygiene	2	6	-	2
PC13	. follow regular cleaning and disinfection practices at work place using appropriate techniques and materials	1	2	-	1
PC14	. follow hand hygiene practices at work place using appropriate techniques and materials	1	2	-	1
PC15	. report regarding the contagious illness of self or people in close contact	-	1	-	-
PC16	. avoid contact with ill people and self- isolate in a similar situation	-	1	-	-
Hous	sekeeping and waste management	7	12	-	5

PC17. follow the fundamentals of 5S for housekeeping	2	3	-	2
PC18. ensure good housekeeping in order to prevent hazards and accidents	1	2	-	-
PC19. store the material, tools and equipment in the correct location and in good condition	1	2	-	-
PC20. segregate waste into different categories	1	2	-	1
PC21. identify recyclable, non-recyclable and hazardous waste	1	1	-	1
PC22. dispose non-recyclable, recyclable and reusable waste appropriately at identified location	1	2	-	1
Material and energy conservation	5	9	-	2
PC23. identify ways to optimize usage of material in various tasks/activities/processes	1	2	-	-
PC24. check for spills/leakages in various tasks/activities/processes	1	2	-	1
PC25. plug spills/leakages and escalate to appropriate authority if unable to rectify	1	2	-	1
PC26. check if the equipment/machine is functioning normally before commencing work and rectify wherever required	1	2	-	-
PC27. ensure electrical equipment and appliances are properly connected and turned off when not in use	1	1	-	-
NOS Total	30	50	-	20

ISC/N0009: Work effectively with others

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Communicate effectively with colleagues and others	13	20	-	9
PC1. coordinate with colleagues to share work, as per the workload in order to achieve team goals	3	5	-	2

PC2. maintain clear communication with colleagues and others, wherever needed, through all means i.e. face-to-face, telephonic or written	5	7	-	3
PC3. adjust communication styles to reflect gender and persons with disability (PwD) sensitivity	3	4	-	2
PC4. respect all colleagues and co-workers	1	2	-	1
PC5. resolve conflicts by communicating with colleagues and other departments	1	2	-	1
Interact with supervisor	8	14	-	6
PC6. identify work requirements by receiving instructions from reporting supervisor	2	3	-	1
PC7. escalate problems to supervisors that cannot be handled	2	3	-	2
PC8. report the completed work	2	3	-	1
PC9. interact with the reporting supervisor about any possible hazards and safety concerns	2	5	-	2
Follow appropriate behaviour at work place	9	16	-	5
PC10. extend help to people with Disability (PwD) at workplace, if required	2	4	-	2
PC11. empathize with people with disability	2	4	-	1
PC12. adopt a gender neutral behavior	2	4	-	1
PC13. adopt responsible and disciplined behaviours at the workplace	3	4	-	1
NOS Total	30	50	-	20

Outcomes to be	Assessment criteria for the outcome
assessed/NOSs to be	
assessed	

Provided in the above section	

Means of 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 theory part will be based on knowledge bank of questions created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below.)
- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.

Means of assessment 2

Add boxes as required.

Pass/Fail

- 1. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
- 2. 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.

SECTION 2 EVIDENCE OF LEVEL

Title/Name of qualification/component: Iron and Steel: Welder - (GTAW) Level: 4			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Carryout the cleaning activities of work pieces to be welded, calibrations of the welding equipment and fittings and working status, setting of welding machines, basic maintenance activities of welded jobs	Person may carry out a job which may require limited range of activities routine and predictable. This level 4	4
Professional knowledge	Knowledge related to workshop and welding terminology, basic measurements, welding job setup and assembly (mounting, welding and dismounting)	Basic facts, process and principle applied in trade of employment and hence is level 4.	4
Professional skill	Attaching utmost importance to safety and housekeeping, maintenance and operations of welding operations	demonstrate practical skill, routine and repetitive in wide range of application and Hence this is level 4	4
Core skill	Reading and writing; addition, subtraction; hygiene and environment.	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment. Hence this is level 4	4
Responsibility	Responsible for completing the assigned task, working under limited guidance of supervisor	Responsibility for own work and learning. and hence level 4	4

SECTION 3 EVIDENCE OF NEED

What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?

Basis	In case of SSC	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)
Need of the qualification The Indian and Steel Sector is second largest steel producing nation in the world after China poised to grow from 110MT to 300 MT by 2030. It will undergo a substantial transformation. The sector employs a total of 2 million direct and indirect workers, as of 2018.	The SSC would undertake market study and would enclosed demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or authorized secondary sources as well.	The Submitting Body would produce any reputable and reliable research reports, such as labour market information reports; occupational mapping similar research carried out by Ministry/State/Any other authentic source forecasting the demand for the proposed qualification
Industry Relevance We are in the process of taking industry validation.	The SSC would undertake validation of the job roles with actual end-user industry where such employment is going to be generated and absorbed instead of generic validation of industry. The SSC would	The Submitting Body would submit the list of industry participation while preparation of the curriculum/ course content of the qualifications. These could include minutes of

	submit the endorsements from users/intended users of the qualification clearly supporting or otherwise the need for trained people against specific job role.(The industry validation format to be used)	the meeting/ reports of these consultations
Usage of the qualification: This Qualification Pack will be used across iron and steel industry which is organised as well as unorganised	The SSC would submit details of the employment generated (wherever applicable) and realised by virtue of training in the Qualifications of the sector earlier submitted for NSQF alignment. In case of unorganized sector, case studies or evidences may be given	The submitting body would submit the details of trained and placed data in the proposed qualification (if an existing qualification is being proposed for NSQF alignment) Information about the success of the qualification should be given (e.g. uptake figures, examples of use in recruitment and placement rates (if known) should be given. However, many of the bodies that do not have placement tracking mechanism established in place would provide necessary endorsements by the state/ ministry stating that a tracking mechanism would be institutionalized and placement records shall be provided annually or later, depending on length of qualification.
Estimated uptake The Iron and Steel sector will require a	The SSC would submit the estimated uptake of the qualification and	The Submitting Body should submit the estimated uptake by

	routine tasks like social intelligence, complex critical thinking, and creative problem solving to remain relevant in the steel industry. out to uptake qualific of this include number in cou which v people	teps were carried test the likely of the ation? The basis estimate should data about the rof jobs or places rses of learning will be available to who are awarded alification.	reflecting the number of the takers for this qualification for at least two years from submission of the qualification		
2	Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences N/A				
3	What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification NSDC list of Approved and Under-Development QPs was checked prior to commencement the work.				
4	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? Specify the review process here • Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation • Monitoring of results of assessments • Employer feedback will be sought post-placement • A formal review is scheduled by 2026				

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4 EVIDENCE OF 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?
 - 1. Endorsed and accepted by the Industry players
 - 2. Formal recognition from the Industry players
 - 3. Horizontal and vertical mobility options are available