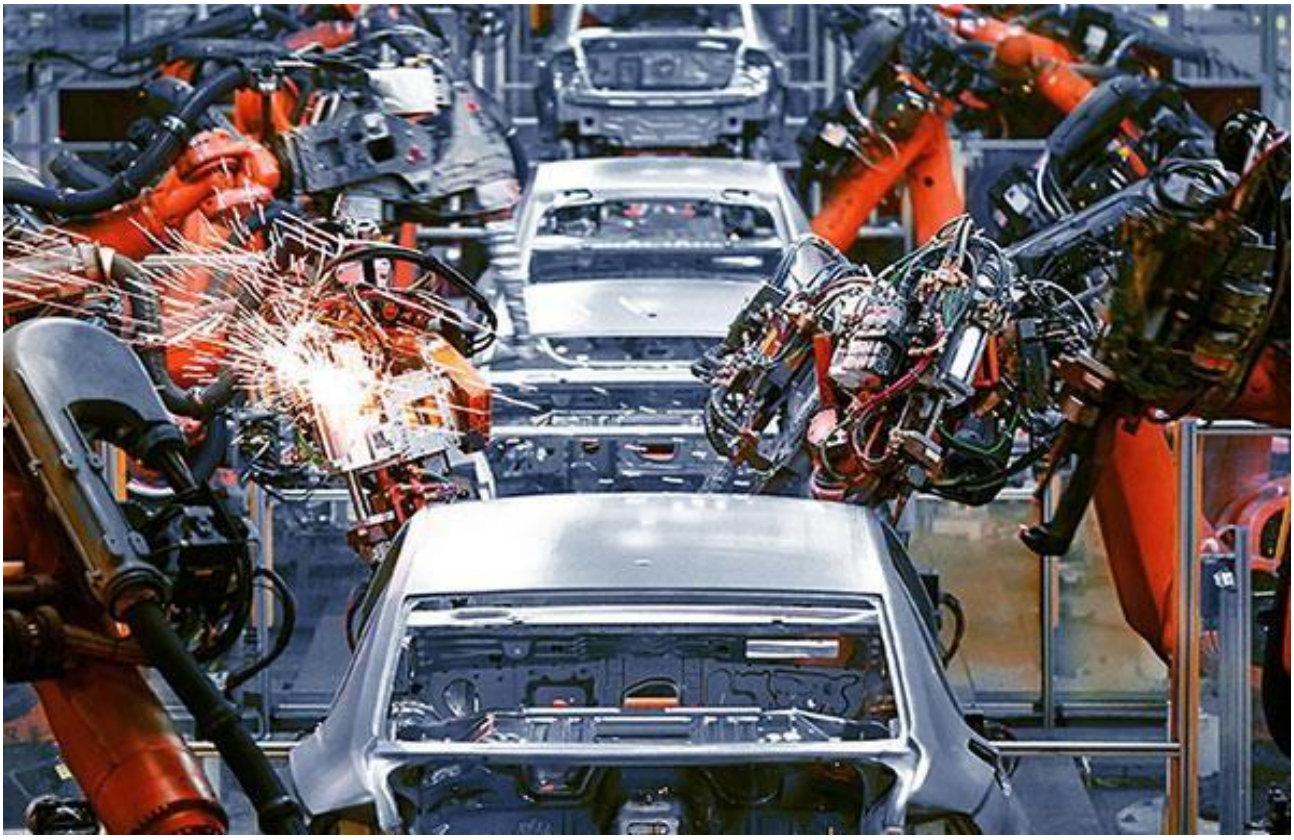

Model Curriculum

QP Name: Automotive Welding Machine Trainer

QP Code: ASC/Q3110

QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

Automotive Skills Development Council | 153, Gr Floor, Okhla Industrial Area, Phase – III, Leela Building, New Delhi – 110020

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Training Parameters

Sector	Automotive
Sub-Sector	Manufacturing
Occupation	Metal Joining
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3122.4702
Minimum Educational Qualification and Experience	10th Class + I.T.I (Welder) with 2 Years of relevant experience OR 12th Class with 4 years relevant experience OR 3 years Diploma (Mechanical/Automobile) from a recognized body (after class 12th) OR Certificate-NSQF (Automotive Welding Machine Technician Level 4)) with 2 Years of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	20 years
Last Reviewed On	25/11/2021
Next Review Date	25/11/2026
NSQC Approval Date	25/11/2021
QP Version	1.0
Model Curriculum Creation Date	25/11/2021
Model Curriculum Valid Up to Date	25/11/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	510 Hours 00 Minutes
Maximum Duration of the Course	510 Hours 00 Minutes

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Employ appropriate practices to conduct training session to meet the learner needs.
- Demonstrate how to conduct the assessment and evaluate the evidence to identify whether the required competencies achieved by trainee or not.
- Carry out preparatory activities such as preparation of material, inspection of tools and equipment etc.
- Carry out welding and post-welding operations.
- Work effectively and efficiently as per schedules and timelines.
- Implement safety practices.
- Use resources optimally to ensure less wastage and maximum conservation.
- Communicate effectively and develop interpersonal skills.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**05:00**	**00:00**			**05:00**
Module 1: Introduction to the role of an Automotive Welding Machine Trainer	05:00	00:00			05:00
ASC/N9810: Manage work and resources (Manufacturing) NOS Version No. – 1.0 NSQF Level – 5	**20:00**	**40:00**	-	-	**60:00**
Module 2: Manage work and resources according to safety and conservation standards	20:00	40:00	-	-	60:00
ASC/N9812 – Interact effectively with team, customers and others NOS Version No. 1.0 NSQF Level 5	**20:00**	**35:00**			**55:00**
Module 3: Communicate effectively and efficiently	20:00	35:00			55:00
ASC/N9805 – Interpret engineering drawing NOS Version No. – 1.0 NSQF Level – 4	**15:00**	**15:00**			**30:00**
Module 4: Interpret engineering drawing	15:00	15:00			30:00
ASC/N3117 – Plan and	**30:00**	**60:00**			**90:00**

deliver competency based, instructor-led training sessions for welding operations as per session plan **NOS Version No. 1.0** **NSQF Level 5**					
Module 5: Plan and deliver training sessions as per session plan	30:00	60:00			90:00
ASC/N3118 – Evaluation and assessment of welders **NOS Version No. 1.0** **NSQF Level 5**	**30:00**	**60:00**			**90:00**
Module 6: Evaluation and assessment of trainees	30:00	60:00			90:00
ASC/N3119 – Conduct technical training of welding team **NOS Version No. – 1.0** **NSQF Level – 5**	**60:00**	**120:00**			**180:00**
Module 7: Conduct technical training on welding activities	60:00	120:00			180:00
Total Duration	**180:00**	**330:00**			**510:00**

Module Details

Module 1: Introduction to the role of an Automotive Welding Machine Trainer

Bridge module

Terminal Outcomes:

- Discuss the role and responsibilities of an Automotive Machining Trainer.

Duration: *<05:00>*	**Duration**: *<00:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the role and responsibilities of an Automotive Welding Machine Trainer. • Discuss the job opportunities for an Automotive Welding Machine Trainer in the automobile industry. • Explain about Indian automotive manufacturing market. • List various automobile Original Equipment Manufacturers (OEMs) and different products/ models manufactured by them. • Discuss organisations training and assessment system policies and procedures followed in the industry.	
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 2: Manage work and resources according to safety and conservation standards

Mapped to ASC/N9810, v1.0

Terminal Outcomes:

- Employ appropriate ways to maintain safe and secure working environment
- Apply material and energy conservation practices at the workplace.

Duration: *<20:00>*	**Duration**: *<40:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss organisational procedures for health, safety and security and individual role and responsibilities related to the same. • List the potential workplace related risks, threats and hazards, their causes and preventions. • List personal protective equipment like safety gloves, glasses, shoes and mask used at the workplace. • List various types of fire extinguisher. • Identify various safety boards/ signs placed on the shop floor. • Explain 5S standards, procedures and policies followed at workplace. • Discuss organisational procedures to deal with emergencies and accidents at the workplace and importance of following them. • State the importance of conducting safety drills or training sessions. • Explain the process of filling daily check sheet for reporting to the concerned authorities about improvements done and risks identified. • Discuss how and when to report about potential hazards identified in the workplace and limits of responsibility for dealing with them. • Outline the importance of keeping workplace, equipment, restrooms etc. clean and sanitised. • Explain the importance of following hygiene and sanitation regulations developed by organisation at the workplace. • Discuss the importance of maintaining the availability of running water, hand wash and alcohol-based sanitizers at the	• Apply appropriate ways to implement safety practices to ensure safety of people at the workplace. • Display the correct way of wearing and disposing PPE. • Demonstrate the use of fire extinguisher. • Demonstrate how to provide first aid procedure in case of emergencies. • Demonstrate how to evacuate the workplace in case of an emergency. • Employ various techniques for checking malfunctions in the machines with the support of maintenance team and as per Standard Operating Procedures (SOP). • Demonstrate to arrange tools/ equipment/ fasteners/ spare parts into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions. • Apply appropriate ways to organise safety drills or training sessions for others on the identified risks and safety practices. • Prepare a report about the health, safety and security breaches. • Apply appropriate ways to check that workplace, equipment, restrooms etc. are cleaned and sanitised. • Role play a situation to brief the team about the hygiene and sanitation regulations developed by organisation. • Demonstrate the correct way of washing hands using soap and water and alcohol-based hand rubs. • Apply appropriate methods to support the employees to cope with stress, anxiety etc. • Demonstrate proper waste collection and disposal mechanism depending upon types of waste.

workplace. • Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol based hand sanitizers or soap. • Recall ways of reporting advanced hygiene and sanitation issues to the concerned authorities. • Elucidate various stress and anxiety management techniques. • Discuss the significance of greening. • Classify different categories of waste for the purpose of segregation. • Differentiate between recyclable and non-recyclable waste. • Discuss various methods of waste collection and disposal. • List the various materials used at the workplace. • Explain organisational recommended norms for storage of tools, equipment and material. • Discuss the importance of efficient utilisation of material and water. • Explain basics of electricity and prevalent energy efficient devices. • Explain the processes to optimize usage of material and energy/electricity. • Enlist common practices for conserving electricity at workplace.	• Perform the steps involved in storage of tools, equipment and material after completion of work. • Employ appropriate ways to resolve malfunctioning (fumes/ sparks/ emission/ vibration/ noise) and lapse in maintenance of equipment as per requirements. • Perform the steps to prepare a sample material and energy audit reports. • Employ practices for efficient utilization of material and energy/electricity.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Housekeeping material: Cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel, fire extinguisher • Safety gears: Safety shoes, ear plug, goggles, gloves, helmet, first-aid kit	

Module 3: Communicate Effectively and Efficiently

Mapped to ASC/N9812, v1.0

Terminal Outcomes:

- Use effective communication and interpersonal skills.
- Apply sensitivity while interacting with different genders and people with disabilities.

Duration: *<20:00>*	**Duration**: *<35:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of complying with organizational requirements to share information with team members. • Discuss the ways to adjust the communication styles to reflect sensitivity towards gender and persons with disability (PwD). • Explain the importance of respecting personal space of colleagues and customers. • Describe the ways to manage and coordinate with team members for work integration. • State the importance of team goals over individual goals, keeping commitment made to team members, and informing them in case of delays. • Discuss the importance of following the organisation's policies and procedures • Discuss the importance of rectifying errors as per feedback and minimizing mistakes. • Discuss gender-based concepts, issues and legislation as well organization standards, guidelines, rights and duties of PwD. • Discuss the importance of PwD and gender sensitization to ensure that team shows sensitivity towards them. • State the importance of following organizational standards and guidelines related to PwD. • Recall the rights and duties at workplace with respect to PwD. • Outline organisation policies and procedures pertaining to written and verbal communication.	• Employ different means and methods of communication depending upon the requirement to interact with the team members. • Employ appropriate ways to maintain good relationships with team members and superiors. • Apply appropriate techniques to resolve conflicts and manage team members for smooth workflow. • Conduct training sessions to train the team members on proper reporting of completed work and receiving feedback. • Employ suitable ways to escalate problems to superiors as and when required. • Prepare a sample report on the progress and team performance . • Role play a situation on how to offer help to people with disability (PwD) if required at work.
Classroom Aids:	
Whiteboard/blackboard, marker/chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	

Module 4: Interpret engineering drawing

Mapped to ASC/N9805 v1.0

Terminal Outcomes:

- Describe the basics of engineering drawing.
- Interpret the machine drawings and symbols for understanding the job requirements.

Duration: *<15:00>*	**Duration**: *<15:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Identify uniqueness, dimensioning and important features of 2D and 3D shapes. • Identify types of lines, angles, points and their symmetry in shapes. • Differentiate between first angle and third angle projection. • Interpret 3 axis (x, y and z axis) of projection and machine symbols used in drawing. • Describe GD&T and use of its symbols in the drawings. • Identify required limits and tolerances of component from drawing. • Explain standards used in India for making assembly drawings. • Identify organisational drawing standards for interpreting the work requirements appropriately.	• Read an object in first angle and third angle projection. • Demonstrate appropriate way of reading and interpreting the shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection. • Interpret and read orthographic and isometric views. • Read GD&T symbols in the given drawing. • Employ appropriate ways of storing the drawings in a defined and appropriate place. • Role play a situation on how to communicate the changes in drawing to the concerned authority.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Drawing tools • Machine drawing handbook • Machine drawings	

Module 5: Plan and deliver training sessions as per session plan

Mapped to ASC/N3117, v1.0

Terminal Outcomes:

- Identify training requirements through training documentation.
- Demonstrate ways to deliver training sessions as per the learner needs.
- Prepare and modify the records and documents related to leaner and training delivery.

Duration: *<30:00>*	**Duration**: *<60:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the information derived from training documentation such as trainer's guide, occupational standards to be achieved, curriculum and training schedule about the training requirements. • Discuss ways to identify learner needs and its characteristics. • List the training environment requirements like venue, tools, equipment, materials, space, layout and seating arrangements, stationery, etc. • Discuss the organisational process of collecting and arranging the training tools, equipment and material from the store. • List the steps to be performed for setting the required training tools, equipment and material. • Elaborate ways to analyse risks pertaining to training delivery. • Discuss the need of training and how the trainees would benefit from it. • Discuss various training methods and processes and their impact on the trainee learning needs. • Describe various facilitation techniques and learning principles. • Discuss the need of maintaining positive learning environment. • Elaborate ways to handle inappropriate behavior in a professional manner. • Discuss the importance of monitoring and documenting the learner progress and sharing the feedback with learners. • Discuss the documents and records needed to be maintained and stored related to learners and training. • Describe organisational record-management systems and reporting requirements.	• Apply appropriate ways for collecting the details of learners. • Employ session plans in accordance with special learner needs, time and availability of materials etc. • Show how to arrange and set the required training tools, equipment and material as per the training requirement. • Show how to modify the session plans in specified templates as per organisational procedures. • Employ appropriate ways to maintain the availability of required training materials, facility, technology, tools and equipment during the delivery of learning sessions. • Apply appropriate ways to check that training area is risk free and equipped with necessary health and safety resources. • Show how to facilitate the training session as per the session plan and modify it to meet the required learner needs. • Show how to start the training session with an icebreaker activity. • Demonstrate various training methods and processes like lectures, both way conversation, demonstration, field trips, case studies. • Show how to design the sessions in such a manner that it meets the learner needs. • Apply appropriate facilitation techniques and learning principles to meet learner needs and ensure trainees participation. • Employ practices to create and maintain a positive learning environment. • Apply appropriate ways to manage the inappropriate behaviour of trainees during the session. • Perform steps to monitor and document the learner progress. • Apply appropriate ways to share feedback

	with learners on a regular basis and keep them updated on their progress. • Show how to make adjustments in the delivery sessions on the basis of learner needs and progress.
Classroom Aids:	
Whiteboard, marker pen, projector, computer	
Tools, Equipment and Other Requirements	
Sample trainer guide, sample trainee handbook, sample curriculum, sample session plan	

Module 6: Evaluation and assessment of trainees

Mapped to ASC/N3118, v1.0

Terminal Outcomes:

- Identify requirements for conducting the assessment.
- Perform the steps to conduct assessment and evaluate the evidence of assessment.
- Prepare documents and records related assessment, result and learner.

Duration: *<30:00>*	**Duration**: *<60:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the performance indicators need to be measured during the assessment. • Elaborate ways to analyse the learner performance that indicates achievement. • Describe units of competency for assessing the learner performance. • Elaborate various assessment tools for collecting the evidence of assessment. • List tools, equipment and materials required during the assessment. • Differentiate between assessment tools and assessment instrument. • Elucidate different types of assessment. • Discuss how competency based assessment differs from other types of assessment. • Recall competency standards as the basis of qualifications. • Discuss the need of explaining the purpose of formative assessment and what will be assessed to the learners before the assessment. • List the steps to be performed for conducting the assessment. • Elucidate principles of assessment and rules of evidence. • List the steps to be performed for analysing, evaluating and recording the assessment evidence and result. • Describe different types of feedback. • Discuss need of constructive feedback. • Discuss the documents and records needed to be prepared and maintained related to assessment, assessment result and learner performance as per organisational guidelines.	• Perform steps to evaluate the learner performance against the performance criteria to be achieved. • Apply appropriate ways to record and share the feedback with management and learner by following organisational guidelines. • Prepare schedule of the assessments as prescribed in the training plan. • Show how to assess the units of competency and identify the assessment tools based on it. • Employ appropriate ways to maintain the availability of required tools, equipment and materials during the assessment. • Demonstrate organisational procedure of conducting assessment and using tools and technology during the assessment. • Apply appropriate ways to collect assessment evidence by following the principles of assessment and rules of evidence. • Perform steps to evaluate the evidence, judge the result and prepare records of the same. • Show how to identify learning gaps and competency level achieved on the basis of assessment result. • Apply appropriate ways to give the feedback to candidate on the basis of assessment result. • Draft sample development plan for learner to cover the learning gaps identified in assessment. • Show how to pack, label and store the learner documents.
Classroom Aids:	
Whiteboard, marker pen, projector, computer/ laptop, speaker	
Tools, Equipment and Other Requirements	

Module 7: Conduct technical training on welding activities

Mapped to ASC/N3119, v1.0

Terminal Outcomes:

- Identify tools and equipment required for welding.
- Demonstrate pre-welding activities such as inspection of tools, selection of workpiece etc.
- Demonstrate various welding methods such as spot, seam, MIG, TIG and robotic welding.
- Demonstrate post-welding activities.

Duration: *<60:00>*	**Duration**: *<120:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the necessary precautions to be taken to avoid any hazard and accident during welding activities. • Discuss basic principle of welding process. • Explain various types of welding (MIG, MAG, TIG, Resistance Welding, Robotic Welding etc.), welding joints and welding positions. • Discuss the information derived from welding drawing, Welding Procedure Specification (WPS), job orders, SOPs, manual etc. about the welding requirements and output product specifications. • List tools, measuring instruments, equipment, accessories, consumables and input material required during welding work. • Explain the selection criteria of tools, equipment, accessories, consumables, measuring instruments and input material for the welding work. • Recall the ISO colour codes for welding apparatus. • Summarise the steps to be performed for checking the functioning of tools and equipment required. • Discuss methods to clean the electrodes, metal surfaces etc. • Discuss all technical aspects and performance parameters of the different types of welding. • Discuss the importance of maintaining welding parameters like voltage, current, gas flow rate, speed, electrodes distance, contact area, pressure etc. as per the Work Instructions (WI) and their impact on quality and quantity of output product. • Summarise the steps to be performed for	• Show how to read and interpret the welding drawing, Welding Procedure Specification (WPS), job orders, SOPs, manual etc. for identifying work requirements and selecting welding method. • Demonstrate the standard operating procedure to use tools, measuring instruments and equipment required during job. • Apply appropriate ways of checking the tools and equipment for defects before use. • Demonstrate how to check the input component for the welding work as per the work instructions. • Show how to prepare raw material and electrodes as per the selected welding method. • Show how to set the welding machine and its parameters as per the work instructions. • Demonstrate the procedure of installing the work pieces and fixture on the apparatus and aligning with the electrodes. • Role play a situation on how to ensure that all learners are seeing the demonstration, hearing the instructions and explanations clearly and getting the opportunity of practicing the procedures discussed. • Role play a situation on how to guide the trainee during the demonstration of tasks and procedures discussed. • Demonstrate organizational specified procedure of all types of welding such as MIG, MAG, TIG, Resistance Welding, Robotic Welding etc.

installing the work pieces and fixture on the apparatus and aligning with the electrodes as per requirements. • Discuss the do's and don'ts of the manufacturing process as per SOPs/ work instructions. • Discuss the importance of monitoring process parameters during the welding and correcting them as per the requirements. • List the steps to be performed for observing and recording machine performance. • Discuss post welding processes like inspection, cleaning, maintenance etc. • List the steps to be performed for quality check of finished products. • Discuss various inspection methods and testing techniques like visual inspection, destructive and non-destructive tests for inspecting the quality of welded workpieces. • List the commonly occurring defects in the welded workpieces. • Discuss the process of segregating, tagging and storing of damaged and ok workpieces as per organisational guidelines. • List machine maintenance and repairing activities needed to be done after completion of work. • Discuss the documents and records needed to be prepared and maintained related to welding activities done.	• Show correct way of holding the welding torch and filler wire, maintaining the welding direction, travel and feed speed during the welding and produce joints of the specified dimensional accuracy and required weld quality. • Employ appropriate ways of measuring and comparing welded component dimensions with the specified dimensions in the job orders. • Employ appropriate ways for checking the machine operations for any defects in the component. • Role play a situation to communicate the defects in the machine and its components to supervisor/ maintenance team for correction. • Read the measurement gauges to monitor the process parameters and maintain the quality standards. • Apply appropriate inspection methods for identifying the defects and checking the quality of welded workpieces as per the control plan. • Show how to repair the defective workpieces as per SOP/WI. • Demonstrate how to check that welded pieces are segregated, tagged and stored as per organisational guidelines. • Show how to conduct minor maintenance and repairing activities of machine and its components. • Show how to address the queries of participants and give them feedback according to that. • Show how to monitor the cleanliness of training room and store the training tools and equipment as per organisational guidelines.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Basic tool box, Work bench with vice • Hammer scaling 0.25 kg. with handle, Hammer ball pin 1 kg. with handle, Chisel cold flat 19 mm, Chisel cold cross 9mm, Centre punch 9mm x 127mm, Dividers 20 cm, Wire brush 15 cm x 3.7 mm, Spark lighter, Chipping screen hand, Number punch 6 mm and letter punch 6 mm, Square blade 15 cm, Scriber 15 cm, Tongs holding • Brass rule 30 cm or nickel chrome steel rule 30 cm, Screw driver 25cm blade and 20 cm blade, Hacksaw frame adjustable 30 cm, Magnifying glass 15 cm, Weld measuring gauge fillet and butt, File half round bastard 30 cm, File flat 35 cm rough, Steel tape 182 cm flexible in case, Try square	

- Rubber hose clips, Spindle key (for opening cylinder valve), Pressure regulator oxygen double stage, Pressure regulator acetylene regulator, Tip cleaner, Outfit spanner
- Power hacksaw, Portable grinder
- Power source, TIG welding set complete 300 amps with flexible coupling copper wound, Welding cables to carry 350 amps with flexible rubber copper, GMAW/MIG welding set, Spot / Butt welding set
- Dye penetrant test kit, Ultrasonic testing kit, Magnetic particle testing kit, X-ray testing kit
- Hand book, job orders, work order, completion material requests, and Technical Reference Books.
- Safety materials: Fire extinguisher, welding helmet, Leather sleeves, leather safety gloves, leather aprons, safety glasses with side shields, ear plug, safety shoes and first-aid kit
- Cleaning material: Tip cleaner, wire brush (M.S.), cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
B.E/B.Tech	Mechanical/Automobile	4	Welding	1	Welding	NA
B.E/B.Tech	Mechanical/Automobile	5	Welding	0	Welding	NA
M.E/M.Tech	Mechanical/Automobile	2	Welding	2	Welding	NA
Diploma	Mechanical/Automobile	5	Welding	1	Welding	NA
ITI	Welder	7	Welding	1	Welding	NA

Trainer Certification	
Domain Certification	**Platform Certification**
"Automotive Welding Machine Trainer, ASC/Q3110, version 1.0". Minimum accepted score is 80%.	"Trainer, MEP/Q2601 v1.0" Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
B.E/B.Tech	Mechanical/Automobile	5	Welding	1	Welding	NA
B.E/B.Tech	Mechanical/Automobile	6	Welding	0	Welding	NA
M.E./ M.Tech	Mechanical/Automobile	3	Welding	2	Welding	NA
Diploma	Mechanical/Automobile	6	Welding	1	Welding	NA
ITI	Welder	8	Welding	1	Welding	NA

Assessor Certification	
Domain Certification	**Platform Certification**
"Automotive Welding Machine Trainer, ASC/Q3110, version 1.0". Minimum accepted score is 80%.	"Assessor; MEP/Q2701 v1.0" Minimum accepted score is 80%.

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Assessment Strategy

1. Assessment System Overview:
    - Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
    - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
    - Assessment agency deploys the ToA certified Assessor for executing the assessment
    - SSC monitors the assessment process & records

2. Testing Environment:
    - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
    - Check the duration of the training.
    - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
    - If the batch size is more than 30, then there should be 2 Assessors.
    - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
    - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
    - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
    - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
    - Question papers created by the Subject Matter Experts (SME)
    - Question papers created by the SME verified by the other subject Matter Experts
    - Questions are mapped with NOS and PC
    - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
    - Assessor must be ToA certified & trainer must be ToT Certified
    - Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:
    - Time-stamped & geotagged reporting of the assessor from assessment location
    - Centre photographs with signboards and scheme specific branding
    - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
    - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:
    - Surprise visit to the assessment location
    - Random audit of the batch
    - Random audit of any candidate

6. Method for assessment documentation, archiving, and access
    - Hard copies of the documents are stored
    - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
    - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
SOP	Standard Operating Procedure
WI	Work Instructions
PPE	Personal Protective equipment