

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role : Senior Tungsten Inert Gas Welder (GTAW)

Qualification Pack : CSC/Q0213

Sector Skill Council : Capital Goods Skill Council

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 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 this criteria
5. To pass the Qualification Pack , every trainee should score a minimum of 70% in every NOS
6. 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.

Assessable Outcomes	Assessment Criteria	Total Marks	Out of	Theory	Practical Skills
CSC/N0213 Manually welding joints using the TIG (GTAW) Process	PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	100	2	1	1
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for TIG welding operations		2	1	1
	PC3. check the condition of welding leads, gas connection arrangements, earthing arrangements and electrode holder		1	0	1
	PC4. report any faults or potential hazards to appropriate authority		1	0	1
	PC5. interpret weld procedure data sheets specifications		2	1	1
	PC6. select welding machines eg. transformer, inverters (AC/DC), rectifiers and generators, according to the materials and task		2	0	2
	PC7. select proper welding torch and tungsten electrode that meet the job requirement and specification		1	0	1
	PC8. obtain filler wire according to		2	1	1

specifications			
PC9. prepare for the TIG welding process	2	0	2
PC10. prepare the materials and joint in readiness for welding	2	0	2
PC11. select tungsten electrode by the colour of the tip according to base metal, and correct diameter	3	1	2
PC12. select and fit the welding shielding gases for a range of given applications	2	1	1
PC13. plan the welding activities before they start them effectively and efficiently for achieving specifications as per WPS	3	1	2
PC14. connect torches and components	3	1	2
PC15. connect and adjust regulators and flow meters to cylinders	2	0	2
PC16. read, set and adjust current (amperage) as required	2	0	2
PC17. set pre-purge with shielding gas as required	2	0	2
PC18. prepare tungsten by sharpening or balling it to desired tip shape	2	0	2
PC19. set and verify gas flow rates	2	0	2
PC20. prepare and support the joint, using the appropriate methods	3	1	2
PC21. tack weld the joint at appropriate intervals, and check the joint for accuracy before final welding	2	0	2
PC22. obtain clearance from quality control for weld joint before welding	1	0	1
PC23. match feed and travel speed as required	2	1	1
PC24. perform TIG welding operations using appropriate welding techniques to meet welding procedure specification requirements	4	1	3
PC25. use correct technique for starting the arc (using HF (high frequency) unit, scratching the electrode on the job material, lifting the electrode immediately after touching the job material)	3	1	2
PC26. use correct angle of torch and	2	1	1

filler wire			
PC27. weld the joint to the specified quality, dimensions and profile	3	1	2
PC28. use manual welding and related equipment, to carry out TIG welding processes	3	1	2
PC29. use welding consumables appropriate to the material and application, to include AC current types and DC current types	2	1	1
PC30. produce joints of the required quality and of specified dimensional accuracy which achieve a weld quality equivalent to Level B of ISO 5817	4	1	3
PC31. use both methods to produce the various joints a) with filler wire b) without filler wire (autogenously)	3	1	2
PC32. produce joints from various materials in different forms	3	1	2
PC33. weld joints in good access situations, in select positions	3	1	2
PC34. shut down and make safe the welding equipment on completion of the welding activities	2	0	2
PC35. make sure that the work area is maintained and left in a safe and tidy condition	1	0	1
PC36. use appropriate methods and equipment to check the quality, and that all dimensional and geometrical aspects of the weld are to the specification	3	1	2
PC37. check that the welded joint conforms to the specification, by checking various quality parameters using visual inspection	3	1	2
PC38. identify various weld defects	2	0	2
PC39. detect surface imperfections and deal with them appropriately	2	0	2
PC40. carry out LPT tests to assess fine defect open to the surface not detected by visual inspection (VT)	3	1	2
PC41. assist in preparation for non-destructive testing of the welds for a range of tests	2	1	1
PC42. prepare for destructive tests on weld specimens for select tests	2	1	1

	PC43. follow the established organisational process for dealing with the welded pieces including handover, storage, safety and security, record keeping, etc.		2	1	1
	PC44. detect equipment malfunctions and deal with them appropriately		1	0	1
	PC45. deal promptly and effectively with problems within their control, and seek help and guidance from the relevant people if they have problems that they cannot resolve		1	0	1
		Total	100	26	74
CSC/N1335 Use basic health and safety practices at the workplace	PC1. use protective clothing/equipment for specific tasks and work conditions	100	5	2	3
	PC2. state the name and location of people responsible for health and safety in the workplace		3	1	2
	PC3. state the names and location of documents that refer to health and safety in the workplace		3	1	2
	PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace		5	2	3
	PC5. carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role		4	2	2
	PC6. state location of general health and safety equipment in the workplace		3	2	1
	PC7. inspect for faults, set up and safely use steps and ladders in general use		5	2	3
	PC8. work safely in and around trenches, elevated places and confined areas		5	2	3
	PC9. lift heavy objects safely using correct procedures		5	2	3
	PC10. apply good housekeeping practices at all times		4	2	2
	PC11. identify common hazard signs displayed in various areas		5	2	3
	PC12. retrieve and/or point out documents that refer to health and		3	1	2

	safety in the workplace				
	PC13. use the various appropriate fire extinguishers on different types of fires correctly	4	1	3	
	PC14. demonstrate rescue techniques applied during fire hazard	4	1	3	
	PC15. demonstrate good housekeeping in order to prevent fire hazards	3	1	2	
	PC16. demonstrate the correct use of a fire extinguisher	4	1	3	
	PC17. demonstrate how to free a person from electrocution	4	1	3	
	PC18. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.	4	1	3	
	PC19. demonstrate basic techniques of bandaging	3	1	2	
	PC20. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments	4	1	3	
	PC21. perform and organize loss minimization or rescue activity during an accident in real or simulated environments	3	1	2	
	PC22. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases	3	1	2	
	PC23. demonstrate the artificial respiration and the CPR Process	3	1	2	
	PC24. participate in emergency procedures	3	2	1	
	PC25. complete a written accident/incident report or dictate a report to another person, and send report to person responsible	4	1	3	
	PC26. demonstrate correct method to move injured people and others during an emergency	4	1	3	
	Total	100	36	64	
CSC/N1336 Work effectively with others	PC1. accurately receive information and instructions from the supervisor and fellow workers, getting	100	10	3	7

	clarification where required			
	PC2. accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt	10	3	7
	PC3. give information to others clearly, at a pace and in a manner that helps them to understand	10	3	7
	PC4. display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible	10	3	7
	PC5. consult with and assist others to maximize effectiveness and efficiency in carrying out tasks	10	3	7
	PC6. display appropriate communication etiquette while working	10	3	7
	PC7. display active listening skills while interacting with others at work	10	3	7
	PC8. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism	10	3	7
	PC9. demonstrate responsible and disciplined behaviors at the workplace	10	3	7
	PC10. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict	10	3	7
	Total	100	30	70