

3. Any change of more than 10% in the gas flow rate or any change in the gas composition.
 4. Any change greater than 15% in the specified arc voltage and welding current.
- B. If it is necessary to undertake a new welding procedure qualification the Engineer shall be given the opportunity of witnessing the welding and testing of the test plates. Each welding procedure qualification test shall be subjected to 100% non-destructive examination no sooner than 24 hours after completion of welding. Mechanical testing of the welding procedure qualification test pieces shall be carried out by an approved test laboratory. The type and number of tests shall be in accordance with ISO 15609-1
- C. All welding consumables shall be subject to Engineer approval. Welding consumables shall be used within the limits recommended by the consumable manufacturer.
- D. Welding shall be carried out in a sequence, which will minimise distortion, and shrinkage stresses. Successive welding passes shall not stop and start at the same point. Grinding of weld stop/starts prior to laying subsequent passes shall be mandatory.
- E. Each welding pass shall be visually inspected to ensure freedom from slag, porosity or cracks before the start of the next pass. Any defects shall be removed or repaired prior to the start of the next pass. On completion of the weld the adjacent surfaces shall be cleaned of all spatter, slag, flux and carbonaceous material.
- F. All welds shall be visually examined over the full length of the weld in accordance with ISO 17637 and the results of the examination shall be recorded. The acceptance criteria for visual examination shall be:
1. The weld has no cracks.
 2. Thorough fusion exists between adjacent layers of weld metal and between the weld metal and base metal.
 3. All craters are filled to the cross section of the weld.
 4. The external weld reinforcement shall be of smooth even contour with no excessive convexity or concavity.
- G. The following non-destructive testing techniques shall be applied and shall be performed a minimum 24 hours after completion of welding.
- Acceptance criteria shall be as specified in BS EN 1011.
1. Radiography to ISO 17636-2 & 17636-1.