

Welding Pre-Competition Activity

Need

To provide a skilled workforce to meet the needs of UK industry.

Aim

Is to raise the standard of training to provide multi skilled welders, with increased employability, and productivity.

Objective

The objective of the WorldSkills UK competition is to:

- challenge trainee welders to develop their skills in a competitive environment
- to inspire trainee welders to be ambitious to develop their careers
- to assess an individual's knowledge, practical skills against a set of strict criteria
- to assist employers and training providers to benchmark their own apprenticeship and training programmes.

The training provider can decide on the most appropriate method to deliver the competition to suit their local need's. All competitors must complete the welding geometry listed below, these can either be completed as individual test coupons or as a single fabricated structure which ever is the most appropriate method of delivery that will challenge the competitor and bring more purpose to their learning experience.

Training providers should aim to hold their passive heat as a competition as this will be more challenging for the competitor when they are being judged against their peers

Single test coupons can be used as part of the competitor's assessment for external awarding bodies. The minimum length of competed weld must be 200mm and a minimum plate thickness of 6mm.

Test piece No	Welding process	Welding position	Description	Welding position
1	MMA	PF	Lap Joint	Vertical-UP
2	MAG	PF	Lap Joint	Vertical Up
3	MMA	PF	Tee Fillet	Vertical
4	MAG	PF	Open Corner	Vertical
5	TIG	PB	Pipe to Plate	Horizontal/vertical
6	MAG	PB	Pipe to Plate	Horizontal/vertical
7	TIG	PD	90° Tee Fillet	Overhead
8	MMA	PE	Butt Weld	Overhead

Welding - Passive Heat Test Piece Marking Sheet Weld Test Piece using MMA 111, MAG 135 & TIG 141

All welding inspection to be made to EN ISO 5817 criteria D. Single short imperfection = -40% of marks available (ie 3/5 or 6/10), long imperfection = -80% (ie 1/5 or 2/10), systematic imperfections/not permitted = -100% (ie 0 marks)

Centre	Date	Candidate	Marker
		Name	Name
			Signature

Plate Fillet Welds PB & PD Position

WJ No	Tht Thk	Stop/Start	Overfill	Und/CldLap	Weld Uni	Fabrication	Total
WJ1 MAG	/10	/5	/5	/10	/10	/5	/45
WJ2 MAG	/10	/5	/5	/10	/10	/5	/45
WJ7 MMA	/10	/5	/5	/10	/10	/5	/45
WJ8 MMA	/10	/5	/5	/10	/10	/5	/45

Plate Butt Welds PA & PE Positions

WJ No	Penetration	Stop/Start	Overfill	Und/CldLap	Weld Uni	Fabrication	Total
WJ3 MMA	/10	/5	/5	/10	/10	/5	/45
WJ9 MMA	/10	/5	/5	/10	/10	/5	/45

Plate Corner Weld PF Position (TIG)

WJ No	Penetration	Stop/Start	Overfill	Und/Cldlap	Weld Uni	//////////	Total
WJ 4 TIG	/10	/5	/5	/10	/10	//////////	/40

Pipe/Plate Circular Welds PF position

WJ No	Tht Thk	Stop Start	Overfill	Und/Coldlap	Weld Uni	Fabrication	Total
WJ5 MAG	/10	/5	/5	/10	/10	/5	/45
WJ6 MAG	/10	/5	/5	/10	/10	/5	/45

TOTAL MARK /400