



**TW LTD**  
**Granta Park, Great Abington, Cambridge, CB1 6AL**

Web : [www.twisoftware.com](http://www.twisoftware.com) Email : [support@twisoftware.com](mailto:support@twisoftware.com)

**Example Report**

<b>Created on</b>	06 December 2007
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<b>Component name</b>	Component 1
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<b>Joint name</b>	Joint 1
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**General**

	Region 1	Region 2	Total
Cross sectional area (mm <sup>2</sup> )	15.659	15.659	31.318
Welding process	Submerged Arc	Plasma Arc	
Mechanisation	Mechanised	Mechanised	

**Travel Speed**

Travel speed (mm / min)	55	0	
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No of passes	1	2	3
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**Gas (Shielding)**

Type	-	Ar	
Unit cost (£ per 1000 litres)	-	5.36	
Gas flow rate (litres / min)	-	80	
Cost (£)	-	9.64	9.64

**Gas (Plasma)**

Type	-	Ar	
Unit cost (£ per 1000 litres)	-	5.36	
Gas flow rate (litres / min)	-	50	
Cost (£)	-	6.02	6.02



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**Rods**

Type	-	Aluminium alloys		
Diameter (mm)	-	1.6		
Unit cost (£)	-	0.03		
Length (mm)	-	1000		
Discard length (mm)	-	75		
Deposition efficiency (%)	-	100		
Cost (£)	-	0.42	0.42	

**Wires**

Type	Aluminium alloys	-		
Diameter (mm)	0.8	-		
Unit cost (£)	8.14	-		
Deposition efficiency (%)	100	-		
Cost (£)	0.34	-	0.34	

**Flux**

Type	Alumina basic	-		
Unit cost (£)	0.9	-		
Weld mass ratio	45	-		
Cost (£)	1.71	-	1.71	

**Labour**

Rate (£ per hour)	35	35		
Duty cycle (%)	80	80		
Operators per welding point	1	1		
Cost (£)	13.26	16.39	29.65	



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**Plant**

Length of working shift (hrs)	8	8	
Shifts per 24 hours	1	1	
Working days a week	5	5	
Working weeks per year	50	50	

Maintenance cost (£)	5	5	
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**Depreciation Cost**

Plant cost (£)	50000	50000	
Depreciation time (years)	5	5	
Interest rate (%)	10	10	
Cost (£)	3.05	3.77	6.82

**Power**

Source operating efficiency (%)	80	80	
Unit cost (£ per kwh)	0.11	0.11	

**Single Arc Head**

Welding current (A)	0	78	
Voltage level (V)	0	99	
Electricity cost (£)	0	0.39	0.39

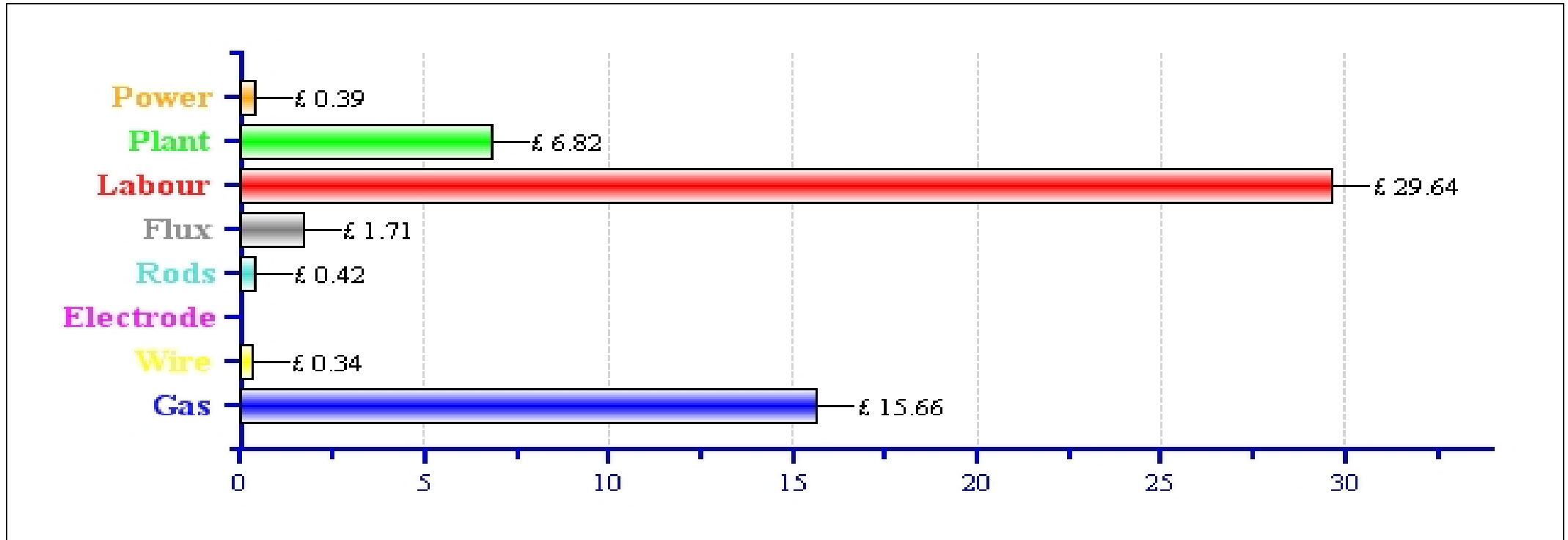


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**Results**



Electrodes cost (£)	0
Rods cost (£)	0.42
Wires cost (£)	0.34



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Flux cost (£)	1.71
Gas cost (£)	15.66
Labour cost (£)	29.64
Plant cost (£)	6.82
Power cost (£)	0.39
Total cost (£)	54.98
No of Rods used (per m)	0.2
No of Electrodes used (per m)	0
Amount of wire used (per m)	0.04
Amount of flux used (per m)	0.04
Arc time (m / mins)	40.65
Indirect time (m / mins)	10.16
Total time (m / mins)	50.81
Gas cost (Shielding) (£ per m)	17.44
Gas used (Shielding) (m)	3252
Gas cost (Plasma) (£ per m)	13.82
Gas used (Plasma) (m)	2577.9



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**Example Report**

**Time for Job Completion**

Number of equipment sets	5
Length of weld to produce (m)	6
Time to complete weld (s)	816
Total cost (£)	3.2988E+05
Electrode consumables required	0
Rod consumables required	180
Wire consumables required	2040
Flux consumables required	10260
Cost of consumables (£)	74880000

**Total Length of Weld**

Number of equipment sets	5
Total welding time (s)	816
Length of weld to produce (m)	6
Total cost (£)	3.2988E+05
Electrode consumables required	0
Rod consumables required	180
Wire consumables required	2040
Flux consumables required	10260
Cost of consumables (£)	74880000



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**Example Report**

**Equipment Sets**

Length of weld to be made (m)	6
Time to make the length (s)	816
Equipment sets required	5
Total cost (£)	3.2988E+05
Electrode consumables required	0
Rod consumables required	180
Wire consumables required	2040
Flux consumables required	10260
Cost of consumables (£)	74880000