

Handheld Plasma Cutting of Steel Plate - JSA - A

en-US · Basic task controls · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area			Assessor		Supervisor	
Team signatures							

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Inspect supply and gas							
HP-2 Verify separation support							
HP-3 Hold and restore controls							
HP-4 Inspect and hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Plan plate and cut path	1. Cut-piece fall 2. Wrong plate cut 3. Hazardous coating fumes	1. Final separation unreviewed 2. Plate ID confused 3. Coating unknown	1. Review both resulting pieces 2. Match plate and cutting layout 3. Identify metal and coating	1. Plate and cut-piece IDs 2. Cut path and final support 3. Material and coating evidence				
2. Set support and shielding	1. Plate movement crush 2. Fire from sparks 3. Cable insulation damage	1. Support inadequate 2. Combustibles below table 3. Lead touches hot edge	1. Secure suitable supports 2. Remove or protect combustibles 3. Protect lead and hose routes	1. Support and restraint 2. Spark-reach inspection 3. Cable and hose routing				
3. Verify separation support	1. Cut piece drops 2. Retained plate tips 3. Molten-metal impact	1. Support outside final piece 2. Sequence not reviewed 3. Person below cut	1. Support each resulting piece 2. Confirm final cutting sequence 3. Exclude below and drop area	1. Piece weight and support 2. Retained-plate stability 3. Drop zone and removal method				
4. Cut and monitor	1. Fume inhalation 2. Arc-radiation injury 3. Fire development	1. Extraction fails 2. Protection unsuitable 3. Sparks reach combustibles	1. Maintain specified extraction 2. Use correct radiation protection 3. Watch exposed areas	1. Extraction and air conditions 2. Screens and filter selection 3. Sparks and combustibles				
5. Service and clear pieces	1. Stored-energy shock 2. Gas-pressure release 3. Hot-consumable burn	1. Switch off used alone 2. Residual gas ignored 3. Cooling skipped	1. Apply permitted service procedure 2. Control supply and residual energy 3. Confirm safe handling condition	1. Isolation and service authority 2. Gas and cooling condition 3. Compatible consumables				
6. Inspect and hand over	1. Hot-piece burn 2. Edge laceration 3. Uninspected part used	1. Heat not identified 2. Storage unstable 3. Part identity lost	1. Mark hot and sharp material 2. Use stable storage 3. Link part and inspection record	1. Heat and access restrictions 2. Storage and removal condition 3. Part inspection and open defects				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Plate and cut-piece IDs	☐ Support and restraint	☐ Piece weight and support
☐ Extraction and air conditions	☐ Isolation and service authority	☐ Heat and access restrictions
☐ Material and coating evidence	☐ Sparks and combustibles	☐ Part inspection and open defects