

Process-instrument impulse tubing - JSA - C

en-SG · Supervision, records, handover · 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 Isolate and verify							
HP-2 Assemble and support							
HP-3 Test controlled boundary							
HP-4 Restore and transfer							

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. Process and permit scope	1. Wrong line opened 2. Hazardous release 3. Process signal lost	1. Tags not traced 2. Fluid unclear 3. Operations not briefed	1. Match P&ID and instrument 2. Review fluid and SDS 3. Agree operations and PTW scope	1. Process and instrument IDs 2. Fluid pressure and temperature 3. Permit and operating restrictions				
2. Isolation acceptance	1. Trapped-pressure release 2. Hot-fluid contact 3. Pressure reaccumulation	1. Zero gauge trusted alone 2. Drain path blocked 3. Valve leakage missed	1. Verify actual boundary 2. Use designated discharge route 3. Confirm and recheck safe state	1. Isolation and drain evidence 2. Residual pressure and heat 3. Reaccumulation review				
3. Tube and fitting acceptance	1. Connection separation 2. Corrosion failure 3. Repeated leak	1. Wall or material wrong 2. Manufacturer parts mixed 3. Reassembly method confused	1. Trace tube and fitting system 2. Verify permitted combination 3. Use actual assembly method	1. Material size wall and lot 2. Body nut and ferrule identity 3. Initial or reassembly record				
4. Hookup and support review	1. False pressure reading 2. Fatigue leak 3. Instrument overload	1. Gas or liquid trapped 2. Support omitted 3. Thermal movement restrained	1. Match actual service routing 2. Verify high and low legs 3. Provide designed supports	1. Hookup and leg identification 2. Slope and trapped-phase review 3. Support and thermal details				
5. Test and fault control	1. Test-pressure injury 2. Unseen leak exposure 3. Device damage	1. Boundary or limit unknown 2. Leak felt by hand 3. Live tightening attempted	1. Release defined test only 2. Exclude release paths 3. Depressurise before repair	1. Medium pressure and criteria 2. Instrument protection and zone 3. Fault correction and retest				
6. Functional restoration	1. Wrong process response 2. Residual test medium 3. Uncontrolled valve lineup	1. Leak test treated as function 2. Temporary restriction forgotten 3. Valve order improvised	1. Confirm specified function 2. Restore by operations procedure 3. Transfer remaining holds	1. Final valve and drain state 2. Instrument and loop response 3. Operations acceptance and limits				

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

4. Pre-work checklist

☐ Process and instrument IDs	☐ Isolation and drain evidence	☐ Material size wall and lot
☐ Hookup and leg identification	☐ Medium pressure and criteria	☐ Final valve and drain state
☐ Permit and operating restrictions	☐ Support and thermal details	☐ Operations acceptance and limits