Job Safety Analysis for Manufacturing

Service Objectives

- Convert real work into clear, verified, standardised safe work instructions at step level.
- Integrate JSAs with SOPs, Permit-to-Work (PTW), Lockout/Tagout (LOTO), maintenance plans, and training.
- Identify credible failure modes and define engineered, administrative, and PPE controls for each step.
- Align with ISO 45001 requirements so risk identification and operational control are implemented at the point of work.
- Reduce incident potential (pinch/crush, entanglement, slips/trips, falling objects, chemical exposure, arc flash/electrical, ergonomic strain).
- Improve permit quality, sustain outcomes via templates and coaching, and connect outputs to document control, CMMS, and training matrices.

> Designed for high-throughput, multi-shift operations with short downtime windows. Emphasises verification steps (try-out, line clearance, re-energisation) and offers bilingual, permit-ready outputs.

Who This Service Is For

- HSE managers, plant managers, production supervisors, maintenance planners, and QA/engineering leads.
- Facilities with presses and punch machines, high-speed conveyors and robotics, hot works, solvent use, confined spaces, and mobile equipment (forklifts/reach trucks).
- Multi-shift plants with contractors and multilingual workforces handling changeovers, CIP, die swaps, jam-clearing, and troubleshooting.
- Discrete manufacturing (automotive parts, packaging, fabricated steel, electronics) and process-oriented operations (food and beverage, cement, glass, chemicals).
- Teams needing JSAs that clarify interfaces with PTW categories (hot work, confined space, work at height) and embed LOTO/try-out and guarding standards.
- Supervisors and technicians seeking validated, easy-to-use, sequence-by-sequence guidance embedded into daily operations.

Duration & Process Overview

- Single line or 10–15 high-risk tasks: typically 1–2 weeks on-site plus off-site drafting.
- Medium plant (25–50 priority tasks): phased sprints over 3–6 weeks aligned to changeovers, sanitation, or maintenance windows.
- Multi-site groups: hub-and-spoke model—pilot at one site, then replicate via playbooks and cross-site SME reviews.

- Hybrid delivery: on-site gemba and validation walkdowns, remote document reviews and MS Teams sessions; workshops in 60–90 minute blocks with a milestone-based plan to permit-ready packs.

Methodology

Phase	Objective / What It Covers	Deliverable
Scoping & Prioritisation	Prioritise tasks by risk, frequency, and incidents; confirm observation windows; agree criteria and document set.	Kick-off and risk-prioritised task register.
Targeted Document Review	Review SOPs, P&IDs/schematics, OEM manuals, SDS, PTW categories, LOTO procedures, audits, incident learnings.	Pre-walkdown hazard cues and control baseline.
Gemba Observation & Step Capture	Observe at the point of work; define task boundaries; break into steps; engage operators and technicians.	Draft step list with step-specific hazards and credible deviations.
Risk Analysis & Controls Assignment	Calibrate with corporate risk matrix; apply hierarchy of controls; specify who/what/when; verify guarding, isolation, tooling, housekeeping.	Stepwise controls with residual risk and hold-points visible to supervisors.
Verification Emphasis	Embed try-out checks, line clearance, absence-of-voltage (where applicable), and re-energisation controls.	Verification cues and restart checklists integrated into JSAs.
SME Review & Walkdowns	Short, focused reviews with production, maintenance, and HSE; validation walkdowns at the machine.	Reviewed JSAs with agreed edits and confirmations.
Finalisation & Permit-Ready Job Packs	Finalise bilingual outputs; integrate with PTW; prepare visual JSAs and one-point lessons as needed.	Approved JSA sheets, permit-ready checklists, and an action register formatted for document control/CMMS/training matrices.