

JSA used in UiS Subsea. The JSA is used both when producing and operating the ROV.

Task	Hazards	Risk Controls	Responsible persons
Operation of ROV:			
Transportation of ROV	Damage on people and ROV	Handling-routines for ROV. Two persons should carry the ROV at all times. Keep the area tidy. Ensure that persons carrying the ROV are equipped with close-toed shoes and gloves.	Management
Rotating elements (thrusters)	Pinch hazard points, damage on propellers, equipment or people	Safety distance from rotating elements, correct PPE (appropriate clothing, no loose hair or strings). Sufficient shrouding around propeller. Properly fastened equipment	Mechanical Chief Engineer
LED-Lights	Temporary or permanent loss of sight	Routines of how the ROV should be oriented and where people are allowed to go. Clear communication when the power is turned ON. Not looking directly at the LED-lights.	Electrical Chief Engineer
Launch of ROV	Falling in water and injuries caused by falling	Minimum two people needed. Remove potential obstacles. Ensure handlers can swim, available flotation devices, suitable ladder to get out of water.	Management
Tether handling	Damage on people or equipment caused by stumbling	Routines for handling tether while ROV is in use. Coiling up tether when not in use.	Management

Production of ROV:			
Rotating machinery	Injuries by flying objects or getting stuck	Team members wearing correct PPE and appropriate clothes. Ensure parts, components or tools are properly fastened.	Mechanical Chief Engineer
Welding	Burns, radiation exposure or impaired vision	Proper training, ventilation and correct PPE (welding mask, welding gloves, safety shoes).	Mechanical Chief Engineer
Soldering	Burned or inhaling of undesired gas and particles	Ventilation and correct PPE (mask, gloves, safety glasses)	Electrical Chief Engineer
Fine particle and dust generating work	Inhaling of suspended dust or particles, eye damage due to dust or chips, hypoacusis, burns	Water available and correct PPE (mask, safety glasses, gloves, ear protection)	Mechanical Chief Engineer
Heat generating sources	Burns	Safety routines (water and proper fire extinguisher easily accessible) and use of correct PPE (heat suit, gloves, safety glasses)	Mechanical Chief Engineer
Connection of electrical components	High voltage, high current	Never connect with voltage on, always be physical unattached. Communication between team members for when to turn power ON.	Electrical Chief Engineer
Handling chemicals	Chemical burn, loss of sight, poisoning	Safety routines (water and medical equipment easily accessible). Use of correct PPE (mask, safety glasses).	Mechanical Chief Engineer
Sharp edges	Cuts	Deburring edges og wearing gloves when handling.	Mechanical Chief Engineer

Loud machinery	Temporary or permanent hearing loss	Hearing protection, taking breaks from noisy environments	Mechanical Chief Engineer
High pressure appliances	Explosions	Proper handling of equipment under high pressure. Minimum two person handling the equipment.	Mechanical Chief Engineer
Flammable materials	Fire	Proper fire extinguisher that is up to date.	Management
Heavy items	Back injuries	A focus on proper lift technique. Tools and other equipment to help lift heavy items should be easily accessible.	Mechanical Chief Engineer
Slippery environments	Falling	Ensure to wipe off the floor around the pool to prevent a slippery environment.	Management