Job Safety Analysis

The Center for Robotics Development, Vladivostok, Russia JSA prepared by Ivan Sukhanov JSA prepared date May 16, 2018

DESCRIBE JOB STAGE	POTENTIONAL HAZARDS	RECOMMEND RISK CONTROL MEASURES	RESPONSIBLE PERSON(S)	INITIALS OF THE RESPONSIBLE PERSON(S)
Machining and tooling	Machinery-related injuries	Materials to be machined shall be securely fastened. Wear protective clothing, gloves and goggles.	Engineers	S. Sulzhenko
Working on electrical devices	Electrical hazards	Ensure all electrical devices are appropriately guarded and electrical appliances are protected by means of a residual current device. Ensure all extension leads are in a safe condition with plugs and connections. DO NOT TOUCH CONTROL BOX WITH WET HANDS .	Engineers, pilot	I. Sukhanov
Handling chemicals	Exposure to chemicals, intoxication	Always review the Material Safety Data Sheet for each chemical before using. Use Personal Protective Equipment or Safety Data Sheet Equipment. Adjust ventilation for proper air circulation. AVOID DIRECT CONTACT WITH CHEMICALS. ADJUST VENTILATION FOR PROPER AOR CIRCULATION.	Engineers	S. Sulzhenko
Deploy/recovery ROV near pool (Slippery Surfaces), Tether management	Slips, trips, falls	Watch your feet and wear appropriate non-slip footwear. When the tether is not used, it should be neatly folded. When used, it should always be under control ATTENTIVELY INSPECT AREA .	Everybody	K. Leontev
Making electrical components: Soldering components and wires	Thermal burns with hot surfaces, Eye injury with solder "spit"	Do not touch hot surfaces with hands. Use appropriate equipment. Turn off equipment when you don't work with it USE PROPER CLOTHES. DO NOT TOUCH HOT SURFACES.	Engineers	I. Sukhanov
All the time building ROV	Spinal, neck, arm and joint injuries. Eyestrain and stress.	Organize workflow and workspace right. Use ergonomic chair and keyboard. Make short rest breaks and do stretching exercises	All	S. Lukasheva
Transportation	Entangling in tether, Overexertion injury: spinal or arm injuries	Make sure that tether neatly folded. Use proper lifting and carrying technics	All	K. Leontev
Storing	ROV falling down from shelf can cause injuries, Overexertion injury: spinal or arm injuries	Use proper lifting technics. Before placing to storage shelf make sure that all cables disconnected and neatly folded and locks on control box are closed. Make sure that ROV placed properly	All	K. Leontev