UNC CHARLOTTE
Department of Engineering Technology

LABORATORY SAFETY ANALYSIS

OPERATING A HORIZONTAL BAND SAW

Location: Smith 128A/B

Required Training: Horizontal Band saws are designed and intended for use by properly trained and experienced operators. If you are not familiar with the proper and safe operation of a vertical band saw, do not use until proper training and knowledge have been obtained.

Required Personal Protective Equipment (PPE): Safety glasses, dusk mask in dusty work conditions, leather gloves if blades have to be touched, face shield in addition to safety glasses if stock material chips severely.

Reference Materials: Manufacturer's safety rules and operating instructions

PHOTOS	TASK	HAZARDS	CONTROLS
	Remove all jewelry. Wrap long hair in net. Ensure clothing is sturdy and snug. Loose clothing, gloves, neckties, rings, bracelets, or other jewelry may get caught in moving parts.	Caught in saw	• Do not wear any jewelry that may get caught in the blade or moving parts. • Do not wear gloves when operating the horizontal band saw. • Loose clothing may get caught in moving parts.
	Wear clear safety glasses with side shields and if necessary use a dust mask and **leather gloves (only if you will be handling saw blade).**	Flying debris and dust particles	• Students are required to provide their own safety glasses. • See laboratory instructor or laboratory manager if you do not have safety glasses before proceeding to use equipment.
	Inspect safety glasses for cracks, scratches or other damage. Ensure the ANSI standard Z87.1 is stamped into the side of glasses. If necessary inspect dust mask or face mask.	Flying debris and dust particles	• If defects are found report this to your laboratory instructor before using.
	Put on all necessary PPE	Flying debris and dust particles	• Always wear safety glasses. Use a dust mask in dusty work conditions. • **Wear leather gloves only if you will be handling saw blade. Do not wear gloves during operation of saw.**

	Visually inspect the electrical power cord.	Electrical shock	• If the electrical cord is damaged or worn the electrical cord should be unplugged and tagged "Out of Service-Do Not Use". • This should be reported to the laboratory manager immediately. • Electrical cord replacement should only be conducted by a factory authorized technician.
	Ensure the electrical cord is connected to electrical outlet.	Electrical shock	• Caution: Always remember to disconnect the electrical power cord before changing blades.
	Inspect work area, walk around saw area looking for debris and ensure adequate lighting.	Slips, trips & falls	• Remove any debris that could possible cause a injury. Keep work space around saw free from scraps, sawdust, metal dust and oil or grease.
	Visually inspect band saw blade. If the blade must be rotated by hand, please disconnect electrical cord and wear leather gloves. Always check to ensure blade is tight.	Struck by, cut, injury	• When setting up to work, check the saw blade for missing teeth and cracks. • Make sure the blade is properly mounted and rated for the revolution per minutes (RPM). • Keep the saw blade clean and sharp. • Ensure the electrical cord has been disconnected from electrical outlet during this process. Reconnect once complete.
	Visually Inspect guards	Cut, injury	• Ensure that both of the wheel guard covers are securely attached when running.
	Visually inspect any other adjustable parts.	Cut, injury	• Insure that fixed vise jaw is tight and that moveable jaw has adequate range to clamp the work securely. • Adjust blade guide as narrow as stock allows (1/2" clearance) while still clearing vise jaws. • Check for proper blade tensioning.
	Place the material to be cut firmly on table and Check the stock for nails, screws, and loose knots before sawing. Be certain that hand tools and loose stock are removed from the saw table. Ensure that all clamps and locking handles are properly tightened.	Strain, Struck by	• Use the proper lifting techniques, ask for assistance or obtain a mechanical lifting device for large or heavy materials.
	Operating band saw	Struck by flying debris, laceration, Injury	• Devote your individual attention to the work being performed. • Adjust down feed rate to maintain cutting without undue pressure on blade.
	Turn the saw on by switching the button to the "ON"	Cut	• Allow the saw to reach full speed before starting a cut. Guards should be in place

	position.		and used at all times.
	Proceed to cut material.	Cut, struck by, strain, kickback	• Ensure that material is held firmly in the vise jaws before starting a cut. • Support long pieces of stock. • Always stand with your face and body to one side of the saw blade. • Allow the downward pressure of the saw to make the cut. Do not push on the moveable head of the saw • Always keep your fingers and hands away from the path of the blade.
	Turn off band saw by switching the button to "OFF" position	Cut	• Always turn the power off and wait to the blade stops. • If so equipped, check that the automatic end of cut stop switch is functioning properly.
	Remove stock material	Cut	• After the power is turned off, wait until the blade stops before removing the stock. • Never stop the blade by allowing it to cut into any material.
	Clean work area and return all PPE to clean, dry storage area.	Injury	• To ensure adequate housekeeping measures to prevent accidents.

For more information about this LSA, contact the *Department of Engineering Technology* at UNC Charlotte (704) 687-2305

Please visit our website at: http://www.et.uncc.edu\

The development of Laboratory Safety Analyses is a very effective means of helping reduce incidents, accidents, and injuries in the workplace. It is an excellent tool to use for training purposes and can also be used to investigate "near misses" and accidents.