RIGGING RESOURCE CENTRE

BEAM CLAMP COMPETENCY ASSESSMENT

WORKER BEING EVALUATED:_____

EVALUATOR:_____

LOCATION:_____ **DATE:**_____

This evaluation form can be used as a demonstration or knowledge-based competency of a worker's understanding of a Beam Clamp. It can be used by either Workers or Employers to assess their knowledge.

The ASME B30.20 Standard has been used for reference when compiling this evaluation. ASME B30.20 states that the Beam Clamp Manufacturer specifications must also be referenced to provide specific information required for the Selection, Inspection, Limitations and Use.

EMPLOYER READ THE CAPITALIZED WORDS, can the Employer successfully explain and complete the following.	**YES**	**NO**
1) **COMPLIANCE TO STANDARDS** THE EMPLOYER TO VERIFY THE BEAM CLAMP IS COMPLIANT TO A STANDARD. Compliance to a standard should be confirmed in the manufacturers, specifications, *generally the ASME B30.20 standard in North America.*		
2) **DESIGN FACTORS** DOES THE EMPLOYER KNOW THE DESIGN FACTOR ASSOCIATED WITH THE BEAM CLAMP BEING USED? This is the point it will break above its rated load. The minimum required design factor of beam clamps is based on the service class. *The manufacturer must be consulted.*		
3) **MANUFACTURERS SPECIFICATIONS** THE EMPLOYER MUST HAVE THE MANUFACTURERS SPECIFICATIONS READILY AVAILABLE. The only way a worker can be assessed is if they have been given the manufactures specification for the product being evaluated on, as manufactures specifications differ. *This information will provide the worker its limitations, use and inspection requirements*.		
4) **PERIODIC INSPECTIONS** THE EMPLOYER IS RESPONSIBLE TO ENSURE THAT THE BEAM CLAMP HAS HAD A PERIODIC INSPECTION**.** These are the inspections required by the ASME B30.20 standard that the employer must ensure are completed*. At a minimum annually.*		
5) **STORAGE** THE EMPLOYER IS RESPONSIBLE TO ENSURE PROPER BEAM CLAMP STORAGE WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the beam clamp whether it be mechanical, chemical or temperature related. *What is your company's storage policy?*		

BEAM CLAMP KNOWLEDGE Evaluator to READ THE CAPITALIZED WORDS and see if the worker can successfully explain the following.	**COMPETENT**	**NEEDS COACHING**
6) **MANUFACTURERS SPECIFICATIONS** DOES THE WORKER HAVE ACCESS TO THE MANUFACTURERS SPECIFICATIONS? The worker knows that manufacturers specification are available, where they are located, and why they have to be used.		
7) **DESIGN FACTORS** DOES THE WORKER KNOW THE DESIGN FACTOR ASSOCIATED WITH THE BEAM CLAMP BEING USED? The worker states the minimum required design factor of beam clamps is based on the service class. *The manufacturer must be consulted*		
8) **PERIODIC INSPECTIONS** CAN THE WORKER VERIFY THAT THE BEAM CLAMP HAS HAD A PERIODIC INSPECTION**.** These are the annual inspections required by the employer to complete. As stated in the ASME B30.20 standard*. An external coded mark on the beam clamp is an acceptable identification in lieu of records.*		
9) **MARKINGS - MANUFACTURER** SHOW ME THE MANUFACTURERS NAME MARKING ON THE BEAM CLAMP. The manufacturer's name and contact information must be marked on the beam clamp. *This may be an actual name, but in some cases is a trademark or abbreviation, the contact information may be an address, telephone number or website.*		
10) **MARKINGS – SERIAL NUMBER** SHOW ME THE SERIAL NUMBER MARKING ON THE BEAM CLAMP. The manufacturer's model or serial number must be marked on the beam clamp. *It gives the clamp its own unique unit identifie*r.		
11) **MARKINGS – CLAMP WEIGHT** SHOW ME THE CLAMP WEIGHT MARKING ON THE BEAM CLAMP. The beam clamps own weight must be marked on the beam clamp. *If it weights over 100lbs.*		
12) **MARKINGS – RATE LOAD** SHOW ME THE RATED LOAD MARKING ON THE BEAM CLAMP. The rated maximum (and minimum) load of the clamp must be marked on the beam clamp. Usually marked with WLL "working load limit" followed by a number and unit that can be US or Metric *E.g. 1 Ton, 2000 lbs. or maybe 1Tonne, 1000 kg.*		
13) **MARKINGS – DESIGN CATEGORY** SHOW ME THE DESIGN CATEGORY MARKING ON THE BEAM CLAMP. The design category must be marked on the beam clamp. *Design Category refers to the beam clamps static strength criteria.*		
14) **MARKINGS – SERVICE CLASS** SHOW ME THE SERVICE CLASS MARKING ON THE BEAM CLAMP. The service class must be marked on the beam clamp. *Service Class refers to the beam clamps fatigue life criteria.*		
15) **MARKINGS – PRODUCT SAFETY LABEL** SHOW ME THE PRODUCT SAFETY LABEL ON THE BEAM CLAMP. The beam clamp must have fixed to it a product safety label concerning the operating procedures, cautionary language identifying hazards, and methods for accident prevention. *The worker must refer to instruction manuals for additional information.*		
16) **TEMPERATURES** WHAT IS THE TEMPERATURE RANGE OF THE BEAM CLAMP FROM THE MANUFACTURER? AND HOW CAN THE WORKER VERIFY THIS. The worker knows temperatures exceeding normal ambient temperatures can affect the beam clamp. *The worker must confirm with the manufacturer as they may differ.*		

BEAM CLAMP APPLICATION Evaluator to READ THE CAPITALIZED WORDS and see if the worker can successfully explain the following.	**COMPETENT**	**NEEDS COACHING**
17) **REMOVAL CRITERIA** HAVE THE WORKER TELL YOU REASONS TO REMOVE THE BEAM CLAMP FROM SERVICE. 1. Deformity, cracks or wear, 2. Loose or missing, guards, fasteners, covers, stops or nameplates, 3. Excessive pitting or corrosion, 4. Excessive nicks or gouges, 5. Indications of heat damage, including weld spatter or arc strikes, 6. Evidence of unauthorized welding or modifications, 7. Unauthorized replacement components, 8. Improper assembly, 9. Damaged gripping teeth, 10. Damaged or distorted pins, 11. Damaged bail, 12. Damaged body, 13. Impaired, seized, or bound cam, linkage, bail movement, or locking lever, 14. Deformed, broken, or missing springs, 15. Broken, worn, or loose cam. *Manufacturer may give specific criteria and must be referenced.*		
18) **LOAD DISTRIBUTION** IF A BEAM CLAMP IS ATTACHED TO A LOAD HAVE THE WORKER TELL YOU HOW THE LOAD MUST BE DISTRIBUTED. The worker knows that the beam clamp must be positioned above the loads center of gravity, to achieve balance. Beam clamps can be designed for anchoring or position (suspension or lifting) or in some cases both, the worker must select the correct beam clamp for the application. C*lamps that are designed only for anchoring or positioning shall be marked accordingly and the manufacturer must be referenced.*		
19) **LOAD SECURITY** IF THE BEAM CLAMP IS BEING USED TO SUSPEND OR LIFT A LOAD HAVE THE WORKER TELL YOU WHAT COULD AFFECT LOAD SECURITY. The worker knows that material hardness, type, thickness, surface conditions and angle of loading can affect the clamps gripping capabilities. Clamps for different materials normally have different teeth or cam patterns. Manufacturer may give specific criteria and must be referenced.		
20) **MINIMUM LOAD** IF THE BEAM CLAMP IS BEING USED TO LIFT A LIGHTER LOAD HAVE THE WORKER TELL YOU WHAT AFFECT THERE COULD BE TO LOAD SECURITY. The worker knows that some beam clamps have a minimum load rating. If the load being lifted is below this weight the beam clamp is not guaranteed to hold the load*. Manufacturer may give specific criteria and must be referenced.*		
21) **SIDE LOADING** IF THE BEAM CLAMP IS BEING SIDE LOADED HAVE THE WORKER TELL YOU HOW THIS AFFECTS THE BEAM CLAMP. The worker knows that not all beam clamps can be side loaded, and those that can have a rated load reduction when side loading. An example would be two clamps being used as suspension points when drifting a load. *Manufacturer may give specific criteria and must be referenced.*		
22) **ORIENTATION** IF THE BEAM CLAMP IS BEING USED TO MOVE A LOAD FROM THE HORIZONTAL TO THE VERTICAL, OR VICE VERSA, HAVE THE WORKER TELL YOU HOW THIS AFFECTS THE BEAM CLAMP. The worker knows that not all beam clamps can be used in both orientations, and those that can may have a rated load reduction when flipping a load*. Manufacturers may give specific criteria and must be referenced.*		
23) **LOCKS** IF THE BEAM CLAMP IS DESIGNED WITH A LOCKING MECHANISM HAVE THE WORKER TELL YOU THE PURPOSE OF THE LOCK. The worker knows that the lock is designed to ensure gripping tension to the load is maintained. *The lock must be used if provided.*		
24) **STORAGE** HAVE THE WORKER TELL YOU WHERE THE BEAM CLAMP IS KEPT WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the beam clamp whether it be mechanical, corrosive or temperature related. *The clamp, when not in use, should be stored at an assigned location.*		

COMMENTS:

SIGNATURE OF WORKER BEING EVALUATED:

X_____

SIGNATURE OF EVALUATOR:

X_____