RIGGING RESOURCE CENTRE

SHACKLE 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 Shackle. It can be used by either Workers or Employers to assess their knowledge.

The ASME B30.26 Standard has been used for reference when compiling this evaluation. ASME B30.26 states that the Shackle 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 SHACKLE IS COMPLIANT TO A STANDARD. Compliance to a standard should be confirmed in the manufacturer's specifications, *generally the ASME B30.26 standard in North America.*		
2) **DESIGN FACTORS** DOES THE EMPLOYER KNOW THE DESIGN FACTOR ASSOCIATED WITH THE SHACKLE BEING USED. This is the point it will break above its rated load. *ASME B30.26 states 5:1 minimum*		
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 SHACKLE HAS HAD A PERIODIC INSPECTION**.** These are the inspections required by the ASME B30.26 standard that the employer must ensure are completed*. At a minimum annually.*		
5) **STORAGE** THE EMPLOYER IS RESPONSIBLE TO ENSURE PROPER SHACKLE STORAGE WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the shackle whether it be mechanical, chemical or temperature related. *What is your company's storage policy?*		

SHACKLE 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 SHACKLE BEING USED? The worker states the minimum required design factor of shackles. *ASME B30.26 states 5:1*		
8) **PERIODIC INSPECTIONS** CAN THE WORKER VERIFY THAT THE SHACKLE HAS HAD A PERIODIC INSPECTION**?** These are the annual inspections required by the employer to complete. *As stated in the ASME B30.26 standard.*		
9) **BODY MARKINGS - MANUFACTURER** SHOW ME THE MANUFACTURERS NAME MARKING ON THE SHACKLE BODY. The manufacturer's name or trademark must be marked on the shackle body. *This may be an actual name, but in some cases is a trademark, abbreviation or logo.*		
10) **BODY MARKINGS – RATED LOAD** SHOW ME THE RATED LOAD MARKING ON THE SHACKLE BODY. The rated load must be marked on the shackle body. Rated load is usually marked with WLL "working load limit" followed by a number and unit that can be US or Metric, *E.g. 3 1/4T or maybe 3.25t.*		
11) **BODY MARKINGS - SIZE** SHOW ME THE SIZE MARKED ON THE SHACKLE BODY. The size must be marked on the shackle body and refers to the shackles body diameter. *Normally marked in inches (in) or millimeters (mm's) E.g. ¾" or maybe 20mm*		
12) **PIN MARKINGS - MANUFACTURER** SHOW ME THE MANUFACTURERS NAME MARKING ON THE SHACKLE PIN. The manufacturer's name or trademark must be marked on the shackle PIN. This may be an actual name, but in some cases is a trademark, abbreviation, colour, or logo. *The shackles pin and body must be from the same manufacturer.*		
13) **PIN MARKINGS – GRADE, MATERIAL TYPE OR RATED LOAD** SHOW ME THE GRADE, MATERIAL TYPE OR RATED LOAD MARKED ON THE SHACKLE PIN. At least one of either the grade, material type or rated load must be marked on the shackle pin. *Grade or material type are more commonly marked and are usually an abbreviation E.g. 4, 6, 8, HS or AS. Rated load is not commonly marked.*		
14) **TEMPERATURES** ASK THE WORKER WHAT THE TEMPERATURE RANGE FOR THE SHACKLE IS FROM THE MANUFACTURER. AND HOW CAN THE WORKER VERIFY THIS? The worker knows extreme temperatures can affect the shackle, ASME B30.26 states not below -40C or above 204 C. *the worker must confirm with the manufacturer as they may differ.*		

SHACKLE APPLICATION Evaluator to READ THE CAPITALIZED WORDS and see if the worker can successfully explain the following.	**COMPETENT**	**NEEDS COACHING**
15) **REMOVAL CRITERIA** HAVE THE WORKER INSPECT THE SHACKLE AND TELL YOU REASONS TO REMOVE THE SHACKLE FROM SERVICE. 1. Missing or illegible identification, 2. Indications of heat damage, 3. Excessive pitting or corrosion, 4. Bends, twists, distortion, stretching, cracks or breaks, 5. Excessive nicks or gouges, 6. 10% reduction of original dimensions, 7. Incomplete pin engagement, 8. Excessive thread damage, 9. Evidence of unauthorized welding or modification. *Manufacturer will give specific criteria and must be referenced.*		

16) **SCREW PIN SHACKLE ASSEMBLY** IF A SCREW PIN SHACKLE IS USED HAVE THE WORKER TELL YOU THE CORRECT ASSEMBLY METHOD. The worker knows that the shackle screw pin must be hand tight, fully engaged and shouldered to the shackle body. *The pin should never be backed off or loosened before a lift begins.*		
17) **BOLT TYPE SHACKLE ASSEMBLY** IF A BOLT TYPE SHACKLE IS USED HAVE THE WORKER TELL YOU THE CORRECT ASSEMBLY METHOD. The worker knows that the shackle bolt must be fully inserted through the body and the nut must be threaded sufficiently on the bolt to allow the cotter pin to be inserted at the bolt end. *Cotter pins must be in place before lifting the load*.		
18) **MULTIPLE SLINGS - APPLICATION** IF MULTIPLE SLINGS ARE BEING APPLIED TO A SHACKLE HAVE THE WORKER TELL YOU HOW THE SLINGS SHOULD BE ATTACHED. The worker knows that multiple slings must be placed in the body of the shackle, not on the pin.		
19) **MULTIPLE SLINGS - SYMMETRICAL LOADING** IF THE SHACKLE IS BEING USED TO LIFT A LOAD WITH MULTIPLE SLINGS SYMMETRICALLY HAVE THE WORKER TELL YOU HOW THE SLINGS MUST BE ATTACHED TO THE SHACKLE. The worker knows that when attaching multiple slings to a shackle they must not exceed 120 degrees included angle to keep the shackles full rated load. *The slings must be equal angles from the centerline of the body.*		
20) **MULTIPLE SLINGS - NON-SYMMETRICAL LOADING** IF THE SHACKLE IS BEING USED TO LIFT A LOAD WITH MULTIPLE SLINGS NON-SYMMETRICALLY HAVE THE WORKER TELL YOU HOW THIS CAN AFFECT THE SHACKLE. the worker knows that when attaching multiple slings to a shackle non-symmetrically the manufacturer must be consulted as the rating is affected. *The slings would not be equal angles from the centerline of the body.*		
21) **SIDE LOADING** IF THE SHACKLE IS BEING SIDE LOADED HAVE THE WORKER TELL YOU HOW THIS AFFECTS THE SHACKLE. The worker knows when a shackle is side loaded its rated load is reduced, ASME B30.26 states 30% reduction at 45 degrees and 50% reduction at 90 degrees from in-line*). The worker must confirm with the manufacturer as they may differ.*		
22) **CHOKE HITCH** IF THE SHACKLE IS USED TO FORM A CHOKE HITCH HAVE THE WORKER TELL YOU THE CORRECT WAY TO ORIENTATE THE SHACKLE. The worker knows the sling eye must be installed on the shackle pin, not the shackle body and that the body is not pressed against the sling or a sharp edge. *This orientation reduces the chances of the shackle pin loosening during lifting.*		
23) **STORAGE** HAVE THE WORKER TELL YOU WHERE THE SHACKLE IS KEPT WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the shackle whether it be mechanical, chemical or temperature related.		

COMMENTS:

SIGNATURE OF WORKER BEING EVALUATED:

X_____

SIGNATURE OF EVALUATOR:

X_____