RIGGING RESOURCE CENTRE

EYEBOLT 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 an Eyebolt. 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 Eyebolt 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) **<u>COMPLIANCE TO STANDARDS</u>** THE EMPLOYER TO VERIFY THE EYEBOLT 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) **<u>DESIGN FACTORS</u>** DOES THE EMPLOYER KNOW THE DESIGN FACTOR ASSOCIATED WITH THE EYEBOLT BEING USED? This is the point it will break above its rated load. *ASME B30.26 states 5:1 minimum.*		
3) **<u>MANUFACTURERS SPECIFICATIONS</u>** 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) **<u>PERIODIC INSPECTIONS</u>** THE EMPLOYER IS RESPONSIBLE TO ENSURE THAT THE EYEBOLT 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) **<u>STORAGE</u>** THE EMPLOYER IS RESPONSIBLE TO ENSURE PROPER EYEBOLT STORAGE WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the eyebolt whether it be mechanical, chemical or temperature related. *What is your company's storage policy?*		

EYEBOLT 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 EYEBOLT BEING USED? The worker states the minimum required design factor of eyebolts*. ASME B30.26 states 5:1*		
8) **PERIODIC INSPECTIONS** CAN THE WORKER VERIFY THAT THE EYEBOLT 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) **MARKINGS - MANUFACTURER** SHOW ME THE MANUFACTURERS NAME MARKING ON THE EYEBOLT. The manufacturer's name or trademark must be marked on the eyebolt. *This may be an actual name, but in some cases is a trademark, abbreviation or logo.*		
10) **(MARKINGS – RATED LOAD OR SIZE** SHOW ME THE RATED LOAD OR SIZE MARKING ON THE EYEBOLT. Either the rated load or size must be marked on the eyebolt. Rated load is usually marked with WLL "working load limit" followed by a number and unit that can be US or Metric, *E.g. 2200 lbs or maybe 1000 kg.* Size is usually marked in inches or mm's, *E.g. ¾" or maybe 20mm.*		
11) **MARKINGS - GRADE** SHOW ME THE GRADE MARKING ON THE EYEBOLT. The grade must be marked on the eyebolt, if the eyebolt is alloy. *Grade will affect the eyebolt strength and its temperature rating.*		
12) **TEMPERATURES** ASK THE WORKER WHAT THE TEMPERATURE RANGE FOR THE EYEBOLT IS FROM THE MANUFACTURER AND HOW CAN THE WORKER VERIFY THIS? The worker knows extreme temperatures can affect the eyebolt, ASME B30.26 states not below -1C or above 204 C for carbon eyebolts and -40 C for alloy eyebolts. *The worker must confirm with the manufacturer as they may differ.*		

EYEBOLT APPLICATION Evaluator to READ THE CAPITALIZED WORDS and see if the worker can successfully explain the following.	**COMPETENT**	**NEEDS COACHING**
13) **REMOVAL CRITERIA** HAVE THE WORKER INSPECT THE EYEBOLT AND TELL YOU REASONS TO REMOVE THE EYEBOLT FROM SERVICE. 1. Missing or illegible identification, 2. Indications of heat damage, 3. Excessive pitting or corrosion, 4. Bents, twists, distortion, stretching, elongation, cracks or breaks, 5. Excessive nicks or gouges, 6. 10% reduction of original dimensions, 7. Excessive thread damage or wear, 8. Evidence of unauthorized welding or modification. *Manufacturer will give specific criteria and must be referenced.*		
14) **THREAD ENGAGEMENT – BLIND HOLE** IF AN EYEBOLT IS INSERTED INTO A THREADED BLIND HOLE HAVE THE WORKER TELL YOU WHAT THE CORRECT THREAD ENGAGEMENT IS. (like an electric motor or pump) The worker knows the eyebolt must be threaded into the load at least the minimum amount required by the manufacturer. ASME B30.26 states 1.5 times the eyebolts thread diameter. *The worker must confirm with the manufacturer as they may differ.*		

15) **<u>THREAD ENGAGEMENT – TAPPED THROUGH HOLE</u>** IF AN EYEBOLT IS INSERTED IN A THREADED THROUGH HOLE HAVE THE WORKER TELL YOU WHAT THE CORRECT THREAD ENGAGEMENT IS. The worker knows to secure the eyebolt with a nut under the load, ASME B30.26 states if the load is less than 1 eyebolt thread diameter in thickness. *The worker must confirm with the manufacturer as they may differ.*		
16) **<u>THREAD ENGAGEMENT – UNTAPPED THROUGH HOLE</u>** IF AN EYEBOLT IS INSERTED INTO AN UNTAPPED HOLE HAVE THE WORKER TELL YOU WHAT THE CORRECT SECURING METHOD IS. The worker knows to secure the eyebolt with nuts above and below the load as per ASME B30.26. *The worker must confirm with the manufacturer as they may differ.*		
17) **<u>SIDE LOADING</u>** IF THE EYEBOLT IS BEING SIDE LOADED HAVE THE WORKER TELL YOU HOW THIS AFFECTS THE EYEBOLT, The worker knows that only shouldered eyebolts can be used for angular loading, the eyebolt must be aligned with the plane of the eye, and that the rated load may be reduced, ASME B30.26 states by as much as 45% at 5-15 degrees and by 75% after 15 degrees. *The worker must confirm with the manufacturer as they may differ.*		
18) **<u>ALIGNMENT</u>** – IF THE DIRECTION OF ALIGNMENT REQUIRES ADJUSTMENT HAVE THE WORKER TELL YOU HOW THIS CAN BE ACHIEVED, AND THE CAUTION THAT IS REQUIRED. The worker know that when side loading an eyebolt the plane of the eyebolt shall be aligned with the direction of pull. ASME B30.26 states, steel flat washers may be used under the shoulder to position the plane of the eye. *The thickness of the washer must be the minimum to achieve the correct alignment.*		
19) **<u>STORAGE</u>** HAVE THE WORKER TELL YOU WHERE THE EYEBOLT IS KEPT WHEN NOT IN USE. Storage is important to stop or reduce possible damage to the eyebolt whether it be mechanical, chemical or temperature related.		

<u>COMMENTS:</u>

SIGNATURE OF WORKER BEING EVALUATED:

X_____

SIGNATURE OF EVALUATOR:

X_____