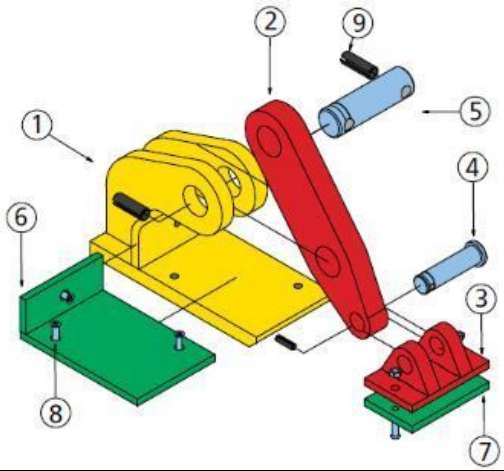
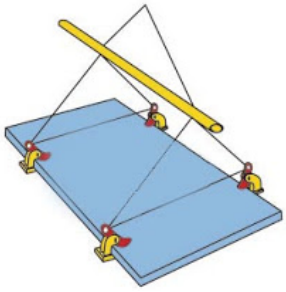
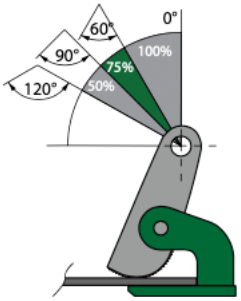
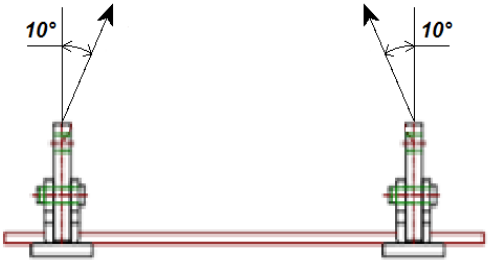
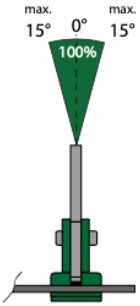
HORIZONTAL CLAMP
Tool Box Talk

The objective of this Tool Box Talk is that it can be used as part of a safety meeting that focuses on the use of Horizontal Clamps in the workplace. The ASME B30.20 standard has been referenced when compiling this document as this is the most recognized standard used in North America for selection, inspection, cautions to personnel, effects of environment, and rigging practices of horizontal clamps.

Ask members of the meeting to give answers to the following, encouraging participation whether their answers are right or wrong.

LEGISLATION	ANSWER
1) WHAT STANDARDS SHOULD THE HORIZONTAL CLAMP COMPLY WITH?	**ASME B30.20 standard.**
2) WHAT OTHER INFORMATION MUST BE REFERENCED?	**Manufacturers Specifications**
3) HOW OFTEN DO PERIODIC INSPECTIONS NEED TO BE CARRIED OUT?	**At least annually(ASME), *but state what your company rules are.***
MARKINGS	**ANSWER**
4) WHAT 6 ITEMS ARE REQUIRED NEED TO BE MARKED ON THE HORIZONTAL CLAMP?	**1. Manufacturer, 2. Serial Number, 3. Clamps Weight (if over 100 lbs.), 4.Rated Load (Maximum and Minimum), 5. Design Category, 6. Service Class.**
5) WHAT INFORMATION ALSO NEEDS TO BE ATTACHED TO THE HORIZONTAL CLAMP?	**A product safety label concerning the operating procedures, cautionary language identifying hazards, and methods for accident prevention**.
APPLICATION	**ANSWER**
6) WHAT ARE THE TEMPERATURE RANGES FOR THE HORIZONTAL?	**Temperatures exceeding normal ambient temperatures can affect the horizontal clamp. *The worker must confirm with the manufacturer as they may differ*.**
7) NAME SOME REASONS WHY THE HORIZONTAL CLAMP MAY HAVE TO BE REMOVED 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,** **14. Deformed, broken, or missing springs,** **15. Broken, worn, or loose cam.**

8) HOW MUST THE LOAD BE DISTRIBUTED WHEN USING A HORIZONTAL CLAMP? 	**Horizontal clamps must be used in multiple numbers and must be positioned to capture the loads center of gravity to achieve balance.** 
9) WHAT NEEDS TO BE CONSIDERED WHEN THE CLAMP IS SECURED TO THE LOAD?	**Material hardness, type, thickness and surface conditions can affect the clamps gripping capabilities. Multiple plates can be lifted simultaneously only if the plates will not sag.** 
10) WHY IS KNOWING THE CLAMPS MINIMUM LOAD IMPORTANT?	**Some horizontal clamps have a minimum load rating, if the load being lifted is below this weight the plate clamp is not guaranteed to hold the load.**
11) WHAT MUST BE CHECKED WHEN LIFTING A PLATE FROM HORIZONTAL TO VERTICAL? 	**Horizontal clamps cannot be used in both orientations and have angular restrictions from the horizontal plane.** 
12) CAN A HORIZONTAL CLAMP BE SIDE LOADED? 	**Not all plate clamps can be side loaded, and those that can have a rated load reduction when side loading. An example would be four clamps lifting a plate but slung back to one hook.** 
13) WHERE IS THE BEST PLACE TO STORE HORIZONTAL CLAMPS?	**Where they will not be affected by mechanical damage, corrosion, moisture, or adverse temperatures.**