

Willamette # 7 Work Party Notes Historic Museum Fort Missoula, Missoula, MT 7/9/19 to 7/18/19 - # 5

Received additional drawings from the Oregon Historical Society (OHS), who has a collection of Willamette information. Elerina Aldamar has been very helpful in assisting in the research to find the appropriate drawing for # 7. The Willamette Drawing numbering system is still quite a mystery to myself and the OHS. A typical drawing number would be for the Steam Turret Valve Stem (in the Cab) RHVML – A27. The letters mean something still unknown and could be from 3 to 6 letters long. In the letter/number following the letter represents the Drawing size and the number the version in sequence. OHS collection does not have the "Z" size drawings in the collection any more as the have disappeared over the years. The drawing received are scanned and available in a different file as they are too large to attach to this report.

Complete designing a structure to cover the # 7, designed to represent a timber structure of the "era" with a flare of heavy industrial look in the metal brackets used in joining the timbers. Since I am not a Structural Engineer, these were turned over to Mark Buck to review and to be placed in a format that the City of Missoula will approve.



Finished cleaning nuts and threaded adjustment rods for main rod wedges. Found one or three threaded rods was missing back side washer which was replaced in the past with a standard flat washer. Made a new washer the same as original Willamette washer by coping the existing original. Took the rod straps to engine rebuilder to have "hot tanked". Cleaned and checked all the threads on the straps and removed remaining rust from the inside. Painted the straps.



Flat Washer (L), New Copy (M), Original Willamette (R)

Rod Strap Prior to removal



Rod strap prior to cleaning and painting

Rod Strap completed and qualifyed

The "split half" Rod Brasses had been previously removed by us in the last Work Party. They were cleaned, and inspected. It was noted they were stamped as to location most likely by Willamette by possible by Anaconda as they showed signs of having been removed a number of times in the past. Willamette used number to indacate the cylinder position and "T" for top and "B" for bottom. Noted that the brasses were in poor to fair shape, servicable for limited use, but several will need to be replaced in the future. Conditions are listed as follows:

1-T Good Condition; Babbitted surface (not original) most likely by Anaconda to save cost of new
1-B Good Condition; Babbitted surface (not original) most likely by Anaconda to save cost of new
2-T Fair Condition; Original Brass Surface but partely cracked – Canidate for replacment
2-B Poor Condition; Original Brass Surface but broken in half – usuable canidate for replacment
3-T Poor Condition; Babbitted surface (not original) Babbitt needs replacing or canidate for replacment
3-B Good Condition; Babbitted Surface (not original)

Pictures for Reference of all Rod Brasses



Should be noted that making new brasses is a rather simple process that included making a wooden pattern, finding a foundry to cast the part (generally out of 80-10-10 Bronze), and some machine work on the finished casting. In reviewing the Willamette files which cover the parts ordered by Western Lumber, Heron Lumber and Anaconda indicate that one Crank Pin Brass (Part # RRDSC A-3) was ordered with a "5 Bore on 10/5/1940. That drawing is on

my list still to be received from OHS. I talked with AFFCO Foundry in Anaconda, MT to see if they could have supplied the brass to Anaconda Lumber at sometime.

AFFCO was owned and operated by Anaconda until 1980 and made all of the castings for Anaconda (all divisions). They still have all of the patterns that Anaconda made/used from the beginning to the end of operations. They invited us to look at these as they are available to be used. They are not cataloged but in a 3-story building arrainged by category.

I removed the Eccentric Strap and cleaned the same. It's "running' surface has been babbitted at some point and broken in number of places (babbitt). The strap is still servicable and had some rust on the lower point due to water collecting from sitting.

