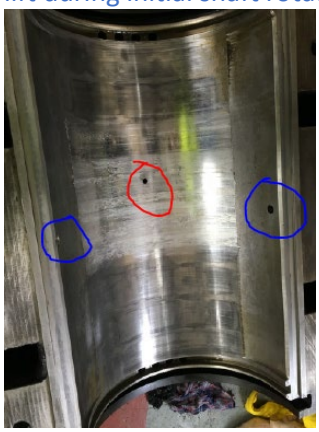
Fly Wheel Refurbishments

Questions

1. Would you please make available a sketch / picture or description of the 6 leather bearing seals (3 (16.254" shaft diam) and 3 (16.233" shaft diam))?
    - No sketch or pictures are available. Seals have never been used on these bearings to date; however, there is interest in using some type of seal to help keep oil mists from escaping the bearing pedestal and contaminating electrical equipment in the room. These seals will also help keep small dust particles from entering the bearing pedestal and mixing with the bearing oil lubricant. For the sake of the RFB, please quote a 9/11 oz thick harness leather strip that is skive cut (angle cut) to allow for field installation around the 16.254" and 16.233" diameter shafts. The SDSTA will work to provide the selected Offeror additional measurements as needed for a proper seal to be selected after award.

2. Would you be willing to entertain an alternate seal material (offering better performance characteristics) – assuming the seals are made from leather per the description? **Offeror** could propose an alternate and provide the engineering justification / samples / etc. to that end.
    - Yes. We would be willing to entertain different seal constructions and/or materials if detailed by the Offeror in the bid materials.

3. The bearings #118, and #119 description mentions that hydrostatic lift is provided by lube pumps. In the picture provided the bearing does not have provisions in the bottom half for a hydrostatic lift. Is the provision for this simply pumping oil into the bearing for more of a pre-lube setup rather than an actual hydrostatic lift system?
    - Pages 1 through 8 of the *Example Bearing Photos from Ore Hoist MG Set* are of bearings along the MG set that do not support the flywheel and do not have hydrostatic lift pumps. Pages 9 through 12 are of the flywheel bearings, which have (3) lubricating ports in the bottom half. Two of these ports (circled in blue in the snippet below) provide lubricating oil to oil reservoirs that form between the shaft and the interior of the bearing. The third port (circled in red in the snippet below) provides the hydrostatic lift during initial shaft rotation with the help of a lift pump.



4. The spare flywheel bearing does not mention a hydrostatic lift. Are there any differences in the bearing designs? This question may be answered by answer to question 1.

- There are no differences between the spare flywheel bearing and the two installed flywheel bearings. Please see attached *Spare_Flywheel_Bearing_Pictures.pdf* for pictures of the spare bearing.

5. Will the pedestal bore diameter be provided to help determine the OD requirement of the bearings? If not, what will be the size criteria for the bearing ODs?
   - Yes. The SDSTA will work to provide the selected Offeror additional measurements as needed to help determine the OD requirement of the bearings.

6. States that transportation could "possibly be arranged to take place using the same truck used to transport ____ bearing if the truck is able to wait one day while bearing is removed from the MG-set and packaged for transport". Shall bidders assume that this is possible, and will there be an opportunity for change order if it is deemed this is not possible and additional round trips are required?
   - Please price the bid as if additional round trips will be needed.

7. Our facilities are ISO certified. We will submit the ISO certification to meet the requirements of this evaluation criteria. Is there additional documentation that would be beneficial to provide alongside the ISO cert, or will the certification fully meet this requirement?
   - While an ISO certificate certainly helps prove the presence of a quality management program, we would like to see a brief description (i.e. a paragraph or two) of how the program will be applied to this project.

8. States that the centrifugal casting method should be utilized. Based on this low-stress application, **Offeror** believes that static pouring is an adequate re-babbitt method for these bearings. Please advise whether static pouring would be acceptable?
   - The SDSTA will not accept the static pouring method to re-babbitt these bearings.

9. States that a UT inspection is required to ensure optimum bonding of Babbitt to shell. Please provide bonding specification, if applicable. ie 95% bond at edges and load area of bearing.
   - Section 5.3 of the RFB notes the applicable standards and practices for this bearing refurbishment. The bond acceptance criteria can be found in Section 5.4.1.3 of DOD-STD-2183. An alternate standard is ISO 4386-1:2019. If the Offeror would be following different standards or practices to refurbish these bearings, please note this as an exception to the RFB materials and indicate which standards or practices would be followed.

10. The packet addresses the smaller motor bearings, the 5 x 12-3/4, 6 x 12, and 8 x 16, but I do not see that you are requesting a bid for these bearings, is this correct?
    - Yes. This RFB is to refurbish (3) 16 x 36 flywheel bearings only.

11. Does the 16 x 36 bearing have Babbitted slinger grooves, like the smaller motor bearings?
    - Yes. There are two babbitted oil slinger grooves. Please see attached *Spare_Flywheel_Bearing_Pictures.pdf* and *Flywheel_Bearing_and_Slinger_Drawings.pdf* for more details.

12. Do you have any prints or pictures of the leather seals so we can give you accurate pricing?
    - No. Please see the answer to Question 1.