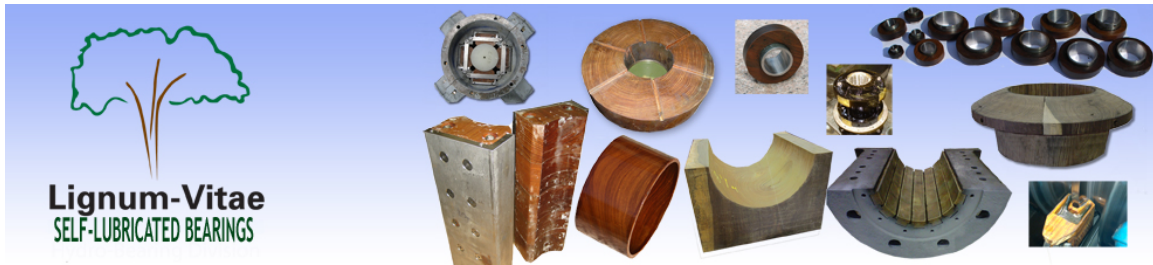


Bearing Cost Analysis

- 1) Is this a planned outage due to low water?
- 2) Is this an unplanned outage with plenty of water?
- 3) Revenue loss per day, week, month?
- 4) Estimated downtime in days?
- 5) Number of personnel required to make change?
- 6) Estimated labor costs to replace?
- 7) Equipment required crane, forklift, man-basket etc.?
- 8) Cost of materials bearings, seals, special needs?
- 9) On site milling of shaft to install properly?
- 10) Offsite milling lathe work etc.



11) Transportation and equipment to load and truck to and from plant.

12) Retrofit costs?

13) Engineering/re-engineering costs?

14) How long did original bearing stay in service?

15) What is expected life of new bearings?

16) What is the warranty for the new bearings?

ISSUES to consider,

1) Is there inordinate vibration?

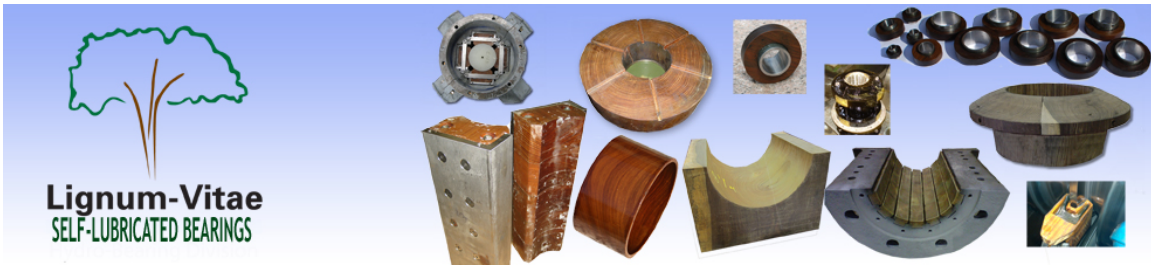
2) Seals leaking oil or grease in water?

3) Is shaft smeared with plastic from previous bearings?

4) Is shaft pitted, scored or grooved?

5) What is condition of the water pristine, sandy, silty?

6) Is any lead or heavy metal involved requiring Hazmat handling?



Environmental Costs,

- 1) Threat of oil and grease in water?
- 2) Leaking oil and grease in water?
- 3) Heavy metal in contact with water?
- 4) Are any VOC's, CFC's, or other harmful solvents involved in the manufacture?
- 5) During manufacture what is the amount of pollution released into the air, water?
- 6) What environmental ramifications are present at disposal with typical plastic life of 500-700 years for plastic in landfills.