Replacement with tilting pad bearing

REASON FOR SUGGESTION:

The present sleeve bearing may cause a high bearing temperature exceeding the alarm temperature in high-speed and high-load operation, which is a problem in supervision. The bearing metal or the rotor journal may be flowed out in a worst case.

Use the tilting pad bearing so that:

1) Its higher cooling effect will prevent the temperature rise.
2) The contacting condition between the back of the liner and the housing will not be factor of changing the effect of heat transfer.
3) No control of the amount of crush subject to change with time will be required for tilt pads bearing.
4) The shorter width of bearing will cause little possibility of uneven contact with the rotor.
5) Oil whirl or whip will be eliminated.

DETAILS OF SUGGESTION:

It is recommended to replace both sides of the bearings with the tilting pad bearings by manufacturing a new bearing housing.

Even when applied:

1) The rotor critical speed will be almost the same as before.
2) Almost the same amount of lubricating oil will be used by inserting an orifice.