DR.PUMP
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When the pump fails!

BEARING FAILURE SYMPTOMS

4c63 Craters and grooves

Craters and grooves due to current transfer
Craters

Characteristics:
Craters at the contact points of the rolling elements in the races, sometimes multiple craters in a row or whole strings of pearls on the perimeter. The surface in the craters is formed in part like welding beads.

Causes:
Current transfer, e.g. during welding or due to failure of ground contacts.

Remedy:
In case of electric welding do not allow current to pass through the bearing (ground).

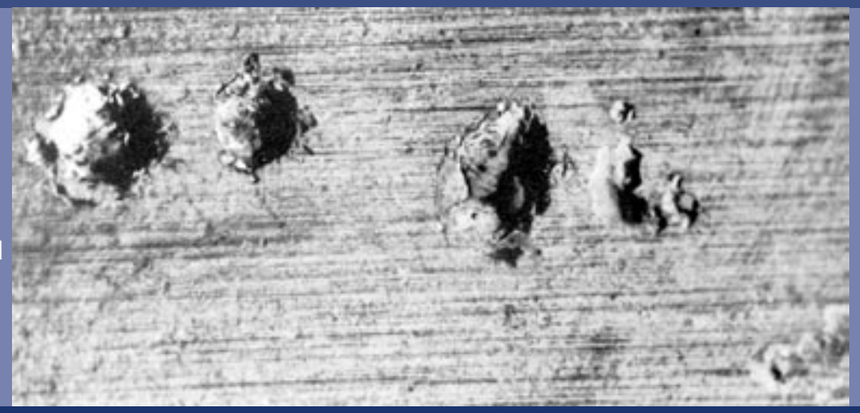
Grooves

Characteristics:
Axially parallel marks of brown discoloration on large parts of the race through to the entire perimeter of the race.

Causes:
Constantly flowing AC or DC power, marks even possible with low current load.

Remedy:
– Do not allow current to pass through the bearing (ground, insulation).
– Use current-insulated bearings.

The groove formation in the race of the outer ring of a deep groove ball bearing was created due to constant current transfer.



Current transfers have resulted in craters forming in the race of a cylindrical roller bearing.