



Through, Case and Zone hardening

by Mike Mortensen - Director of Engineering RBI-USA

All three of these processes are used to provide a hard wear surface on a bearing. Through hardening is a process where a bearing made of higher carbon steel such as 52100 is hardened uniformly throughout to a very high hardness.

Case hardening is used typically on lower carbon steels. When heat treated in a special carbon rich atmosphere, the carbon penetrates into the surface of the bearing. The result is a bearing with a high surface hardness and a softer, more ductile center.

Zone hardening is a process where flame or induction heating is used to harden a specific zone or area on a bearing such a raceway or seal riding surface leaving the remainder of the bearing softer and more malleable.

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