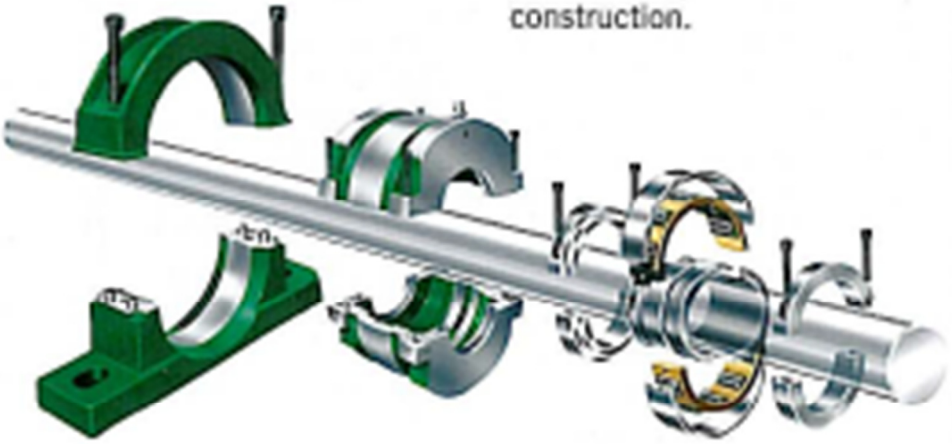
Located versus non-located

While the bearing industry is familiar with the need for one located and one non-located bearing on a shaft, it appears turnkey engineers and end-users are not so familiar.

For example the fabricated steel work assembled on site has loose tolerances on the bolt holes for a conveyor on a new plant under construction.



Cumulatively these tolerances could change the position of the centre line of the bearing housings, with the net result that the non-located bearing is displaced to one side preventing thermal growth or contraction.

The inner race of a bearing runs at 10 to 15 degrees hotter than the outer race; this leads to thermal growth of the shaft, which must be accommodated by the non-located bearing. If the non-located bearing cannot move to accommodate this thermal growth, the bearing life will be dramatically reduced.

Split Roller Bearings (SRB) are becoming the standard on new plants and OE Bearings, as a service to their customers, has been inspecting their bearings prior to commissioning. In all cases, a very high percentage of the non-located bearing needs to be adjusted to allow for thermal growth, in spite of the fact that the bearings were fitted on the correct position on the shaft.

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