

Custom Built Expansion Joints Solve Premature Failures Due to Piping Misalignment

Exceeding recommended misalignment causes multiple expansion joint failures costing down time and maintenance dollars

Application:

Piping to feed pipe on corn grinding mill at a dry grind ethanol facility. The dry grind ethanol facility produces fuel ethanol and Dried Distiller Grains (a low value animal feed product).



Problem:

The process engineer was having difficulties identifying premature failures of the expansion joints on the grinding mills. Each expansion joint was failing after only 2 weeks of operation.

Solution:

Holz Rubber Company determined the premature failure of the expansion joints was due to misalignment between the piping and the feed pipe on the grinding mill. Standard expansion joints are not designed to compensate for piping misalignment greater than 1/8". Misalignment reduces the movement capabilities of the expansion joint and can severely reduce service life due to excess stress. Holz custom manufactured an expansion joint with a built in 3/4" lateral offset to account for the misalignment; keeping the plant running.
