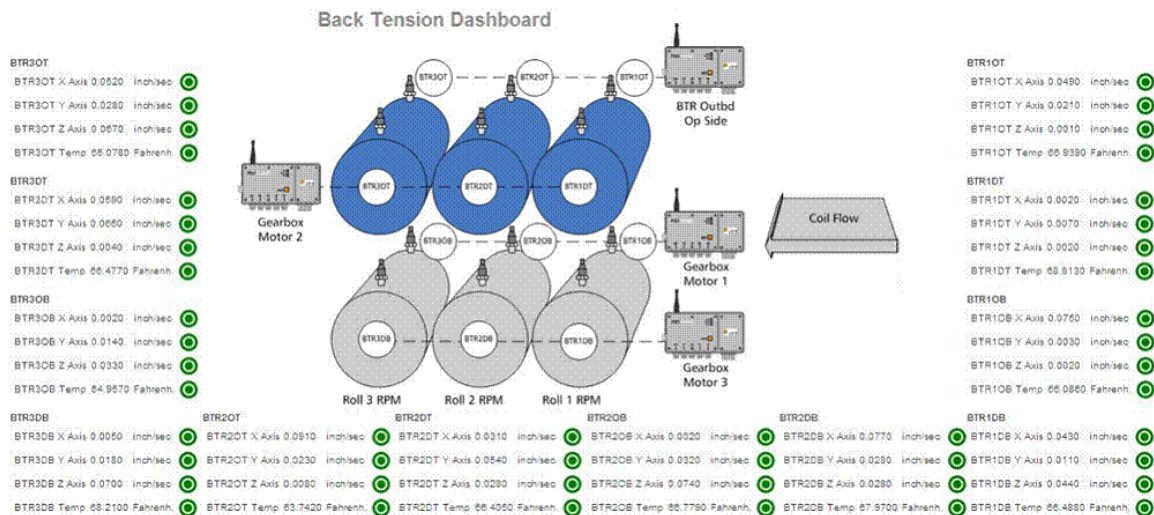


US Steel Mill Avoids Costly Bearing Failures

A large steel mill in the US Midwest utilizes ProSmart to continuously monitor two critical elements of their steel making process. Recently ProSmart identified a major problem on the steel rolling machine. Due to the economic slowdown in November of 2008, the mill scheduled a weekend shut down. Typically this line runs 24/7 and only shuts down for major holidays and for an annual one week outage.

After the weekend shutdown everything was put back in service and production resumed. Immediately following the startup ProSmart began sending alarms due to elevated radial vibration levels on the three top rollers. A bearing failure was not suspected, as the bearing frequencies were not elevated and all three top rollers were reacting in the same manner. The line was subsequently shut down and the rollers were inspected for damage. The rollers were not scheduled to be replaced and had plenty of life left in them. They were all found to have large flat spots on one side of the rollers. After investigation it was discovered that the hydraulic units were left on the weekend before. This caused the rollers to be forced in the down pressurized position instead of the raised standby position. This pressurized position created flat spots on the rollers.

Our customer stated that without continuous monitoring, operation in this state would have continued resulting in damaged roller bearings. The bearing material cost is \$75,000 each for a total of \$450,000 for six bearings. What is unique about this problem is that the unusual lack of production was one of the factors in the damage to the rollers.



Screen Shot of ProSmart Dashboard of Steel Roll Equipment: In this shot all sensor icons are green which denotes no equipment problems.