Garlock

Case Study: Style 206 EZ-FLO®
Nuclear Application

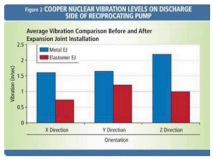
INDUSTRY
Nuclear

BACKGROUND
The customer is a large nuclear power plant in the United States utilizing emergency diesel generator sets (EDG's) that provide backup power as necessary. The EDGs supply power to critical systems during catastrophic events. The generators ensure that power is supplied to the reactor cooling systems and allow for a safe shutdown of the reactor if necessary.

CHALLENGES FACED
The Emergency Diesel Generator 2 began to leak lubricating oil from the discharge pipe. Months later the Emergency Diesel Generator 1 began to leak oil in the same area. The cracks in both cases were attributed to high cycle fatigue on the piping causing lubricating oil to leak at a rate of 8 gallons per hour. Several attempts were made to resolve the vibration issue including increasing the size of the weld to reduce stress, installing support anchors to lower vibration frequency and installing a metal expansion joint to absorb vibration.

OPERATING CONDITIONS
Size - 6.000"ID x 6.000"FF
Temperature - Moderate
Media - Lubricating oil
Pressure - Moderate

SOLUTION AND BENEFITS
Garlock Style 206 EZ-FLO® was installed on EDG 1 in the vertical section between two 90° elbows. The metal expansion joint previously installed was removed and replaced with solid piping. Upon start up the customer recorded reduced vibration levels of nearly 50 percent. After a year of service, the expansion joint was removed and showed no sign of degradation or reduced service life. Garlock Style 206 EZ-FLO® has been in service since 2011 and is still in excellent condition.



For more information, please visit:
http://www.garlock.com

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