



CHAIN WEAR ADVISORY



Identifying Chain Wear

Through recent site visits, Brentwood's Polychem Solutions Team has observed several chain and flight clarifier systems with excessively worn collector chain due to long-term exposure to heavy grit concentrations. Clarifier chain wear can be extreme in high grit conditions such as: combined sewer plants, plants without an effective grit removal system, or coastal facilities with a high presence of sand or snails. Although it is common for a well-maintained longitudinal collector to have 15 to 20 years of chain life, some are showing severe wear in less than 10 years operation, and in certain cross collectors, as rapidly as 3 years. Evidence of premature wear can be seen in barrel striations and can be measured with a pair of calipers. Polychem NCS-720-S collector chain should be replaced when the barrel OD reaches approximately 1.25", understanding that striations can make accurate measurements challenging. Polychem Solutions can assist with chain inspection, testing, and may recommend chain upgrades such as GritShield for both drive and collector chains. Uneven wear may indicate flight misalignment or improper chain catenary. If the initial installation date is known and the system has operated continuously, the estimated remaining chain life can be calculated to assist in maintenance planning and budgeting.



This is a heavily worn chain with the pin almost through the barrel. It will soon fail in the same way that the "beyond failure point" link did with a complete system failure ensuing.



This attachment link has a chain pin which has worn completely through the barrel and consequently cause a complete chain failure.



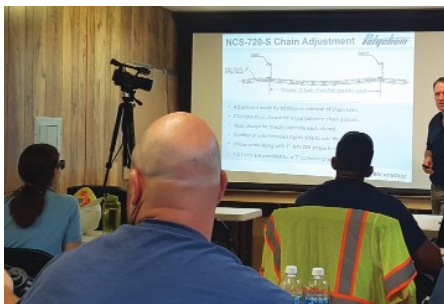
The deep scoring on the barrel of this chain is evidence of grit intrusion. Although still within tolerance, the wear rates will be accelerated and need to be monitored closely.

Please contact Brentwood or your local representative for further information.



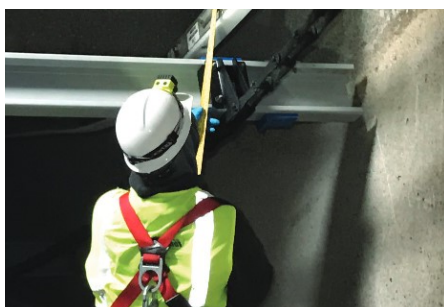


Brentwood can supply numerous **on-site** services for our customers. Whether it's starting up and commissioning a new Polychem installation, evaluating existing equipment and making upgrade recommendations, or educating and training your operators, having Brentwood's qualified, factory-trained technicians on your team will provide you with peace of mind.



CLASSROOM TRAINING

When turnover and staffing issues result in renewed training needs, Brentwood can provide complete training of operation and maintenance of Polychem equipment for treatment plant staff. Our training service includes a focused agenda that has been proven to improve plant personnel skills with maintenance. The program starts with a site specific classroom training session, followed with in-tank training to reinforce all concepts and techniques. It also typically includes a review of the operation and maintenance manual, preventative maintenance, safety precautions, all while keeping a focus on troubleshooting.



TANK MEASUREMENT & INSPECTION

Brentwood can provide measurement service for existing tanks which can help pinpoint equipment concerns. Many operational concerns and problems stem from equipment that wears in a misaligned condition or was improperly installed initially. The first step to remediation of operational issues is to understand when dimensional issues are a problem.



REFURBISHMENT PROGRAM

Brentwood can recommend cost-effective refurbishment of existing chain and flight equipment, while retaining existing structural items such as shafting, wall bearings, return track and supports, and drive unit assemblies. Our retrofit program is design to reduce installation costs by keeping labor requirements minimal. This often results in plant personnel being able to renew worn components and fix problematic installation issues during short outages.



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