

PREVENTION OF CORROSION ON AND IN BOLT CONNECTIONS ON RAIL SYSTEMS

PARTIES & INDIVIDUALS:

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PERIOD:

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BACKGROUND:

Waternet Amsterdam requires an anti-corrosive agent in order to preserve the screw thread of 6100 flanges. Waternet Amsterdam is currently using Molykote P37.

PRODUCTS USED:

Archoil AR8100 Biosyn Biodegradable Synthetic Grease.

OBJECTIVES:

Maintenance of current screw thread and corrosion prevention on new parts.

ACTION:

Archoil AR8100 was used to treat the screw threads. AR8100 is a very high quality biosynthetic (Durasyn 148 high VI) grease enriched with Archoil's Nanoborate technology. The Nanoborate process uses chelation to form a durable, chemically bonded surface layer. This layer reduces the coefficient of friction for metal surfaces to below 0.037%, ensuring that friction and wear are minimal. The chemical bond is very durable, does not wash away, can withstand temperatures up to 2,600°C, provides extreme pressure protection, and actively protects against corrosion. The chemical reaction of the added Nanoborate makes AR8100 exceptionally resistant to cuts and abrasions. The interval between lubrication applications was increased by a factor of 2 to 4. AR8100 contains no toxic or hazardous additives that are regularly found in conventional high-performance coatings. The product is also free from heavy metals, PTFE, molybdenum, graphite, boric acid, zinc, barium, and lead, and has the added benefit of being biodegradable.

RESULT:

Metal parts were kept free of corrosion. This enables normal disassembly after (up to) 5 years.



PRODUCTS TESTED

Archoil AR8100 Biosyn
Biodegradable Synthetic Grease

| Description | Archoil AR8100 | Molykote P37 |
|---------------------------|---|--|
| Price per 0.5 Liters | Liter € 10,90 | € 63,08 |
| Coefficient of friction | < 0.037 | 0.15 to 0.09 |
| Wear-scar at 800N | 0.8 mm | 1.7 mm |
| Anti-corrosion protection | Max 24 months | Not specified |
| Purity | Free of heavy metals, sulfur, chlorine and fluorine | <500mg sulfur, <200mg chlorine, <fluorine 200mg per kg |