

THE PROBLEM

RUST AND CORROSION WHICH ATTACKS WIRE ROPES INTERNALLY

This 7/8" (22 mm) special wire rope, with plastic-coated core, is only 8 months old, rusted through from lack of lubrication. It had to be replaced.



THE MASTO LUBRICATOR SOLVES THE PROBLEM

THE SOLUTION

THE MASTO LUBRICATOR LUBRICATES ALL TYPES OF WIRE ROPE INSIDE AND OUT

Only the Masto Lubricator penetrates under high pressure all types of wire rope, such as Non-rotating, Dyform, and Locked Coil with heavy grade lubricant. NB. To obtain total penetration through a compact rope the pressure must be **minimum 20 bar** (285 PSI) in the chamber. Even wire rope subjected to severe surface wear will have a longer life when lubricated with the Masto. Stainless steel, galvanized, and other special types of wire rope require just as much lubrication since friction is the same and corrosion can also occur.

HOW ITS DONE

EASY INSTALLATION REGARDLESS OF WIRE-ROPE POSITION

The Masto Lubricator is easy to use. Split seals are fitted around the rope and clamped in place by the two halves of the lubricating chamber. The unit is coupled to a high-pressure lubricating pump via flexible hose, and lubricant is forced into the lub. chamber. The unit is anchored by two chains to a convenient, stationary object. The pump is started and the wire rope is pulled through the Lubricator.

THE RESULTS

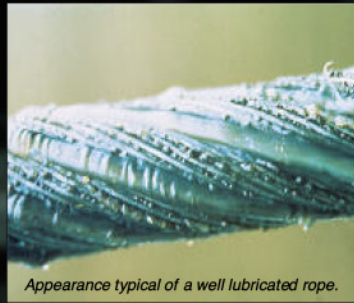
ARE EXCEPTIONAL, EXPERTS SAY

Authorities now recognize the value of effective lubrication. Masto-lubricated wire ropes on lifeboats, cranes, and deep diving equipment, for example can be certified for longer service. Long use by Mobil Exploration/ Statoil Norway, tests by Mobil Oil UK, Bridon Ropes UK and by others demonstrate up to 300% prolonged rope-life whether used onshore, offshore, in shipping or in mining operations. *The Norwegian Maritime Directorate:* We require the lubricant to penetrate the rope. Masto extends wire rope life time and improves safety. *Det Norske Veritas:* We confirm the fact that lubricant penetrated the entire cross-section of 22 mm (7/8") Dyform, non-rotating rope and 34 mm (1 3/8"). Locked coil.

The Norwegian Industrial Safety Department: We observed that the space in an old rusted, Dyform wire rope was filled with fresh lubricant, forcing out the old lubricant, thus improving both safety and economy. *Professor Oplatka Ph.D., E.T.H. Zürich:* The lubricant penetrated straight to the core. I congratulate Masto for achieving such remarkable results. *Mobil Exploration/ Statoil:* We have used the Masto Lubricator for ten years. Wire rope life has been extended 100-200%. We will give our highest recommendation. *Health & Safety Executive Diving Inspectorate (UK):* Diving bell wire ropes: An effective high pressure lubricator should be used that will convey fresh heavy grade marine lubricant to the core of the rope and displace entrained water. Type of lubricant to be used as recommended by the manufacturer of the lubricator, and the rope manufacturer. *Eiff Aquitaine:* We save two man-days of labour on an average-size crane. The high pressure, forces the lubricant to the very core. *Bridon International/Certex (UK):* We have tested various devices. We found that Masto greatly assists effective lubrication.

- LIST OF SOME USERS:
- Bridon International / Certex
 - Scorrop / Mobil Oil UK / Pemex
 - Eiff Aquitaine / Petrobras / Br-Gas
 - Conoco / Esso / Tascos / ETM S.A.
 - Maersk Drilling / Shipping / Amoco
 - Confidite Stena Offshore / Exxon
 - Mc Demott / Rosewater / Chevron
 - Diamond Drilling / Great White Fleet
 - Salmberger / Salspm / Transocean
 - Swiss Pacific Offshore / Transocean
 - Nore. Navy / Army / UK Navy
 - State Gold Mines / Inco Limited
 - Stöberl & Pitt / Hyatt / Geac
 - Geotest / Geac / Sunbelt / Geac
 - Abakal / Oceanering / Shell Comex
 - Essex / Federal Wharves / Transmarine
 - Ceres Helix Shipping / Transmarine
 - Unicom Management / Athensmarine
 - Wells International / MCA / Shiping mgn
 - Universe / Shipping / 14-ships
 - Barber Shipingm. / J.J. Light
 - World Wide Shipping / Sierra Line
 - I.T.M. / Mitsui O.S.K. Line / Crystal Cruises
 - Teddy Shipping / Crystal Cruises
 - Bergwerk-Protege-Haniel / Wheel Lane

Lubricating with the aid of brushes, rags, gloves, or by other means is costly, risky, and ineffective. The lubricant forms a film on the surface which water vapour can penetrate, thus becoming trapped. Temperature changes cause condensation and rust then begins to form from the inside. A wire rope can appear to be in good condition, when in fact corrosion and friction are destroying it from the inside. Its useful life is shortened and it becomes potentially dangerous. Even factory lubricated wire rope requires regular relubrication.



Appearance typical of a well lubricated rope.



Open chamber Model MWL 4/35.



The wire rope below is like new, completely and thoroughly lubricated.

The Masto Lubricator is portable, but it can also be mounted permanently, for example by installing a lubricating chamber on each lifeboat rope with a T-coupling.

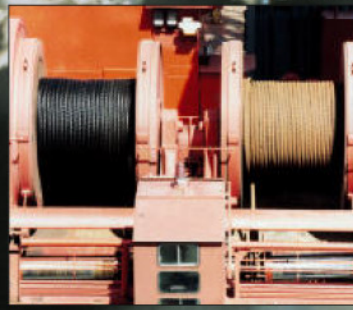
Wire rope type: Non-rotating Dyform. A tightly woven 1 1/4" (32 mm) rope, completely lubricated straight to the core. The masto also works easily with heavy grade lubricants which last much longer and give the best results.

In the test, lubricant was applied at a pressure of 35 bars (511 PSI.). Lubricant consumption was about 3,3lbs. (1,5 kg.) per 50 ft. (15 m) of rope. Wire-rope speed can be up to 165 - 198 ft. (50 - 60 m) per min.

Rust, old lubricant, water and foreign objects are forced out of the rope, scraped off, and fresh lubricant is applied - all in one operation. Normal lubricant consumption: 1-2 % of the wire rope weight.

Model MWL 4/35 is designed to take 4 seals. Model MWL 36/77 takes 2 seals. Lubricators are delivered as standard in aluminium but can also be delivered in other metals, approved for underground mines.

Lubricated with Masto. Unlubricated.

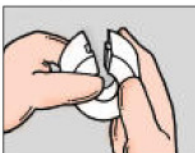


THE MASTO LUBRICATOR IMPROVES SAFETY, PREVENTS ACCIDENTS AND WIRE ROPE FAILURE

The Masto Lubricator extends rope life. It can use a wide range of lubricants but higher viscosity products are recommended. Oil or liquid will disappear very fast from the rope. Masto saves lubricant and time, and minimizes spillage. NB! Do not use any bi-mastic lubricants as this is useless and to obtain penetration this must be cleaned off by a solvent such as whitespirit. Contact us for lubricant advice. The Masto Lubricator comes in two models: Model MWL 4/35 mm dia. and Model MWL 36/77 mm dia. Seals for Model MWL 4/35 mm/dia. come in 16 different diameters (sets) at 2 mm intervals. Seals for Model MWL 36/77 mm dia. come in 15 different diameters (sets) at 3 mm intervals. One seal size covers only one rope diameter. A lubricator for larger rope diameters is available upon special request.



The Masto Lubricator is light in weight. Model 4/35 weights 8 lbs, (3,6 kg). Model 36/77, 13 lbs. (5,9 kg.). Masto seals are very durable. A set of seals can lubricate approximately 9000 ft. (3000 m) of wire ropes.

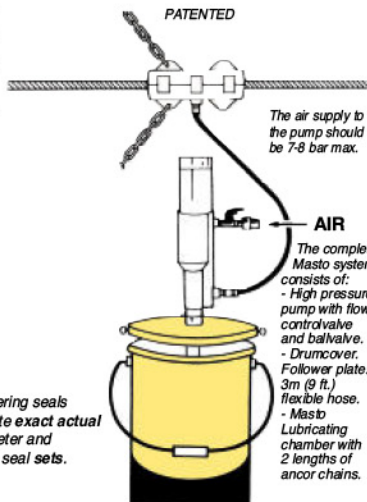


When ordering seals please state exact actual rope diameter and number of seal sets.

The Masto Lubricator is in use on most oil rigs, on all suitable wire ropes.

Areas of application: Offshore, shipping, industry, fishing, mining, armed forces, construction, power stations, cable-cars, elevators, skilifts, diving, ROV, seismic operations, etc. In certain cases the Masto Lubricator can be used on stationary ropes by moving the lubricating chamber along the rope. Masto can lubricate several ropes simultaneously.

Seals will ordinarily clean the rope surface satisfactory. For special cases where unusually tough coatings or extensive corrosion is present passing the rope through the chamber twice, or soaking the rope before pressure lubrication with white spirit or some similar solvent it will often help to loosen the contaminants. NB! When ordering seals please, measure the wire rope exactly best by hand since it may reduce in diameter after a periode in service. A given seal size only works with one rope diameter.



The air supply to the pump should be 7-8 bar max.

The complete Masto system consists of: - High pressure pump with flow control valve and ball valve. - Drumcover. Follower plate. 3m (9 ft.) flexible hose. - Masto Lubricating chamber with 2 lengths of ancor chains.



STOP

LUBRICATING WIRE ROPE BY HAND!

OR BY OTHER INEFFECTIVE METHODS GIVES MAXIMUM SAFETY



ONLY HIGH PRESSURE ENSURES EFFECTIVE INTERNAL CLEANING AND LUBRICATION WITH HEAVY DUTY LUBRICANT



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