# MOLYKOTE<sup>®</sup> Specialty Lubricants for the oil & gas industry

Smart Lubrication<sup>™</sup> solutions to meet the needs of the upstream, midstream & downstream segments

## Ensuring superior reliability & great uptime

Whether on an offshore drilling rig, in a petroleum refinery or at an LNG terminal, extreme conditions and demanding schedules create critical lubrication issues at every turn. Increased equipment reliability and extended service life are important – not only for long-term equipment management, but also for the physical safety and well-being of equipment operators. MOLYKOTE<sup>®</sup> Specialty Lubricants help eliminate downtime, reduce maintenance and prevent losses.

In this document, you will learn more about our solutions for the oil and gas industry, including greases, pastes, oils, compounds, dispersions and anti-friction coatings for a variety of components – offshore and onshore. Pages 2 and 3 offer you a variety of MOLYKOTE<sup>®</sup> solutions for your toughest challenges in applications ranging from valves and flanges to downhole and surface equipment to electrical substations.



## MOLYKOTE<sup>®</sup> solutions for oil-drilling rig & oil refinery components



### Surface equipment

### Wire rope/wireline

- **Corrosion protection:** MOLYKOTE<sup>®</sup> Longterm 00 Semi-Fluid Gearbox Grease or MOLYKOTE® BR-2 Plus High Performance Grease
- No corrosion protection: MOLYKOTE® 1122 Chain and Open Gear Grease

### Bearings in draw works

MOLYKOTE<sup>®</sup> Multilub High Performance Grease

### Crown & traveling block

- Block & tackle (set of pulleys/sheaves under high load): MOLYKOTE<sup>®</sup> G-4700 Extreme Pressure Synthetic Grease
- Sheave & roller bearing: MOLYKOTE<sup>®</sup> BR-2 Plus High Performance Grease or MOLYKOTE<sup>®</sup> Longterm 2 Plus Extreme Pressure Bearing Grease

### Downhole equipment components

### Bearings

- Drill bits: MOLYKOTE® 165 LT Gearwheel Grease or MOLYKOTE® X Grease Paste
- Mud motors/electric submersible pump: MOLYKOTE® D-7409

### Seals

• See "Seals" under "General components" on page 3

### Threaded connections

- Assembly Paste
- or MOLYKOTE® D-6600 Anti-Friction Coating

## **2 3** Valves

### Seat rings

MOLYKOTE® D-321 R Anti-Friction Coating

### **O**-rinas

• See "Seals" under "General components" on page 3

### Plug

- Standard: MOLYKOTE® 111 Compound
- Harsh chemical environment: MOLYKOTE<sup>®</sup> 3452 Chemical Resistant Valve Lubricant, MOLYKOTE® 3400A Anti-Friction Coating LF or MOLYKOTE® 106 Anti-Friction Coating

### Stem

- Housed stem in standard environment: MOLYKOTE<sup>®</sup> G-Rapid Plus Paste
- Housed stem in harsh chemical environment: MOLYKOTE<sup>®</sup> 6169 Grease
- Unhoused stem in dusty environment: MOLYKOTE® D-321 R Anti-Friction Coating

### Actuator

• MOLYKOTE<sup>®</sup> Longterm 2 Plus Extreme Pressure Bearing Grease

### Fasteners

- Standard: MOLYKOTE® 1000 Paste
- Sustainable solution: MOLYKOTE® P-3300 Paste

### Top drive & iron roughneck

• Multiple applications: MOLYKOTE® 7514 Synthetic Grease or MOLYKOTE<sup>®</sup> Longterm 2 Plus Extreme Pressure Bearing Grease

### Pipe-handling system

- Hinge (wet lubrication): MOLYKOTE<sup>®</sup> P-74 Assembly Paste or MOLYKOTE<sup>®</sup> Longterm 2 Plus Extreme Pressure Bearing Grease
- Hinge (dry lubrication): MOLYKOTE<sup>®</sup> 3400A Anti-Friction Coating LF, MOLYKOTE® D-708 Anti-Friction Coating, MOLYKOTE® 3402-C LF Anti-Friction Coating or MOLYKOTE® 106 Anti-Friction Coating
- Fastener: MOLYKOTE<sup>®</sup> 1000 Paste, MOLYKOTE<sup>®</sup> P-3300 Paste or MOLYKOTE<sup>®</sup> G-Rapid Plus Paste
- Actuator: MOLYKOTE<sup>®</sup> G-4500 FMS Multi-Purpose Synthetic Grease Bearing: MOLYKOTE<sup>®</sup> BR-2 Plus High Performance Grease

- Anti-Friction Coating or MOLYKOTE® D-6818 Anti-Friction Coating

- Wet lubrication: MOLYKOTE<sup>®</sup> P-37 Paste or MOLYKOTE<sup>®</sup> P-74
- Dry lubrication: MOLYKOTE<sup>®</sup> 3400A Anti-Friction Coating LF

## Oil-drilling rig



## 2 B Flange components

### Seals

Metal seal: MOLYKOTE® D-321 R Anti-Friction Coating, MOLYKOTE<sup>®</sup> 3402-C LF Anti-Friction Coating, MOLYKOTE® P-3700 Anti-Seize Paste or MOLYKOTE® P-1042 Adhesive Grease Paste

Elastomer seal: See "Seals" under "General components" on page 3

### Threaded connections

- Normal environment: MOLYKOTE<sup>®</sup> G-Rapid Plus Paste
- Subsea clamp connectors: MOLYKOTE<sup>®</sup> 3400A Anti-Friction Coating LF or MOLYKOTE® P-40 (S) Paste
- Refineries: MOLYKOTE<sup>®</sup> 1000 Paste

### **2** B Electrical substation General

- Gasket/seals: MOLYKOTE<sup>®</sup> 3099 HVIC Compound or MOLYKOTE® 111 Compound
- **Bearing Grease**
- Switch gears: MOLYKOTE® 111 Compound
- or MOLYKOTE® G-5008 Dielectric Grease

### SF<sub>6</sub> circuit breaker

- Trip latches: MOLYKOTE<sup>®</sup> G-N Metal Assembly Paste. or MOLYKOTE<sup>®</sup> 44 Medium High Temperature Grease
- Dry lubrication for sliding surfaces: MOLYKOTE® D-321 R Anti-Friction Coating

## **Oil refinery**

### **General components**



### **Bearings**

### • Standard: MOLYKOTE® BR-2 Plus High Performance Grease or

MOLYKOTE<sup>®</sup> Longterm 2 Plus Extreme Pressure Bearing Grease High loads: MOLYKOTE<sup>®</sup> BR-2 Plus High Performance Grease, MOLYKOTE® HP-870 Grease or MOLYKOTE® G-4700 Extreme

### Pressure Synthetic Grease

- High temperatures: MOLYKOTE® BG-20 Synthetic Bearing Grease, MOLYKOTE<sup>®</sup> G-5133M Wide Temperature Range Grease, MOLYKOTE® G-4700 Extreme Pressure Synthetic Grease, MOLYKOTE<sup>®</sup> 44 Medium High Temperature Grease. MOLYKOTE<sup>®</sup> 41 Extreme High Temperature Grease, MOLYKOTE<sup>®</sup> 3451 Chemical Resistant Bearing Grease, MOLYKOTE® HP-300 Grease or MOLYKOTE® HP-870 Grease
- High speeds: MOLYKOTE<sup>®</sup> BG-20 Synthetic Bearing Grease, MOLYKOTE® BG-555 Low Noise Grease or MOLYKOTE® HP-870 Grease
- Good water-washout resistance: MOLYKOTE® Longterm 2 Plus Extreme Pressure Bearing Grease, MOLYKOTE® G-0102 Bearing Grease, MOLYKOTE® G-4500 FMS Multi-Purpose Synthetic Grease or MOLYKOTE® G-1502 FM Synthetic Bearing & Gear Grease
- Chemical & solvent resistance: MOLYKOTE® 3451 Chemical Resistant Bearing Grease, MOLYKOTE® HP-870 Grease or MOLYKOTE® HP-300 Grease
- Very low speeds; water washout resistance: MOLYKOTE® 1122 Chain and Open Gear Grease, MOLYKOTE® P-1042 Adhesive Grease Paste, MOLYKOTE® P-40 (S) Paste, MOLYKOTE® X Grease Paste or MOLYKOTE® 165 LT Gearwheel Grease

 Shock or vibration exposure: MOLYKOTE<sup>®</sup> 165 LT Gearwheel Grease or MOLYKOTE® G-4700 Extreme Pressure Synthetic Grease • Oil lubrication: MOLYKOTE<sup>®</sup> L-Series Synthetic Gear Oils





Switches: MOLYKOTE<sup>®</sup> Cu-7439 Plus Paste V1, MOLYKOTE<sup>®</sup> 41 Extreme High Temperature Grease, MOLYKOTE® 44 Medium High Temperature Grease, MOLYKOTE® 33 Medium Extreme Low Temperature Grease or MOLYKOTE® 3451 Chemical Resistant

• High-voltage electrical contacts: MOLYKOTE® HP-300 Grease

• Bearings: MOLYKOTE® 3451 Chemical Resistant Bearing Grease MOLYKOTE<sup>®</sup> 33 Medium Extreme Low Temperature Grease





### Running-in

Gears

Grease

 MOLYKOTE<sup>®</sup> G-N Plus Paste or MOLYKOTE® G-Rapid Plus Paste

### Operation of open gears

 Standard: MOLYKOTE<sup>®</sup> 1122 Chain and Open Gear Grease, MOLYKOTE® 165 LT Gearwheel Grease or MOLYKOTE<sup>®</sup> G-67 Extreme Pressure

• **Corrosion resistance:** MOLYKOTE<sup>®</sup> 1122 Chain and Open Gear Grease or MOLYKOTE® Longterm 00 Semi-Fluid Gearbox Grease

· High load resistance: MOLYKOTE® Longterm 00 Semi-Fluid Gearbox Grease, MOLYKOTE® 165 LT Gearwheel Grease or MOLYKOTE® G-67 Extreme Pressure Grease

### Operation of closed gears

• Tackiness required: MOLYKOTE® Longterm 00 Semi-Fluid Gearbox Grease

 Fretting corrosion protection: MOLYKOTE<sup>®</sup> D-321 R Anti-Friction Coating or MOLYKOTE® D-7409 Anti-Friction Coating

- Standard: MOLYKOTE® 111 Compound or MOLYKOTE® 55 O-Ring Grease
- Extreme low temperatures: MOLYKOTE<sup>®</sup> 55 O-Ring Grease, MOLYKOTE® HP-300 Grease or MOLYKOTE<sup>®</sup> G-5008 Dielectric Grease
- Extreme high temperatures: MOLYKOTE<sup>®</sup> HP-300 Grease, MOLYKOTE® HP-870 Grease or MOLYKOTE® G-5008 Dielectric Grease
- · Chemical resistance: MOLYKOTE<sup>®</sup> 3452 Chemical Resistant Valve Lubricant, MOLYKOTE® 6169 Grease, MOLYKOTE® HP-870 Grease or MOLYKOTE® HP-300 Grease
- Double tandem mechanical seal: MOLYKOTE<sup>®</sup> L-1605FM Synthetic Barrier Fluid



### For more information

Read our comprehensive oil & gas lubricants brochure:



Explore MOLYKOTE® products' technical data sheets (TDS):



Read our MOLYKOTE<sup>®</sup> Pastes brochure:



Read our MOLYKOTE® Anti-Friction Coatings brochure:



### **About MOLYKOTE<sup>®</sup> Specialty Lubricants**

Since 1948, customers around the world have trusted the MOLYKOTE<sup>®</sup> brand for performance and expertise to help solve complex, technical design and lubrication challenges. Today, our greases, compounds, pastes, dispersions, oils and fluids, and anti-friction coatings support customers' innovation, performance and sustainability needs. To learn more about our extensive product and service offering, to utilize our interactive product selection tool, or to locate a distributor, visit **molykote.com**.

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### **Contact us**

MOLYKOTE<sup>®</sup> has Contact Centers around the globe. Find the phone number for the center nearest you at **www.dupont.com/molykotecontact**.



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