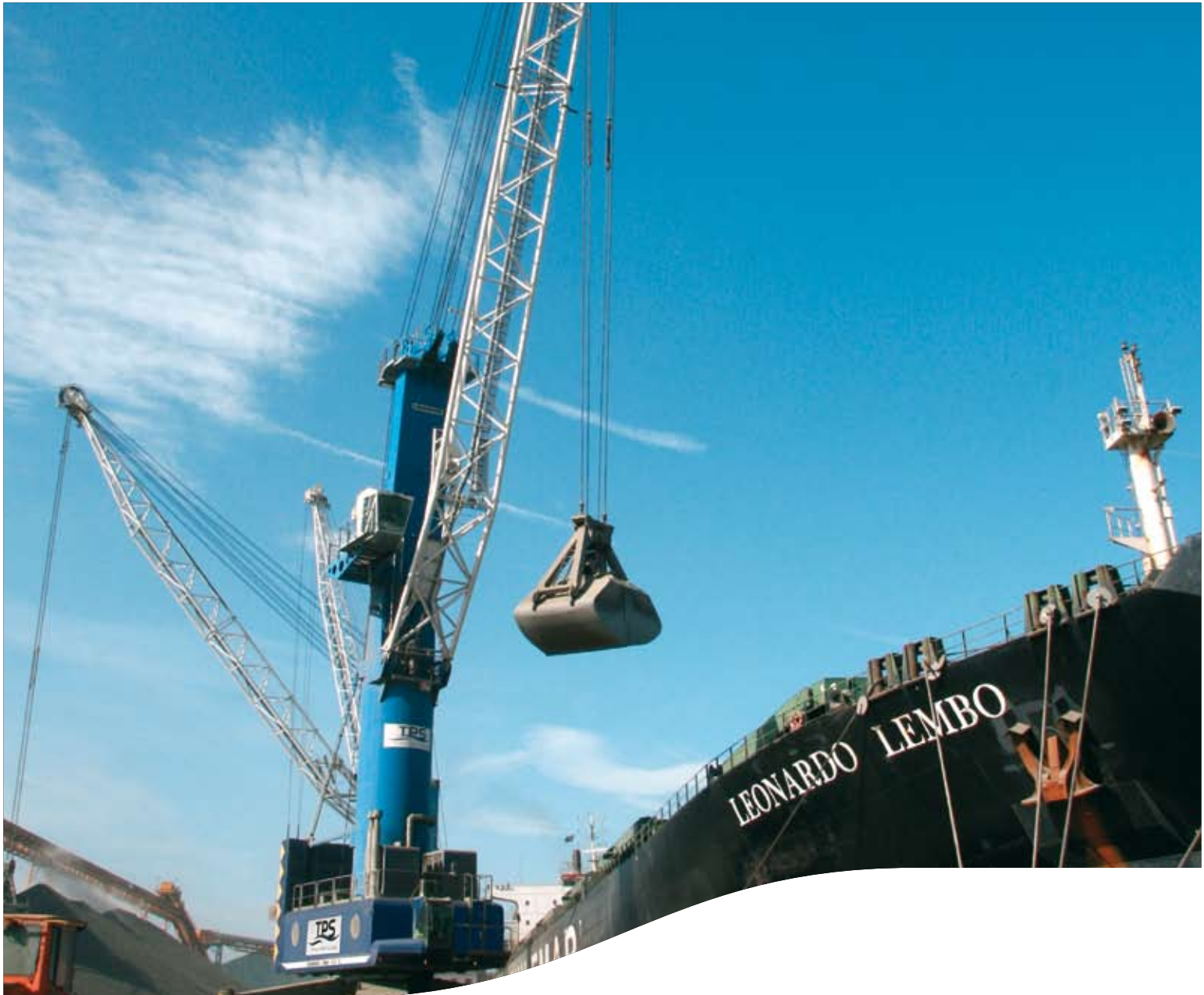




FOR LIEBHERR HARBOR MOBILE CRANES

SPECIAL STEEL WIRE ROPES



TOGETHER IN MOTION

SPECIAL STEEL WIRE ROPES FOR LIEBHERR HARBOR CRANES

Worldwide handling of goods is continually increasing every year. Herefore the harbors operate on the boarder to their capacity limit although already working day and night. In cooperation with Liebherr TEUFELBERGER has developed its special steel wire rope **QS 816 V Protect** that is equipped with these characteristics, that are demanded at a high level of operation. Only if all components are of highest quality economical operations are possible.

QS 816 V PROTECT - RECOMMENDED AND USED BY LIEBHERR

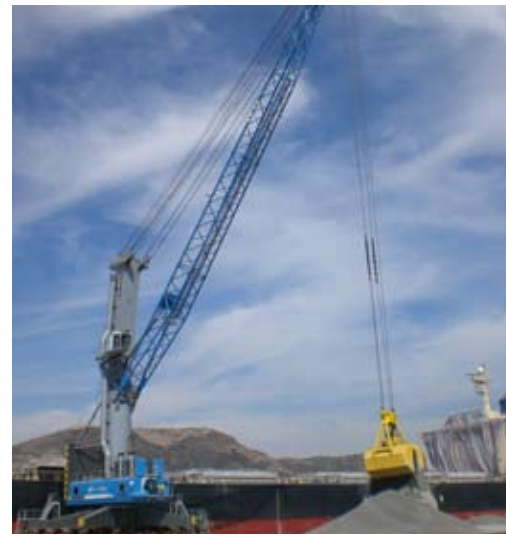
- **Shock resistance:** The use of crane loads of various strengths cannot be avoided in modern cargo-handling. To counteract this is and achieve highest operation performance, by properly absorbing dynamic forces – especially in grabbing operations – we have developed our QS 816 V Protect.
- **Highest safety:** The loading capacity of modern cranes is constantly increasing.
- **The extremely high breaking forces** – especially provided by the SUPERFILL® compaction technology – of our steel wire ropes ensure highest safety for your application.
- **High profitability:** Harbor mobile cranes are often used 365 days a year. Long-term experience has resulted in our gaining specific knowledge as to the requirements for the long service life of steel wire ropes. TEUFELBERGER ropes contribute to a significant reduction of total costs when it comes to the duration of use of your device.
- **Resistance against corrosion:** Our ropes with PLASTFILL™ technology have a plasticized rope core and **galvanized wires** which provide highest resistance against corrosion to the inner and outer rope. Furthermore, all components are optimally lubricated with a special grease.



TEUFELBERGER ORIGINAL EQUIPMENT ROPE FOR LIEBHERR HARBOR MOBILE CRANES

- **Developed in cooperation with Liebherr to achieve longest lifetime of ropes.**

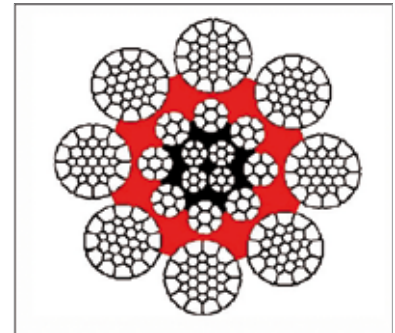
QS 816 V PROTECT



The **extreme high number of wires** in the outer strands provide highest resistance with maximal elasticity for this galvanized rope. TEUFELBERGER's SUPERFILL® compaction technology guarantees high breaking forces, translating to best operational safety. Its use – even in the inner rope – results in high resistance against abrasion, a stable diameter and a long service life.

YOUR ADVANTAGE QS 816 V PROTECT

- **Simple handling** and best winding characteristics on the drum
- **High flexibility** – due to the extra high number of wires
- **Reliability and safety in operation** – due to extremely high breaking forces
- **Significant cost reduction** – due to reduced rope abrasion and increased service life with less maintenance expense.
- **Trouble-free operation** – due to outstanding absorption of dynamic forces such as knocks and vibrations
- **Long service life** – due to smoother rope surface resulting from SUPERFILL® compaction technology



ALL ROPES ARE GALVANIZED TO ACHIEVE A VERY LONG LIFETIME AND ARE AVAILABLE FROM STOCK!

QS 816 V PROTECT

Nominal diameter in mm	Weight in kg/m	Minimum breaking load kN 1960 N/mm ²
32	4.70	855
36	6.08	1,068
44	8.95	1,609
48	10.47	1,878

ATTENTION

Our rope recommendations are non-binding but based on many years of experience. Please note the special characteristics of your system and contact us to find the best rope for you. Subject to technical changes as well as written and print errors.



LIEBHERR REFERENCE LIST

COUNTRY	CITY	TYPE	CUSTOMER
Spain	Tarragona	LHM 600 / LHM 500 / LHM 400	Maporsa
Belgium	Antwerpen	LHM 500	Nova & Hesse-Noord Natie Stevedoring
Belgium	Antwerpen	LHM 400	Independent Maritime Terminal
Turkey	Mersin	LHM 500 / LHM 500	Ugursan
Venezuela	Puerto Cabello	LHM 400 / LHM 400	Almacenadora Braperca
Columbia	Buenaventura	LHM 500 / LHM 500	Sociedad Portuaria Regional
USA	Vancouver	LHM 500	Port of Vancouver
USA	Vancouver	LHM 500	Port of Longview
USA	Miami	LHM 400 / LHM 400	Seaboard Marine
Guatemala	Guatemala	LHM 320 / LHM 320 / LHM 320	Caribe Gru
South Korea	Inchon	LHM 600 / LHM 500 / LHM 500 / LHM 500	Hyundai Steel
United Arab Emirates	Dubai	LHM 400 / LHM 400 / LHM 400	Emirates Trading Agency
Namibia	Walvis Bay	LHM 500 / LHM 400	Namport

TEUFELBERGER Seil Ges.m.b.H.

Böhmerwaldstraße 20, 4600 Wels, Austria
 T +43 7242 615-0
 F +43 7242 60501
 E wireope@teufelberger.com

www.teufelberger.com

