

# Steel wire ropes for ONSHORE OIL & GAS



# SUMMARY

## DRILLING LINE

- 4 IPH 619 API
- 5 IPH GPC
- 6 IPH GPCL

## HIGH PERFORMANCE DRILLING LINE

- 7 IPH GP619 ULTRA
- 8 IPH GPCL ULTRA

## WORKOVER WIRE ROPES

- 9 IPH 619 API
- 10 IPH 67API

## WINCH TRUCK LINE

- 11 IPH 636

## 12 SLINGS FOR OIL & GAS INDUSTRY

## 13 IPH VALUE

## INSTITUTIONAL

- 14 Latin America's most leading edge industrial logistics system.

## TERMS AND DEFINITIONS

IWRC

Independent wire rope core.

SFC

Synthetic fiber core.



## Steel wire ropes for ONSHORE OIL & GAS

Rig equipments used in Oil and Gas industry represent one of the biggest challenges for steel wire ropes. Therefore, only products designed and manufactured according to specific O&G standards shall be used.

As a result of a wide experience and state of the art technology, IPH products and services are globally recognized for satisfying with an outstanding performance customers needs under the most demanding conditions.

IPH O&G products are manufactured according to American Petroleum Institute Standard API Monogram License 9A-0018. In addition, IPH Quality Management System is certified according to ISO 9001 and API Q1 latest Ed.

For special applications or products not displayed in this catalog, please contact out Technical Sales Department.

### IPH QUALITY

IPH Quality Management System guarantees full traceability of products and compliance with international manufacturing standards. Quality controls are carried out throughout the whole process, from raw material reception to final product.

#### MANAGEMENT SYSTEM CERTIFICATIONS:

American Petroleum Institute, API Monogram Spec Q1, Spec 9A.  
TÜV Rheinland, ISO 9001:2008.  
Fundação Vanzolini NBR, ISO 9001:2008.

#### WIRE ROPES SPECIFIC CERTIFICATIONS:

**Marine use:**

Lloyd's Register plant certification.

**General purpose:**

ABNT NBR and ISO 2408 product certification.

**Elevators:**

IRAM-INTI and IRAM 840 product certification.

**Offshore containers lifting slings:**

DNV 2.7-1 product certification.

**Wire rope slings:** IRAM 5221 flemish eye product certification.

For further information regarding certifications, please visit our website.

# DRILLING LINE



## Advantages and features

- Exceeds the service life indicated by API RP 9B.
- Provides higher performance at low cost.

Drilling ropes work under high stresses combined with very compromising sheaves and drum sizes. The IPH 619 API wire rope is widely used and suitable for any onshore rig equipment.

### Minimum breaking load

Diameter		Weight factor		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]
22,20	7/8	2,10	1,41	354	39,8
25,40	1	2,76	1,85	460	51,7
28,60	1 1/8	3,49	2,34	578	65,0
31,80	1 1/4	4,31	2,89	711	79,9
34,90	1 3/8	5,20	3,49	854	96,0
38,10	1 1/2	6,20	4,16	1010	114
41,30	1 5/8	7,26	4,88	1170	132

Construction: 6x19 S-IWRC.

Coating: bright (galvanized upon request).

For products not displayed in this catalog, please contact our Technical Sales Department at [sales@iphglobal.com](mailto:sales@iphglobal.com)



# DRILLING LINE



## Advantages and features

- Its performance exceeds API RP 9B and IADC reference rates.
- Suitable for high demand drilling due to its higher breaking load and particularly low safety factors.
- Increased contact surface on the sheaves.
- Increased compression and abrasion resistance in the drum.

The IPH GPC rope family is made of compacted strands, which increase the rope breaking load and the contact surface on sheaves. This leads to a reduction in wear on both sheaves and the rope itself. It also improves crush resistance, making these wire ropes ideal for intensive work applications in multi-layer drums.

### Minimum breaking load

Diameter		Weight factor		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]
25,40	1	2,82	1,89	510	57,3
28,60	1 1/8	3,58	2,40	640	71,9
31,80	1 1/4	4,42	2,97	791	88,9
34,90	1 3/8	5,32	3,57	953	107
38,10	1 1/2	6,35	4,26	1140	128
41,30	1 5/8	7,46	5,01	1340	151

Construction: 6x19 S-IWRC or 6x26 WS-IWRC depending on diameter range.

Coating: bright (galvanized upon request).

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# DRILLING LINE



## Advantages and features

- Higher breaking load.
- Increased abrasion resistance.
- Minimum diameter loss under tension.
- Increased contact surface on sheaves.
- Higher structural dynamic stability.
- Reduced internal friction due to its thermoplastic process.
- Better load distribution and maximum bending fatigue resistance.

The IPH GPCL wire rope, with compacted strands and plastic cushion steel core, is a high-end alternative for deep drilling with low safety factors and hard operation conditions. It delivers 25% more ton-mile performance than IPH 619 API.

### Minimum breaking load

Diameter		Weight factor		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]
25,40	1	2,87	1,93	535	60,1
28,60	1 1/8	3,64	2,44	675	75,9
31,80	1 1/4	4,51	3,03	835	93,9
34,90	1 3/8	5,43	3,65	1010	114
38,10	1 1/2	6,47	4,34	1200	135
41,30	1 5/8	7,60	5,10	1410	158

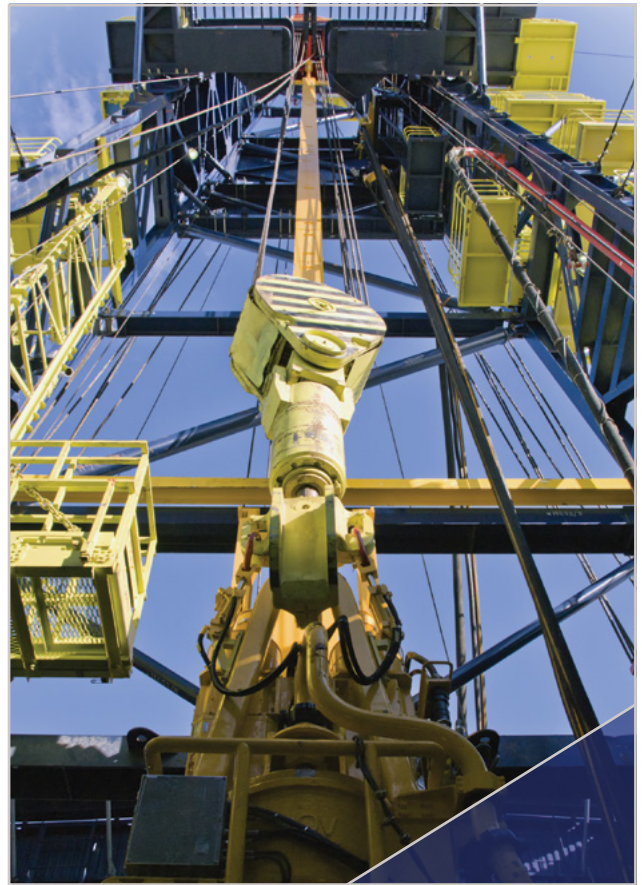
Construction: 6x19 S or 6x26 WS depending on diameter range, with independent wire rope core with thermoplastic process (EPIWRC).

Coating: bright (galvanized upon request).

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# HIGH PERFORMANCE DRILLING LINE



**Advantages and features**

- Increased fatigue resistance.
- Optimal abrasion resistance.
- A softer surface contact that increases wire rope life and reduces sheave friction wear.
- Optimal load distribution.

High performance wire rope, fully coated and filled with a solid polymer, specially developed for high demand applications, where tensile, bending and compression forces are combined. Its performance exceeds API RP 9B and IADC reference rates by 25% to 30%, depending on the operation conditions.

Diameter		Weight factor		Minimum breaking load	
[mm]	[inch]	[kg/m]	[lb/ft]	Grade EIP	
				[kN]	[short tons]
25,40	1	2,82	1,89	506	56,9
28,60	1 1/8	3,58	2,40	636	71,5
31,80	1 1/4	4,42	2,97	782	87,9
34,90	1 3/8	5,32	3,57	943	106
38,10	1 1/2	6,35	4,26	1110	125
41,30	1 5/8	7,46	5,01	1300	146
44,50	1 3/4	8,66	5,81	1500	169
47,60	1 7/8	9,90	6,65	1710	192
50,80	2	11,30	7,59	1930	217
54,00	2 1/8	12,75	8,56	2160	243
57,20	2 1/4	14,30	9,60	2420	272

Construction: 6x19 S-IWRC or 6x26 WS-IWRC depending on diameter range.

Coating: bright (galvanized upon request).

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# HIGH PERFORMANCE DRILLING LINE



## Advantages and features

- Optimal abrasion resistance.
- Perfect load distribution and maximum bending fatigue strength.
- Softer surface contact that increases wire rope life and reduces sheave friction wear.
- Maximum breaking load due to increased metal section.
- Increased resistance to lateral compression in the drum.
- Better structural stability.

Premium high performance wire rope, developed with combined technologies and the selection of special materials. Designed with compacted strands, fully coated and filled with a solid polymer, it provides an excellent performance under high demanding conditions where tensile, bending, abrasion and compression forces are combined. Its performance exceeds the reference rates API RP 9B and IADC by 30% to 35%, depending on the operation conditions.

### Minimum breaking load

Diameter		Weight factor		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]
25,40	1	2,87	1,93	535	60,1
28,60	1 1/8	3,64	2,44	675	75,9
31,80	1 1/4	4,51	3,03	835	93,9
34,90	1 3/8	5,43	3,65	1010	114
38,10	1 1/2	6,47	4,34	1200	135
41,30	1 5/8	7,60	5,10	1410	158
44,50	1 3/4	8,82	5,92	1590	179
47,60	1 7/8	10,10	6,78	1800	202
50,80	2	11,50	7,72	2070	233
54,00	2 1/8	13,00	8,73	2340	263
57,20	2 1/4	14,60	9,80	2620	294

Construction: 6x19 S-IWRC or 6x26 WS-IWRC, depending on diameter range.

Coating: bright (galvanized upon request).

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# WORKOVER WIRE ROPES



## Advantages and features

- Exceeds service life recommended by API RP 9B.
- Provides high performance at low cost.

Tubing line works under high stresses combined with very compromising sheaves and drum sizes. The IPH 619 API wire rope is widely used and suitable for any on shore rig equipment.



### Minimum breaking load

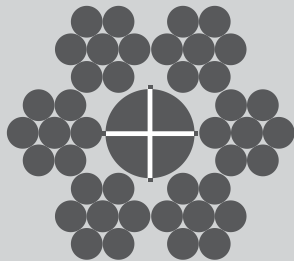
Diameter		Weight factor		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]
19,10	3/4	1,54	1,04	262	29,5
22,20	7/8	2,10	1,41	354	39,8
25,40	1	2,76	1,85	460	51,7

Construction: 6x19 S-IWRC or 6x26 WS-IWRC, depending on diameter range.

Coating: bright (galvanized upon request).

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# WORKOVER WIRE ROPES



**IPH 67 API**

## Advantages and features

- Great wear resistance.
- Corrosion resistant as a result of the use of mineral-based lubricants with anti-corrosion additives, which provide high adherence and penetration.
- Lubricated polypropylene fiber core, resistant to acids.

The secondary steel wire rope in the workover and completion equipment is called "sand line", also known as "swabbing wire" or "swabbing line". Its 6x7 construction, with a high density synthetic fiber core, is the most popular for this application as it provides high resistance to abrasion and corrosion combined with a low cost.



### Minimum breaking load

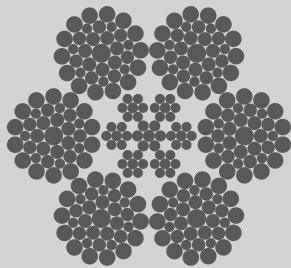
Diameter		Weight factor		Grade IPS		Grade EIP	
[mm]	[inch]	[kg/m]	[lb/ft]	[kN]	[short tons]	[kN]	[short tons]
14,30	9/16	0,70	0,47	116	13,0	127	14,3
15,90	5/8	0,87	0,58	141	15,9	155	17,4

Construction: 6x7 SFC.

Coating: bright (galvanized upon request).

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# WINCH TRUCK LINE



**IPH 636**

## Advantages and features

- General purpose wire rope specially recommended for winch truck applications due to its great flexibility and crushing resistance.
- Corrosion resistant as a result of the use of mineral-based lubricants with anti-corrosion additives, which provide high adherence and penetration.

The winch truck wire ropes are always under high demanding loads combined with reduced drum and roller size. The IPH 636 wire rope provides high tensile strength and great flexibility with a reduced cost.

### Minimum breaking load

Diameter	Weight factor		Grade 1960 N/mm <sup>2</sup>	
	[mm]	[kg/m]	[lb/ft]	[kN]
22,00	1,98	1,33	338	38,0
26,00	2,76	1,85	472	53,0
28,00	3,21	2,16	547	61,5
32,00	4,19	2,82	715	80,4

Construction: 6x36 WS-IWRC.

Coating: bright (galvanized upon request).

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# SLINGS FOR OIL & GAS INDUSTRY

IPH also supplies another reliable line: slings for the Oil and Gas industry.

IPH has a modern slings manufacturing plant that supplies the market with a full range of combinations between wire ropes and fittings, whose most popular configurations are:

- Mast raising line with spelter sockets.
- Mast rig structural wire rope slings.
- Wire rope slings for general lifting, also with standard and customized fittings.

All of our wire rope slings are made with "flemish" eyes in compliance with international standards such as OSHA and ASME B30.9

## FUNILING® SLINGS BENEFITS

- Fully identifiable slings: Workload, Brand and Manufacturing Lot N°.
- The hexagonal shape of the sleeve allows for a more complete and legible marking, both by the manufacturer and by the user.
- Manufacturing and design processes certified under ISO 9001.
- Cold Tuff Sleeves, Crosby Original Swaging dies and Procedures.
- Development and design of special configurations.
- Comprehensive quality control.
- Full traceability.
- IPH's reliability, support and certification.
- Fitting fixation with resin, including testing at twice the working load.
- Addition to the widest variety of components with the backing and safety that characterize the IPH brand.



# IPH VALUE

## RESEARCH AND DEVELOPMENT

- Design engineering know-how.
- Field engineering applied to each operation and improvement opportunities analysis, according to every customer needs.
- Modern testing laboratory equipped with state-of-the-art machinery that can simulate actual operation efforts and conditions, enabling us to validate and guarantee rope performance.



## INTEGRATION

Integration is part of the company's DNA, starting with the steel wire rod.

- Wire production.
- Strand production.
- Steel, synthetic and natural fiber core production.
- Plastic infiltration process.
- Fitting installation as sockets, standard and custom-made swage end terminals.
- Conditioning and packaging development according to every need.
- Slings manufacture.
- Wooden and steel reels manufacture.



## CUTTING EDGE TECHNOLOGY

- Cutting edge facilities and equipment.
- Tools and devices design & developed for each product.
- Process automation and real time controls of key variables.



## TRAINED PROFESSIONAL STAFF

- Highly trained engineers and technicians to evaluate, assess, and advise the high performance optimal solution for each application.
- Constant training for clients about good practices regarding the use and application of steel wire ropes, including installation, inspection and discard criteria.



## SUPPORT & CERTIFICATION

- Full traceability of the product and its components up to their raw materials.
- Process and type certification.
- Third party tests and certifications.



# LATIN AMERICA'S MOST LEADING EDGE INDUSTRIAL LOGISTICS SYSTEM

Founded in 1949 in Buenos Aires, Argentina, IPH has become one of the major players in the manufacturing of wire ropes in Latin America, placing itself into a position of leadership through the specialization in achieving solutions for the highest demands in the market.

Since its beginnings, IPH developed a business model based on innovation and high technology investment. Its high quality and customer service standards allow the company to be present among the most competitive markets in the five continents.

Located in Buenos Aires, Argentina, its 45.000 square meters covered plant with capacity to produce up to 1500 Tons per month, combines cutting edge technology, highly qualified manpower and a Quality System certified by leading international standards.

The planning of the vertically integrated production process involves every component of the steel wire rope, from the self-made wires and steel or fiber cores, until the wooden or steel reels and packaging according to customers specifications. This integration model is key to the design optimization, productive versatility and sustainability and quality assurance of finished products.

In its two modern sales and service centers, located in Buenos Aires and San Pablo, IPH keeps the widest stock of finished goods along with facilities to manufacture slings for several purposes, cut to length, final conditioning of products, certifications and lab testing; offering the most comprehensive response in solutions for lifting and hoisting devices.

The factory, combined with the two sales and service centers, gives to IPH a highly efficient operation shaping the most modern industrial and logistic complex in Latin America.



San Miguel Plant  
Buenos Aires, Argentina.



Service Center  
Itapeví, Brasil.



Service Center  
Bella Vista, Argentina.



### **HEADQUARTERS**

Av. Arturo Illia 4001  
B1663HRI – San Miguel  
Buenos Aires – Argentina  
T. (54.11) 4469-8100  
F. (54.11) 4469-8101  
sales@iphglobal.com  
Info@iphglobal.com

### **BRASILIAN BRANCH**

Rua Nova São Paulo 110  
Refúgio dos Pinheiros  
CEP 06696-100 – Itapevi – SP – Brasil  
Tel/Fax: (55.11) 4774-7000  
comercial@iphglobal.com  
iph@iphglobal.com

[www.iphglobal.com](http://www.iphglobal.com)

**IPH. EVOLUTION AS AN ATTITUDE.**

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