



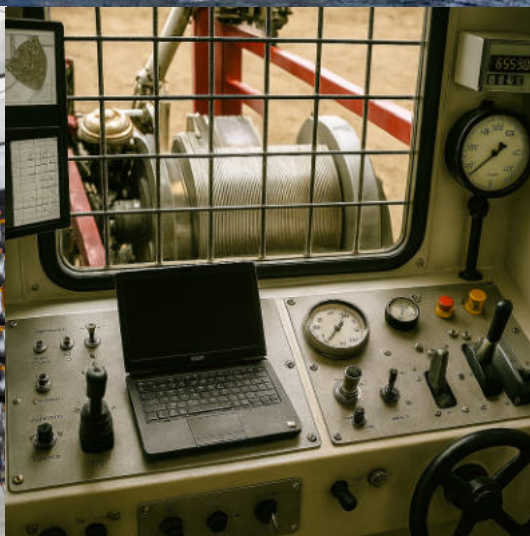
# BGH



Excellence in Specialty Steel

## OIL & GAS SLICKLINES

PREMIUM CORROSION RESISTANT STEELS



# SLICKLINES "MADE IN GERMANY"



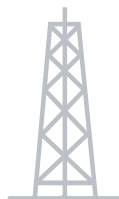
**CERTIFIED FOR QUALITY**

## FROM PERFECTED TECHNOLOGY TO HIGH QUALITY STEEL THROUGH:

- ◀ EAF/VIM melting, AOD/VOD secondary refining and ESR/VAR remelting enables the production of materials with a high degree of metallurgical purity
- ◀ Superior reliability in steel processing ensured by fully controlled production from melting to dispatch
- ◀ World class in-house heat treatment facilities
- ◀ Modern in-house laboratories
- ◀ Application-driven R&D to benefit our customers
- ◀ Certified to international standards ISO 9001, ISO 14001 and ISO 50001
- ◀ Continuous, weld free single wire
- ◀ Each spool subjected to rigorous crack testing

## APPLICATIONS:

- ◀ Downhole
- ◀ Well measuring line
- ◀ Electro-mechanical cable



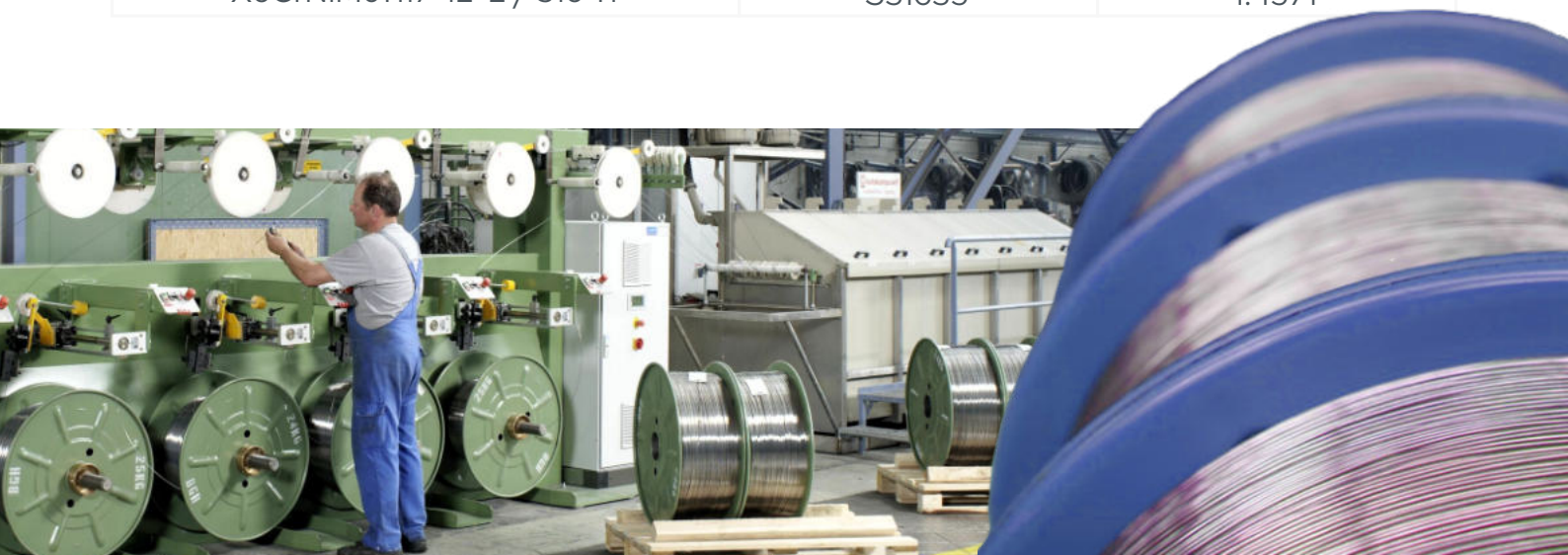
## DIMENSIONS AND DELIVERY FORMS:

- ◀ Typical dimensions: Wire Ø 2,083 mm / 2,34 mm / 2,74 mm / 3,18 mm  
Wire Ø 0.082 in / 0.092 in / 0.108 in / 0.125 in
- ◀ Delivery form: Spools, weight up to 500 kg | 1102 lbs
- ◀ Diameter and form of delivery can be tailored to meet specific customer requirements.

## FOR THE MAJORITY OF OPERATING CONDITIONS:

- ◀ Excellent corrosion resistance in environments containing H<sub>2</sub>S, chloride and CO<sub>2</sub>.
- ◀ Very good resistance to pitting and general corrosion.
- ◀ Reliable performance at elevated temperatures.

Grade name	UNS	DIN EN
<b>Duplex</b>		
X2CrNiMoN22-5-3 / F60 / F51	S32205/S31803	1.4462
<b>Ni-base alloys and special alloys</b>		
NiMo16Cr15W / Alloy N 10276	N10276	2.4819
MP35N / CoNi35Cr20Mo10FeTi	R30035	2.4999
<b>Austenitic grades</b>		
X5CrNiMo17-12-2 / 316	S31600	1.4401
X1NiCrMoCuN25-20-7	N08926	1.4529
X6CrNiMoTi17-12-2 / 316 Ti	S31635	1.4571



# AUSTENITIC GRADES FOR SLICKLINES



<b>X5CrNiMo17-12-2</b>		<b>UNS S31600   DIN 1.4401</b>					<b>PREN 23 - 27</b>			
<b>Chemical analysis (%)</b>		C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min	-	-	-	-	-	16,5	10,0	2,0	-
	Max	0,07	1,00	2,00	0,045	0,030	18,0	13,0	2,5	0,10
<b>Typical properties</b>	Dia. mm   in	length per 500 kg spool m   ft			min. breaking load kN   lbf		min. tensile strength MPa   ksi			
	2,083   0.082	18400   60368			4,98   1120		1500   218			
	2,34   0.092	14600   45932			6,10   1371		1450   210			
	2,74   0.108	10600   34777			8,10   1821		1400   203			
	3,18   0.125	7900   25919			10,13   2277		1300   188			

<b>X1NiCrMoCuN25-20-7</b>		<b>UNS N08926/ N08367   DIN 1.4529</b>					<b>PREN 41 - 46</b>				
<b>Chemical analysis (%)</b>		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N
	Min	-	-	-	-	-	20,0	24,0	6,0	0,50	0,15
	Max	0,02	0,50	1,00	0,030	0,010	21,0	25,5	7,0	0,75	0,25
<b>Typical properties</b>	Dia. mm   in	length per 500 kg spool m   ft			min. breaking load kN   lbf		min. tensile strength MPa   ksi				
	2,083   0.082	18000   59055			5,32   1196		1600   232				
	2,34   0.092	14200   46588			6,73   1513		1600   232				
	2,74   0.108	10400   34121			9,26   2082		1600   232				
	3,18   0.125	7700   25262			11,69   2628		1500   218				

<b>X6CrNiMoTi17-12-2 / 316 Ti</b>		<b>UNS S31635   DIN 1.4571</b>					<b>PREN 23 - 25</b>				
<b>Chemical analysis (%)</b>		C	Si	Mn	P	S	Cr	Ni	Mo	Ti	N
	Min	-	-	-	-	-	16,5	10,5	2,0	5(C+N)	-
	Max	0,08	1,00	2,00	0,045	0,015	18,0	13,5	2,5	0,70	0,1
<b>Typical properties</b>	Dia. mm   in	length per 500 kg spool m   ft			min. breaking load kN   lbf		min. tensile strength MPa   ksi				
	2,083   0.082	18400   60368			4,82   1084		1450   210				
	2,34   0.092	14600   45932			5,89   1324		1400   203				
	2,74   0.108	10600   34777			7,81   1756		1350   195				
	3,18   0.125	7900   25919			10,13   2277		1300   188				

## DUPLEX & SUPERDUPLEX FOR SLICKLINES



<b>X2CrNiMoN22-5-3 / F60 / F51</b>		<b>UNS S32205/S318   DIN 1.4462</b>					<b>PREN 34 - 35</b>			
<b>Chemical analysis (%)</b>		C	Si	Mn	P	S	Cr	Ni	Mo	N
	Min	-	-	-	-	-	22,0	4,5	3,0	0,14
	Max	0,03	1,00	2,00	0,025	0,015	23,0	6,5	3,5	0,20
<b>Typical properties</b>	Dia. mm   in	length per 500 kg spool m   ft			min. breaking load kN   lbf		min. tensile strength MPa   ksi			
	2,083   0.082	18600   61024			5,15   1158		1550   225			
	2,34   0.092	14800   48556			6,31   1378		1500   218			
	2,74   0.108	10800   35505			8,68   1951		1500   218			
	3,18   0.125	8000   26247			11,30   2540		1450   210			

## Ni-BASE ALLOYS & SPECIAL ALLOYS FOR SLICKLINES



<b>NiMo16Cr15W / Alloy C-276</b>				<b>UNS N10276   DIN 2.4819</b>								
<b>Chemical analysis (%)</b>	Ni	Mo	Cr	Fe	W	Co	C	Si	Mn	V	P	S
Min	53,0	15,0	14,5	4,0	3,0	-	-	-	-	-	-	-
Max	63,0	17,0	16,5	7,0	4,5	2,5	0,01	0,08	1,0	0,35	0,02	0,01

<b>CoNi35Cr20Mo10FeTi / MP35N</b>				<b>UNS R30035   DIN 2.4999</b>								
<b>Chemical analysis (%)</b>	C	Si	Mn	P	S	Cr	Ni	Mo	Fe	Ti	B	Co
Min	-	-	-	-	-	19,0	33,0	9,0	-	-	-	-
Max	0,025	0,15	0,15	0,015	0,010	21,0	37,0	10,5	1,00	1,00	0,015	bal.

## WE TAKE RESPONSIBILITY

### SCIENCE-BASED EMISSION REDUCTION TARGETS

Tackling climate change requires ambitious measures from the steel sector. The BGH's emission reduction targets were validated and confirmed in 2023 by the renowned Science Based Targets Initiative (SBTi):

*"We commit to reduce absolute Scope 1 and 2 greenhouse gas (GHG) emissions 42 % by 2030 from a 2021 base year. We also commit to reduce absolute Scope 3 GHG emissions 25 % within the same timeframe."*



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Our science-based target proves our commitment to building a sustainable economy, by doing not what is easy but what is necessary.

In the long term, we are aiming to reduce Scope 1 and 2 emissions by 88 % by 2040 (compared to 2021) and achieve net greenhouse gas neutrality by 2045.

### SUSTAINABILITY BEGINS WITH BGH STEEL

With a scrap utilisation rate of over 80%, valuable resources are conserved and long transport routes from mining areas around the world are avoided. Compared to the blast furnace route, around 70% of CO<sub>2</sub> emissions per tonne of crude steel are already being saved.

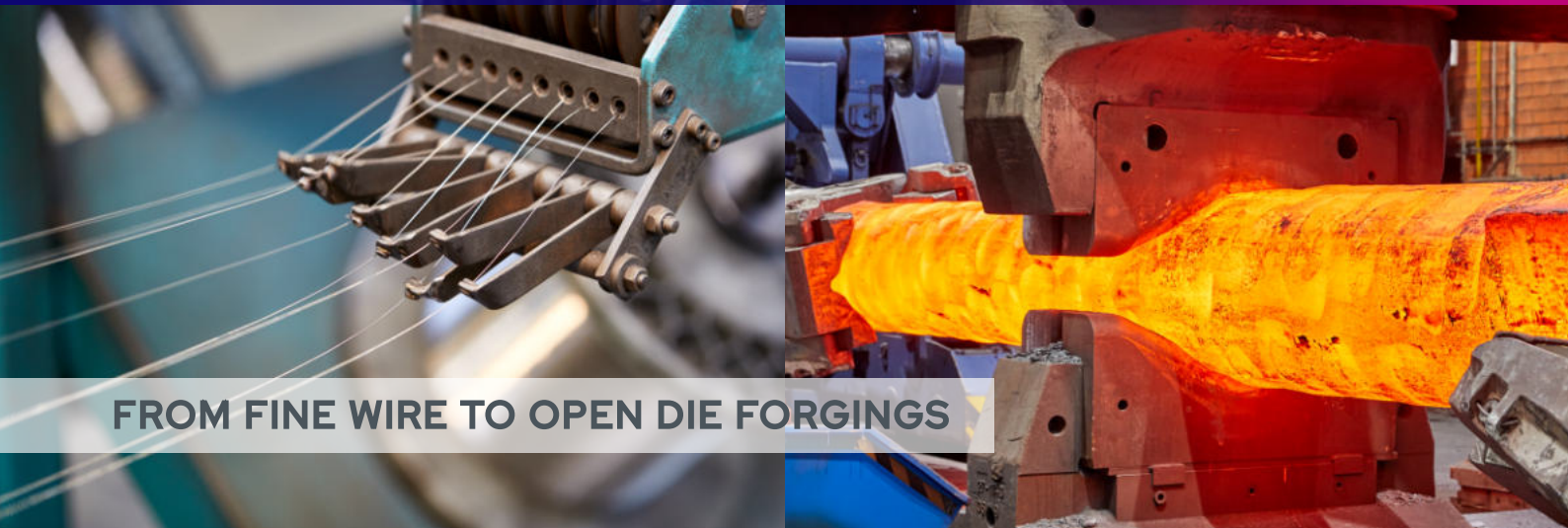


### HEAT TREATMENT TECHNOLOGY HELPS TO REDUCE EMISSIONS

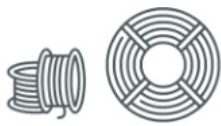
Using single-bar inductive reheating plants instead of gas-fired furnaces and combining the hot forming process with subsequent single bar quenching helps to lower CO<sub>2</sub> emissions and improve the quality of the bars at the same time.



# OVERALL DELIVERY PROGRAM OF BGH GROUP

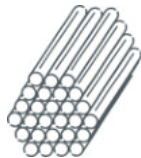


FROM FINE WIRE TO OPEN DIE FORGINGS



## FINE WIRE & WIRE

Round: 0,08 mm - 22 mm



## BRIGHT BAR

Round: 1 mm - 610 mm



## BAR

Round: 15 mm - 950 mm

Flat (W x H): 15 - 250 mm x 5 - 89 mm (hot-rolled)

Flat (W x H): 90 - 1300 mm x 55 - 800 mm (forged)

Square: 17 mm - 800 mm



## OPEN DIE FORGINGS

Longitudinal forgings:

$\varnothing_{\max}$  950 mm;  $L_{\max}$  17,5 m

Weight max. 30 t

Flanged shafts:  $\varnothing_{\max}$  1400 mm

Discs / Rings:  $\varnothing_{\max}$  1800 mm

Tubular forgings:  $\varnothing_{\max}$  1080 mm



## SPECIAL ENGINEERING STEELS



## STAINLESS STEELS



## TOOL STEELS



## NI-BASED ALLOYS & SPECIAL ALLOYS



CHECK STOCK AVAILABILITY





**Excellence in Specialty Steel**



**TRADITIONAL**



**INNOVATIVE**



**FLEXIBLE**



**CLOSE TO THE CUSTOMER**

## **WORLD CLASS SERVICE WITH GERMAN COMMITMENT TO QUALITY AND TECHNOLOGY**

BGH (BoschGotthardsHuette) is a privately held, German-based specialty steel mill est. 1466 with six production plants in Europe. Our fully integrated production process – from melting to the final product – guarantees the highest quality specialty steel. Our products range from fine wire to forged bars as well as open-die forgings.

Customized logistic solutions are available to serve your business from several European and American stocking locations. We have a global distribution network and have been successfully operating on an international level for decades.



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