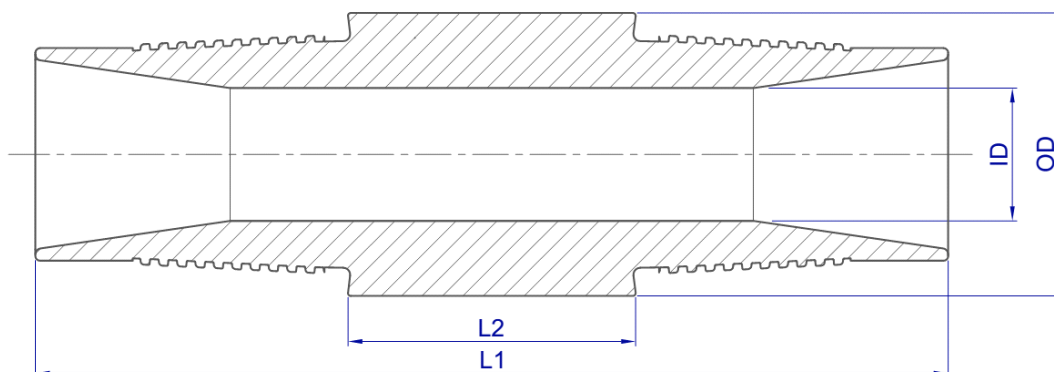


HolloRod™ Nipple 486 SEC NU

Dimensions:*



OD	ID	Type	L1	L2	Nominal Weight	Available Grades
1.929" (49 mm)	0.709" (18 mm)	HI-18	6.22" (158 mm)	1.961" (49.8 mm)	2.6 lb (1.18 kg)	CS105, HS147
1.929" (49 mm)	0.787" (20 mm)	LI-20	6.22" (158 mm)	1.961" (49.8 mm)	2.47 lb (1.12 kg)	CS105, HS147
1.929" (49 mm)	0.866" (22 mm)	LI-22	6.22" (158 mm)	1.961" (49.8 mm)	2.54 lb (1.15 kg)	CS105, HS147

*All values listed are nominal dimensions. Wrench flats optional upon special request

Connection:

Special non upset connection, with smooth internal design to enhance flow.

It's tapered, 8 TPI, flank-valley contact thread profile with pin-box diametrical interference and angled torque shoulder provides an excellent torque transmission as well as an easy make-up.

Steel Grades:

HolloRod™ Nipples are manufactured using seamless cold drawn carbon or alloyed steel pipes, calcium treated to modify inclusions to improve toughness. Controlled microstructure to obtain optimum mechanical properties.

Chemical Composition:

Typical chemical compositions (wt%) listed in the following table.

Grade	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Mo (%)	Others (%)
CS105	0.23	0.55	0.25	0.010 max	0.015 max	0.95	0.30 max	0.70	V: 0.10 max
HS147	0.23	0.55	0.25	0.010 max	0.015 max	0.95	0.30 max	0.70	V: 0.10 max

Mechanical Properties:

Mechanical properties are listed in the following table.

Grade	Tensile			Toughness CVN@RT Full Size	Hardness
	Yield Strength (0,2% offset)	Ultimate Tensile Strength	Elongation (2")		
CS105	100 to 115 kpsi (690 to 793 MPa)	Min 105 kpsi (Min 724 MPa)	10% Min	Min: 74 lb.ft (100 J)	28 HRC Max
HS147	139 to 160 kpsi (960 to 1100 MPa)	Min 147 kpsi (Min 1015 MPa)	10% Min	Min: 37 lb.ft (50 J)	32-38 HRC

Performance Data:

Nipple Grade	HolloRod™ Grade	Type	Make Up Torque	Standoff	Sealability (1)	Max. Pulling Force	Max. Operative Torque	Application
CS105	CS105	HI-18	1250 to 1450 lb.ft (1695 to 1966 N.m)	0.059" to 0.118" (1.5 to 3 mm)	15 kpsi (103 MPa)	81.6 klb (37 Tn)	1300 lb.ft (1763 N.m)	PCP, BP, VS, GL, IW
CS105	CS105	LI-20	950 to 1150 lb.ft (1288 to 1559 N.m)	0.008" to 0.059" (0.2 to 1.5 mm)	15 kpsi (103 MPa)	81.6 klb (37 Tn)	1000 lb.ft (1356 N.m)	PCP, BP, VS, GL, IW
CS105	CS105	LI-22	800 to 1000 lb.ft (1085 to 1356 N.m)	0.008" to 0.059" (0.2 to 1.5 mm)	15 kpsi (103 MPa)	81.6 klb (37 Tn)	850 lb.ft (1152 N.m)	PCP, BP, VS, GL, IW
HS147	HS147	HI-18	1450 to 1650 lb.ft (1966 to 2237 N.m)	0.059" to 0.118" (1.5 to 3 mm)	15 kpsi (103 MPa)	115 klb* (52 Tn)*	1500 lb.ft (2034 N.m)	PCP, BP, VS, GL, IW
HS147	HS147	LI-20	1250 to 1450 lb.ft (1695 to 1966 N.m)	0.008" to 0.059" (0.2 to 1.5 mm)	15 kpsi (103 MPa)	115 klb* (52 Tn)*	1300 lb.ft (1763 N.m)	PCP, BP, VS, GL, IW
HS147	HS147	LI-22	1100 to 1300 lb.ft (1491 to 1763 N.m)	0.008" to 0.059" (0.2 to 1.5 mm)	15 kpsi (103 MPa)	115 klb* (52 Tn)*	1150 lb.ft (1559 N.m)	PCP, BP, VS, GL, IW

*Calculated value.

(1) Connection tested under 20 Tn axial load, 150°C and recommended make up torque, using nitrogen gas up to 15000psi without leakage.

PCP: Progressive Cavity Pumping.

BP: Beam Pumping.

VS: Velocity String.

GL: Gas Lift.

IW: Injection Well.

Other Technical Data:

CS105 grade presents an improved sulfide stress cracking resistance. Material tested under NACE TM0177, Method A, at 1 bar of partial pressure of hydrogen sulfide, and at 85% of the SMYS exceeds 720 hours without failures.

Sour resistance $K_{1ssc}=25$ kpsi. $\sqrt{\text{in}}$.

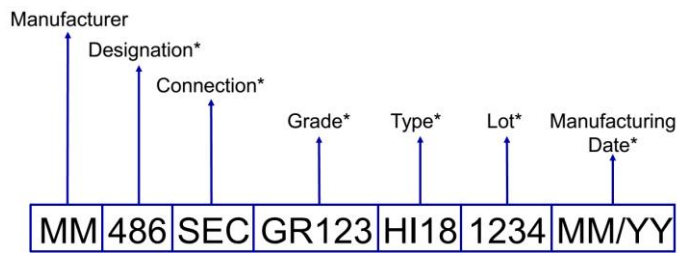
Enhanced corrosion resistance in sweet environments. Laboratory corrosion-fatigue tests have shown a 30% extended life in high pressure-high temperature CO₂ environment compared to the standard HolloRod™.

Non Destructive Testing:

All raw material is carefully inspected using electromagnetic and/or ultrasonic methods to ensure the soundness of the final product.

Marking:

Products are marked for its proper identification and traceability using laser engraving or die punching at manufacturer's option.



*Values shown are for reference only



Packaging:

Nipples are packed in 10 pieces boxes and then into 18 boxes crates (other quantities might be available). Crates maximum weight 230 kg (507 lb).



Labeling:

		Metalmecánica S.A. Ruta 55 Km. 754,1 Villa Mercedes (San Luis) Made in Argentina	
BOX N°	00000	DATE:	07/17
PRODUCT: HolloRod™ Nipple 486 SEC NU LI-20			
PRODUCT DATASHEET CODE:	N01		
PRODUCT DATASHEET NAME:	HRN486SECNU		
GRADE	HS147		
QTY:	180		
CLIENT:			
SALES ORDER:			
DESTINATION:			NET WEIGHT: (kg)

*Values for reference only

Ordering Information:

When placing an order please attach the following information:

PDS: HRN486SECNU

Type: LI-20

Grade: CS105

Unless otherwise specified product is without wrench flats.

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