Oil Country Fittings

Tubing Nipples

- Tubing Nominal Sizes 1 – 4 *(25 – 100 DN)* upset and non-upset ends
- Lengths are 4" – 18" *(102mm–457mm)*
- Tubing nipples are available with any combination of API 5B threads (8Rd, l0Rd, 11 1/2 V, 8V, etc) and are available in grades J-55, K-55, N-80 and L-80 API 5CT material grades
- Wall thicknesses available: standard, extra heavy, double extra heavy
- For different grades of material (stainless, brass, etc.) and different threads, consult factory

Tubing Nipples Standard Weight	Size NPS	Size *DN*	End Connection
18" and shorter upset and non-upset	1	*25*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	1¼	*32*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	1½	*40*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	2	*50*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	2½	*65*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	3	*80*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	4	*100*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)

Tubing Nipples Extra Heavy Weight	Size NPS	Size *DN*	End Connection
18" and shorter upset and non-upset	1	*25*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	1¼	*32*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	1½	*40*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	2	*50*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	2½	*65*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	3	*80*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)
	4	*100*	Upset A.P.I. Thds, One or Both Ends
			Non-upset (Regular)

Standard and XH Weight available in standard lengths 4", 6", 8", 10", 12", 14", 16", 18." Also, available in non-standard lengths.

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

J.B. SMITH PRODUCTS

J.B. Smith oil country tubular fittings, swages and bull plugs add an important dimension to the industry's leading line of flow control products offered by Anvil. J.B. Smith is a respected name and its products are well known for high quality and consistency.

Full Traceability

All J.B. Smith swages, bull plugs, tubing and casing nipples, and chambers are traceable to the original mill test report. To ensure traceability, all fittings are steel stamped as follows:

Material Specification

- Material Grade WPB (ASTM A234 - Line Pipe)
- Material Grade J-55, K-55, L-80, N-80 (API 5CT - Oil Country Sizes)

Raw Material Code

Each is stamped with unique JBS material code for traceability to material type, details of purchase and mill test report.

Heat Treatment

Items made to specification grades requiring final heat treatment bear an additional two letter code for heat treatment traceability.

All J.B. Smith products conform to the following applicable specifications:

- **API 5B** – Threading Oil Country size
- **API 5CT** – Raw material, Process, End Finish (Oil Country Sizes)
- **ASME B1.20.1** – Threading Line Pipe
- **ASME B16.9** – Weld Bevels
- **MSS SP-95** Swage and Bull Plug
- **ASTM A234 WPB** – Raw material, Process, End Finish (Line Pipe High Temp)
- **ASTM A420 WPL6** – Raw material, Process, End Finish (Line Pipe Low Temp)
- **ASTM B633 Type III Class III** – Zinc Electroplate
- **NACE MR-01-75** – As Applicable

Swage Nipples, Bull Plugs, Oil Country Fittings, Couplings, Stainless Swages

Manufacturing Specification

J.B. Smith manufactures swage nipples and bull plugs in accordance to the applicable specification, API 5CT, ASTM A234, MSS SP-95. Materials include ASTM A106, GR B seamless pipe, A-1000 low to medium carbon, fine grain bar stock, API grades J-55 through N-80 tubing and casing, processed and heat treated to applicable specification requirements. Fitting chemical and physical properties fall within the ranges listed below.

All fittings are manufactured in the U.S.A.

Traceability

All material purchased by J.B. Smith is fully traceable to the mill source. A unique JBS material code appears on all products made since the institution of this program. As a result, mill test reports are now available at any time on products so coded (See EXTRAS for MTR charges.)

Pressure Ratings

Due to the wide variation in service conditions, temperature, vibrations, etc., J.B. Smith Mfg. can make no recommendations as to allowable working pressure of swage nipples and bull plugs. There are a number of working pressure formulas from which the end user may choose to determine the required wall thickness of the piping system. It is our responsibility only to furnish a fitting with end dimensions equal to those of the pipe size and schedule ordered.

Material Certification – Carbon Steel

J.B Smith certifies that the material used to manufacture line pipe sizes of swage nipples and bull plugs has be processed to comply with the requirements of ASTM A234 grade WPB and the chemical and physical properties of the fittings fall within the ranges listed below.

Marking

All J.B. Smith fittings are permanently marked as follows:

- **Manufacturer's symbol** - JBS
- **Material Specification or Grade**
  WBP (Line Pipe Sizes)
  J-55, K-55, L-80, N-80 (Oil Country Sizes)
- **Raw Material Code** - Each part is die stamped with unique JBS material code for traceability to material type, details of purchase and mill test report.
- **Heat Treatment** - Heat treatments are performed to ASTM A234 WPB or API 5CT specification grade requirement as applicable. Fittings bear a two letter code provide traceability to final heat treatment.

Threading

Line Pipe, Tubing and Casing threads conform to ASME B1.20.1 B or API 5B as applicable.

Oil Country Industry Thread Color Code

Industry Color Codes as follows:

8R - Red 10R - Yellow 10V - Blue 11½V - Green LP - Silver

Coatings

- **Zinc Electroplate** - ASTM B633 Type III Class III
- **Paint** (Weld Bevel Ends)

Weld Bevels

Weld bevels are machined per ASME B16.9 specifications.

Chemical and Physical Requirements

API 5CT MATERIAL

Chemical Requirements

Grp	Gr	C	Mn	Mo	Cr	Ni	Cu	P	S	Si
1	J55	—	—	—	—	—	—	0.030 Max	0.030 Max	—
1	K55	—	—	—	—	—	—	0.030 Max	0.030 Max	—
1	N80 Type1	—	—	—	—	—	—	0.030 Max	0.030 Max	—
2	L80 Type1	0.43 Max	1.90 Max	—	—	0.25 Max	0.35 Max	0.030 Max	0.030 Max	0.45 Max

Physical Requirements

Grp	Gr	Total Elongation under load %	Yield Strength ksi	Tensile Strength ksi	Hardness	
1	J55	0.5	55-80	75	—	—
1	K55	0.5	55-80	95	—	—
1	N80 Type1	0.5	80-110	100	—	—
2	L80 Type1	0.5	80-110	95	23	241

Note:

- Fittings made from bar or plate may have 0.35 Max Carbon.
- Fittings made from forgings may have a 0.35 Max Carbon and 0.35 Max Silicon.
- For each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted, up to a maximum of 1.35%.
- The sum of Copper, Nickel Chromium and Molybdenum shall not exceed 1.00%.
- The sum of Chromium and Molybdenum shall not exceed 0.32%.

Oil Country Fittings

Current API Thread Standards

Current API Thread Standards					
Size		O.D.		Pipe	Tubing & Casing
NPS	*DN*	in	*mm*		
¾	*20*	1.050	*27*	14	–
¾ EUE	*20*	1.050	*27*	–	10 Rd.
1	*25*	1.315	*33*	11½	10 Rd.
1 EUE	*25*	1.315	*33*	–	10 Rd.
1¼	*32*	1.660	*42*	11½	10 Rd.
1¼ EUE	*32*	1.660	*42*	–	10 Rd.
1½	*40*	1.900	*48*	11½	10 Rd.
1½ EUE	*40*	1.900	*48*	–	10 Rd.
2	*50*	2⅜	*60*	11½	10 Rd.
2 EUE	*50*	2⅜	*60*	–	8 Rd.
2½	*65*	2⅞	*73*	8V	10 Rd.
2½ EUE	*65*	2⅞	*73*	–	8 Rd.
3	*80*	3½	*89*	8V	10 Rd.
3 EUE	*80*	3½	*89*	–	8 Rd.
31⁄2	*90*	4	*102*	8V	8 Rd.
3½ EUE	*90*	4	*102*	8V	8 Rd.
4	*100*	4½	*114*	8V	8 Rd.
4 EUE	*100*	4½	*114*	–	8 Rd.
–	–	5	*127*	–	8 Rd.
–	–	5½	*140*	–	8 Rd.
5	*125*	5⁹⁄₁₆	*141*	8V	–
–	–	6	*152*	–	8 Rd.
6	*150*	6⅝	*168*	8V	8 Rd.
–	–	7	*178*	–	8 Rd.
–	–	7⅝	*194*	–	8 Rd.
8	*200*	8⅝	*219*	8V	8 Rd.
–	–	9⅝	*244*	–	8 Rd.
10	*250*	10¾	*273*	8V	8 Rd.
–	–	11¾	*298*	–	8 Rd.
12	*300*	12¾	*324*	8V	–
–	–	13⅜	*340*	–	8 Rd.
–	–	14	*356*	8V	–
–	–	16	*406*	8V	8 Rd.
–	–	18	*457*	8V	–
–	–	20	*508*	8V	8 Rd.