

Reinforcement Sleeves

• Introduction

Reinforcing Sleeves are used for reinforce non-leaking or damaged pipe while the line remains on line. But the pressure must be reduced to a safe level

• NDT Testing

- 100% UT testing of Raw material of sleeve
- All material shall be Impact tested
- Other NDT procedures available on client request

• Sleeve Design

Reinforcing Sleeves are designed as per ASME B31.4/ ASME B 31.8

$$\text{Sleeve thickness } T = \frac{P D}{2 S F E T F} + s t$$

P=Design Pressure

S=Specified minimum Yield strength

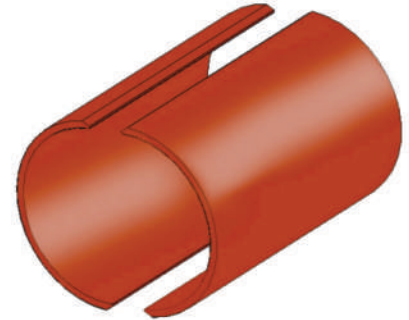
E=Longitudinal Joint Factor

St=Groove thickness for backing strip

D=Outer diameter of sleeve

F=Design Factory

TF=Temperature Derating factory(only for Gas Line)



REINFORCEMENT TABLE OF DIMENSIONS

SLEEVE SIZE		SLEEVE ID	THK(mm) as per	LENGTH (mm)
(INCH)	DN	(MM) +4 -0	Asme B 31.4/ Asme B 31.8 SLEEVE	
4"	114.3	115.3	6.4	500mm -3000mm
6"	168.3	169.3	6.4	
8"	219.1	220.1	6.4	
10"	273.1	274.1	9.5	
12"	323.9	324.9	9.5	
14"	355.6	356.6	9.5	
16"	406.4	407.4	9.5	
18"	457.2	458.2	9.5	
20"	508	509	12.7	
22"	559	560	12.7	
24"	610	611	12.7	
26"	660.4	661.4	12.7	
28"	711.2	712.2	12.7	
30"	762	763	12.7	
32"	813	814	19.1	
34"	864	865	19.1	
36"	914	915	19.1	
38"	965	966	19.1	
40"	1016	1017	19.1	
42"	1067	1068	19.1	
44"	1118	1119	19.1	
46"	1168	1169	19.1	
48"	1219	1220	19.1	

Material of construction

sleeve	ASTM A 516 GR.60	
	ASTM A 516 GR.70	
	API 5L GR. B	
	API 5L GR. X 42	
	API 5L GR. X 46	
	API 5L GR. X 52	
	API 5L GR. X 56	
	API 5L GR. X 60	
	API 5L GR. X 65	
	API 5L GR. X 70	
	ASTM A 516 GR.60	
	ASTM A 516 GR.70	
	Backing Strip	ASTM A 36

Note: Higher sizes, Length, Thickness and Special Material Available on client Request

