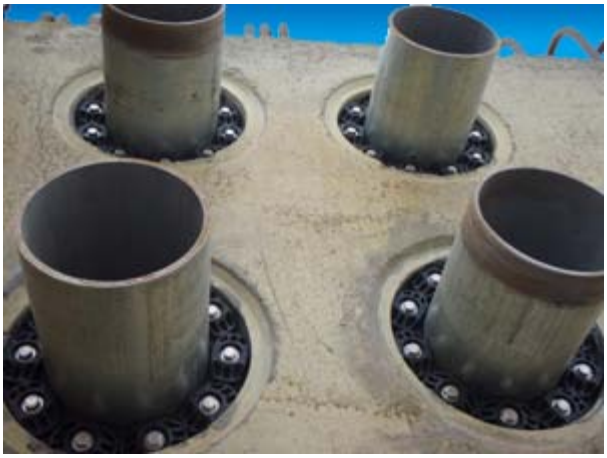
Material Properties of Link-Seal Modular Seal Elements				
PROPERTY	ASTM METHOD	EPDM (EPDM L)	NITRILE	SILICONE
Hardness (shore A)	D-2240	50 ±5 (40 ±5)	50 ±5	50 ±5
Tensile	D-412	1450 psi	1300 psi	860 psi
Elongation	D-412	400%	300%	250%
Compression Set	S-395	15% 22 hrs. @ 158ºF (70ºC)	45% 22 hrs. @ 212ºF (100ºC)	40% 22 hrs. @ 350ºF (177ºC)
Specific Gravity	D-297	1.10	1.15	1.40

Material Properties of Composite Pressure Plates		
PROPERTY	ASTM METHOD	VALUE
Izod Impact - Notched	D-256	2.05 ft-lb/in
Tensile Strength @ Yield	D-638	20,000 psi
Tensile Strength - Break	D-638	20,250 psi
Flexural Strength @ Yield	D-790	30,750 psi
Flexural Modulus	D-790	1,124,000 psi
Elongation, Break	D-638	11.07%
Specific Gravity	D-792	1.38
Moisture Content	--	0.18%



Bolt & Nut Specifications	
Standard: Carbon Steel	Carbon steel, zinc dichromated per ASTM B633 with an additional corrosion inhibiting proprietary organic coating. (passes 1470 hour salt spray test) Tensile Strength = 60,000 psi, minimum.
Option: Stainless Steel	ANSI Type = 316, Per ASTM F593-95 Tensile Strength = 85,000 psi, average.

Modular/Mechanical Seal and Sleeve Specification

Typical Specification

1.0 Penetration Seals

Use a modular, mechanical seal, consisting of rubber links shaped to continuously fill the annular space between the pipe and the wall opening. Link-Seal® pressure plates shall be molded of glass reinforced

2.0 Sleeves and Wall Openings

A. For diameters up to 24.81" install molded non-metallic high density polyethylene sleeves (HDPE) with integral hollow, molded water-stop ring four inches larger than the outside diameter of the sleeve

nylon. Hardware shall be mild steel with a 60,000 psi minimum tensile strength and 2-part Zinc Dichromate coating per ASTM B-633 and Organic Coating, tested in accordance with ASTM B-117 to pass a 1,500-hour salt spray test (or 316 Stainless Steel). Coloration shall be throughout elastomer for positive field inspection. Each link shall have permanent identification of the size and manufacturer's name molded into the pressure plate and sealing element. The Contractor will submit to verify the modular seals are domestically manufactured at a plant with a current ISO-9001:2000 registration. Copy of ISO-9001:2000 registrations shall be a submittal item. PSI-Thunderline/ Link-Seal® Modular Seal as manufactured by Pipeline Seal & Insulator, Inc, Houston, TX, or pre-approved equal.

itself. End caps and reinforcing ribs, domestically manufactured in an approved ISO-9001:2000 facility. Century-Line® Sleeve as manufactured by Pipeline Seal & Insulator, Inc, Houston, TX., or engineered pre-approved equal.

B. For openings from 29.25" to 64.74" in diameter, use a modular hole-forming system consisting of interlocking HDPE plastic discs, domestically manufactured in an ISO-9001:2000 facility. The system shall provide a round hole in conformance with Link Seal® Modular Seal sizing data. Cell-Cast® Hole Forming Discs as manufactured by Pipeline Seal & Insulator, Inc, Houston, TX, or engineer pre-approved equal.

Consideration of brands other than mentioned above shall be submitted to the Engineer for evaluation at least 10 days prior to bid due date and shall include evidence of a minimum of 25 years of successful in-service application of the mechanical seal, as well as current ISO-9001:2000 registration.