

B-CON

Misalignment Ball Connector

The B-CON is designed for piping and pipeline systems where the connector must compensate for misalignment of the pipe. The B-CON significantly reduces the time required to install subsea pipeline connections by providing a leak tight metal seal with performance characteristics and versatility that exceed those of welded pipe or conventional flanges. While primarily intended for subsea piping operations, the B-CON is a valuable piece of equipment in any application (above or below water) where misalignment of the pipeline is a problem.



FEATURES

Metal-to-metal seal allows +/-10° of misalignment

Meets all applicable codes & standards

Sizes range from 4 in to 24 in NPS

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The unique design of the B-CON connector's metal seal allows for up to +/-10° of misalignment in any axial plane from the centerline of the adjoining pipe (20° total misalignment). The metal sealing criteria is the same as specified by ASME for the ring-joint flanges. Sealing integrity is maintained at any angle of misalignment, with the seal being insensitive to externally applied bending loads at all operating pressures. It is actuated by tightening of the bolts. The tightening locks the ball member into the socket flange, creating a rigid, static leak tight seal.

Design Parameters:

Nominal Pipe Size (NPS): any API Specification 5L pipe, wall thickness and grade

Service: Standard (i.e. crude oil, natural gas, hydrocarbons, water or chemical injection, etc.) and Sour (i.e. hydrogen sulfide, carbon dioxide, etc.)

Design Pressure Rating and Applicable Dimensions: ASME, MSS or API

Design Temperature Range: 25°F (-4°C) to 250°F (121°C)

Material Specifications:

Retaining, RTJ Flange & Ball: ASTM A694 F52 and F60 weldless forging, normalized or to customer specifications

Metal Seal Ring: AISI C1008 or 316 Stainless Steel, Cadmium Plated

Mating Studs & Nuts: ASTM A193 Gr. B7 studs & ASTM A194 Gr. 2H heavy hex nuts, all XYLAN coated (i.e. PTFE, dark blue)

External Coating: Carboline 890 Marine Epoxy Paint System, Safety Yellow Color

Applicable Design Codes, Standards & Specifications (latest editions):

OIE/PCRS Group B-CON Misalignment Ball Connector Drawings, Bill of Materials (Controlled Copies) and Vendor Supplied Material Test Reports

OIE ISO 9001:2000 Quality Assurance - Quality Control Procedures & PCRS Operating Procedures

ASME Boiler Pressure Vessel Code, Section V - Nondestructive Examination

ASME Boiler Pressure Section VIII, Division 1 and 2

ASME B16.5 & B16.47, Pipe Flanges and Flanged Fittings

ASME B31.4, Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids

API SPEC 5L, Specification for Line Pipe

API SPEC 6A, Specification for Wellhead and Christmas Tree Equipment

API SPEC 6H, Specification on End Closures, Connectors and Swivels

MSS SP-44, Steel Pipeline Flanges

ASME B18.2.1 Square and Hex Bolts and Screws Inch Series

ASME B16.20, Metallic Gaskets for Pipe Flanges - Ring Joint, Spiral Wound and Jacketed (Latest Edition)

NACE MR0175, Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment

Certifications:

ISO 9001:2008 - World Certification Services Ltd. - Accredited by UKAS Quality Management

EN10204 Section 3.2 (DIN50049), Inspection Documents for the Delivery of Metallic Products