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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | August 12, 2014 | First draft review (AV) |
| 3 | June 8, 2015 | Second Draft for Review (AV) |
| **4** | **September 16, 2015** | **Updated, Finalized Specification – Reference eDOCS #5823664-v3A (AV)** |
| 5 | May 25, 2017 | Updated references to standards : ASME B16.11-2016, ASME B36.19-2004 (R2015), ASTM A182/A182M-16a , ASTM A193/A193M-16 , ASTM A312/A312M-17, ASTM A403/A403M-16, MSS SP-43-2013/AM 2015 (AAM) |
| 6 | August 16, 2017 | Removal of specified products (CPD, OMM) |

NOTE:

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**The on-line copy is the current version of the document.**

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| **Item** | **Size** | **Description** |
| Pipe | 50 mm & smaller | Schedule 40S: ASTM A312/A312M-17, Type 316L seamless, pickled and passivated, conforming to the requirements of ASME B36.19-2004 (R2015). |
| 60 mm & larger | Schedule 10S: ASTM A312/A312M-17, Type 316L seamless or straight-seam welded, pickled conforming to the requirements of ASME B36.19-2004 (R2015). |
| Below grade, all sizes | Schedule 40S: ASTM A312/A312M-17, Type 316L seamless or straight-seam welded, pickled and passivated, conforming to the requirements of ASME B36.19-2004 (R2015). |
| Joints | 50 mm & smaller | Butt-welded; threaded or flanged at valves and equipment as required or shown on the Drawings. |
|  | 60 mm & larger | Butt-welded; flanged at valves and equipment. |
| Fittings | All sizes | Butt-welded: ASTM A403/A403M-16 Type 316L conforming to the requirements of ANSI/ASME B16.9-2012 and MSS SP-43-2013/AM 2015, pickled and passivated; Schedule 10S or 40S to match adjoining pipe; smooth flow type elbows and tees; long radius elbows unless shown otherwise on the Drawings. |
| Branch Connections | All sizes | Butt-welded tee or reducing tee in conformance with Fittings above; weld-o-let where indicated on the Drawings. |
| Flanges | 50 mm & smaller | Threaded Forged: ASTM A182/A182M-16a, Grade F316, 13,800 or 20,700 kPag WOG, integral ground seats, Association of American Railroads (AAR) design meeting the requirements of ASME B16.11-2016, bore to match pipe. |
| Unions | 19 mm & smaller | Threaded Forged: ASTM A182/A182M-16a, Grade F304 or F316, 13,800 kPag- or 20,700 kPag WOG, integral ground seats, AAR design meeting the requirements of ANSI B16.11-2016, bore to match pipe. |
| Bolting | All | Type 304 stainless steel, ASTM A193/A193M-16 Grade B8M hex head bolts and ASTM A194/A194M-16 Grade 8M hex head nuts; Type 304 stainless steel flat washers under all bolt heads and nuts. |
| Gaskets | All Flanges | Up to 75 degrees Celsius: 3 mm thick, unless otherwise specified on the Drawings, full face, premium grade neoprene, minimum hardness 40 (Shore A). |
| Greater than 75 degrees Celsius: 3 mm thick, unless otherwise specified on the Drawings, full face, heat resistant, suitable for digester gas. |
| Blind flanges shall be gasketed, covering the entire inside face with gasket cemented to blind flange. |
| Thread Lubricant | All sizes | Anti-galling compound on all threads. |

**END OF SECTION**