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| TIPO DE DOCUMENTO: | LISTA  | CODIGO:<br>MU-E50-EM/ME0026-01 de 01 |
| PROYECTO:          | SERVICIO DE INGENIERIA BASICA Y DE DETALLE<br>PUENTE DE MEDICION - SIDERURGICA MUTUN | HOJA:<br>2 de 3                      |
| TITULO:            | LISTA DE MATERIALES MECÁNICOS  | REV:<br>0                            |

#### DOCUMENTOS DE REFERENCIA

|    |  |
|----|--|
| 1. | MU-E50-EM/ME0015-01 de 01  |
|    | MAQUETA 3D PUENTE MEDICIÓN   |
| 2. | IPE-2022-2661-M-ET-001   |
|    | ESPECIFICACIÓN CLASE DE TUBERÍAS, VÁLVULAS Y ACCESORIOS (PIPING CLASS) |
| 3. | MU-E50-EM/PR0002-01 de 01  |
|    | PPD - PUENTE MEDICIÓN TRANSFERENCIA DE CUSTODIA ESTACIÓN MUTÚN         |
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#### NOTAS

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| 1. | TODOS LAS CANTIDADES DE LOS ÍTEMS EN EL DOCUMENTO ESTAN SIN MAYORIZAR.                            |
| 2. | LAS CANTIDADES Y MATERIALES LISTADOS CORRESPONDEN CON LAS VISTAS EN PLANTA Y VISTAS EN ELEVACIÓN. |
| 3. | LA PRESENTE LISTA NO INCLUYE MATERIALES DE EQUIPOS PAQUETIZADOS.                                  |
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#### ABREVIATURAS:

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|--------------|--|
| BOE-TOE      | = BEVEL ONE END - THREAD ONE END (UNA TERMINACION BISELADA - UNA TERMINACION ROSCADA)            |
| TBE          | = THREAD BOTH END (AMBAS TERMINACIONES ROSCADAS)   |
| BBE          | = BEVEL BOTH END (AMBAS TERMINACIONES BISELADAS)   |
| BE           | = BEVEL END (TERMINACION BISELADA)   |
| BW           | = BUTTWELD (SOLDADO A TOPE)  |
| PBE          | = PLAIN BOTH END (AMBAS TERMINACIONES PLANAS)  |
| TLE-TSE      | = THREAD LARGE END - THREAD SMALL END (TERMINACION GRANDE ROSCADA - TERMINACION PEQUEÑA ROSCADA) |
| PLE-TSE      | = PLAIN LARGE END - THREAD SMALL END (TERMINACION GRANDE PLANA - TERMINACION PEQUEÑA ROSCADA)    |
| BLE-PSE      | = BEVEL LARGE END - PLAIN SMALL END (TERMINACION GRANDE BISELADO - TERMINACION PEQUEÑO PLANA)    |
| BLE-TSE      | = BEVEL LARGE END - THREAD SMALL END (TERMINACION GRANDE BISELADO - TERMINACION PEQUEÑA ROSCADA) |
| RF           | = RAISED FACE (CARA CON RESALTE)   |
| RTJ          | = RING TYPE JOINT (JUNTA TIPO ANILLO)  |
| ERW          | = ELECTRIC RESISTANCE WELDED ( SOLDADO CON ELECTRO RESISTENCIA)                                  |
| SO           | = SLIP ON  |
| WN           | = WELDING NECK   |
| SW           | = SOCKET WELD  |
| DO O UTILIZA | = ANSI 150   |
| B            | = ANSI 300   |
| D            | = ANSI 600   |



|                           |                                      |  |                                  |                         |
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| <b>TIPO DE DOCUMENTO:</b> | <b>LISTA</b>                         |  | <b>CODIGO:</b>                   |                         |
|                           |                                      |  | <b>MU-E50-EM/ME0026-01 de 01</b> |                         |
|                           | <b>PROYECTO:</b>                     | <b>SERVICIO DE INGENIERIA BASICA Y DE DETALLE<br/>PUENTE DE MEDICION - SIDERURGICA MUTUN</b> | <b>HOJA:</b>                     | <b>3 de 3<br/>3 de3</b> |
| <b>TITULO:</b>            | <b>LISTA DE MATERIALES MECANICOS</b> |  | <b>REV:</b>                      | <b>0</b>                |

| ÍTEM  | DIAM.   | MATERIAL | DESCRIPCIÓN  | UNIDAD | CANTIDAD | SPEC |
|---|---------|----------|--|--------|----------|------|
| 1   | 2"      | PIPE     | Pipe Seamless, ASTM A106 Gr. B, Bevelled Ends, ASME B36.10, S/80   | mm     | 1500     | D    |
| 2   | 8"      | PIPE     | Pipe Seamless, API 5L X42, Bevelled Ends, ASME B 36.10, WT=0.322"  | mm     | 80000    | D    |
| 3   | 2"      | FLANGE   | Welding Neck Flange, ASTM A105, 600#, Raised Face, ASME B16.5, S/80  | Pza    | 4        | D    |
| 4   | 4"      | FLANGE   | Welding Neck Flange, ASTM A105, 600#, Raised Face, ASME B16.5, S/80  | Pza    | 1        | D    |
| 5   | 6"      | FLANGE   | Welding Neck Flange, ASTM A-694 GR F42, 600#, Raised Face, MSS SP-44, WT= 0.280"   | Pza    | 1        | D    |
| 6   | 8"      | FLANGE   | Welding Neck Flange, ASTM A-694 GR F42, 600#, Raised Face, MSS SP-44, WT= 0.322"   | Pza    | 21       | D    |
| 7   | 8"      | 0        | Blind Flange, ASTM A-694 GR F42, 600#, Raised Face, MSS SP-44  | Pza    | 1        | D    |
| 8   | 2"      | FITTING  | 90 Degree Elbow Long Radius, Seamless, ASTM A234 Gr. WPB, Butt Weld Ends, ASME B16.9, S/80   | Pza    | 2        | D    |
| 9   | 8"      | FITTING  | 90 Degree Elbow Long Radius, Seamless, WPHY42, Butt Weld Ends, MSS SP-75, WT= 0.322"   | Pza    | 10       | D    |
| 10  | 8"      | FITTING  | Tee 90 Degrees, Seamless, WPHY42, Butt Weld Ends, MSS SP-75, WT= 0.322"  | Pza    | 7        | D    |
| 11  | 8"x4"   | FITTING  | Concentric Reducer, Seamless, WPHY42, Butt Weld Ends, MSS SP-75, WT= 0.322" x SCH/80   | Pza    | 1        | D    |
| 12  | 8"x6"   | FITTING  | Concentric Reducer, Seamless, WPHY42, Butt Weld Ends, MSS SP-75, WT= 0.322" x WT= 0.280"   | Pza    | 1        | D    |
| 13  | 8"      | FITTING  | Cap, Seamless, WPHY42, Butt Weld Ends, MSS SP-75, WT= 0.322"   | Pza    | 4        | D    |
| 14  | 3/4"    | FITTING  | Nipple 100 mm, ASTM A106 Gr. B, Threaded One End, ASME B36.10, S/160   | Pza    | 2        | D    |
| 15  | 3/4"    | FITTING  | Hexagonal Head Plug, ASTM A105, CLASS 3000, Threaded Male Ends, ASME B16.11  | Pza    | 2        | D    |
| 16  | 8"      | FITTING  | Spectacle Blind (Figure 8), ASTM A-694 GR F42, 600#, Raised Face   | Pza    | 1        | D    |
| 17  | 8"      | FITTING  | Paddle Spacer, ASTM A-694 GR F42, 600#, Raised Face  | Pza    | 1        | D    |
| 18  | 8"x3/4" | FITTING  | Socketolet, ASTM A105, CLASS 3000, Socket Weld Ends, MSS-SP-97   | Pza    | 2        | D    |
| 19  | 8"x3/4" | FITTING  | Thredolet, ASTM A105, CLASS 3000, Threaded Female Ends, MSS-SP-97  | Pza    | 1        | D    |
| 20  | 8"x2"   | FITTING  | Weldolet, ASTM A105, Butt Weld Ends, MSS-SP-97, S/80   | Pza    | 2        | D    |
| 21  | 2"      | GASKET   | Gasket, 304 SS/Graphite CS, Spiral Wound 1/8" thk (e=3.2mm), 600# RF, Centering Ring/Inner Ring, ASME B16.20 (Flanges as per ASME B16.5) | Pza    | 4        | D    |
| 22  | 4"      | GASKET   | Gasket, 304 SS/Graphite CS, Spiral Wound 1/8" thk (e=3.2mm), 600# RF, Centering Ring/Inner Ring, ASME B16.20 (Flanges as per ASME B16.5) | Pza    | 1        | D    |
| 23  | 6"      | GASKET   | Gasket, 304 SS/Graphite CS, Spiral Wound 1/8" thk (e=3.2mm), 600# RF, Centering Ring/Inner Ring, ASME B16.20 (Flanges as per ASME B16.5) | Pza    | 1        | D    |
| 24  | 8"      | GASKET   | Gasket, 304 SS/Graphite CS, Spiral Wound 1/8" thk (e=3.2mm), 600# RF, Centering Ring/Inner Ring, ASME B16.20 (Flanges as per ASME B16.5) | Pza    | 21       | D    |
| 25  | 1 1/8"  | BOLT     | (12) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (8"-600#) (LG=204mm)              | Set    | 16       | D    |
| 26  | 1 1/8"  | BOLT     | (12) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (8"-600#) (LG=235mm)_F8           | Set    | 1        | D    |
| 27  | 1 1/8"  | BOLT     | (12) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (8"-600#) (LG=235mm)_Spacer       | Set    | 1        | D    |
| 28  | 1"      | BOLT     | (12) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (6"-600#) (LG=185mm)              | Set    | 1        | D    |
| 29  | 5/8"    | BOLT     | (8) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (2"-600#) (LG=121mm)               | Set    | 4        | D    |
| 30  | 7/8"    | BOLT     | (8) Stud Bolt with 2 Heavy Hexagonal Nuts, ASTM A193 Gr.B7 / A194 Gr.2H Zinc, ASME B18.2.1 / B18.2.2, (4"-600#) (LG=159mm)               | Set    | 1        | D    |
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|   |         |          |  |        |          |      |
| O O UTILIZADO PARA CUALQUIER FINALIDAD DIFERENTE DE AQUELLA PARA LA QUE HA SIDO SUMINISTRADO. |         |          |  |        |          |      |