

|           |       |                |          |          |
|-----------|-------|----------------|----------|----------|
| 990       | L     | AA-036873      | 002      | 02       |
| PLANT NO. | INDEX | DRAWING NUMBER | SHT. NO. | REV. NO. |

## PRESSURE RATING OF FLANGES IN PIPELINE

## CONSTRUCTION NOTES

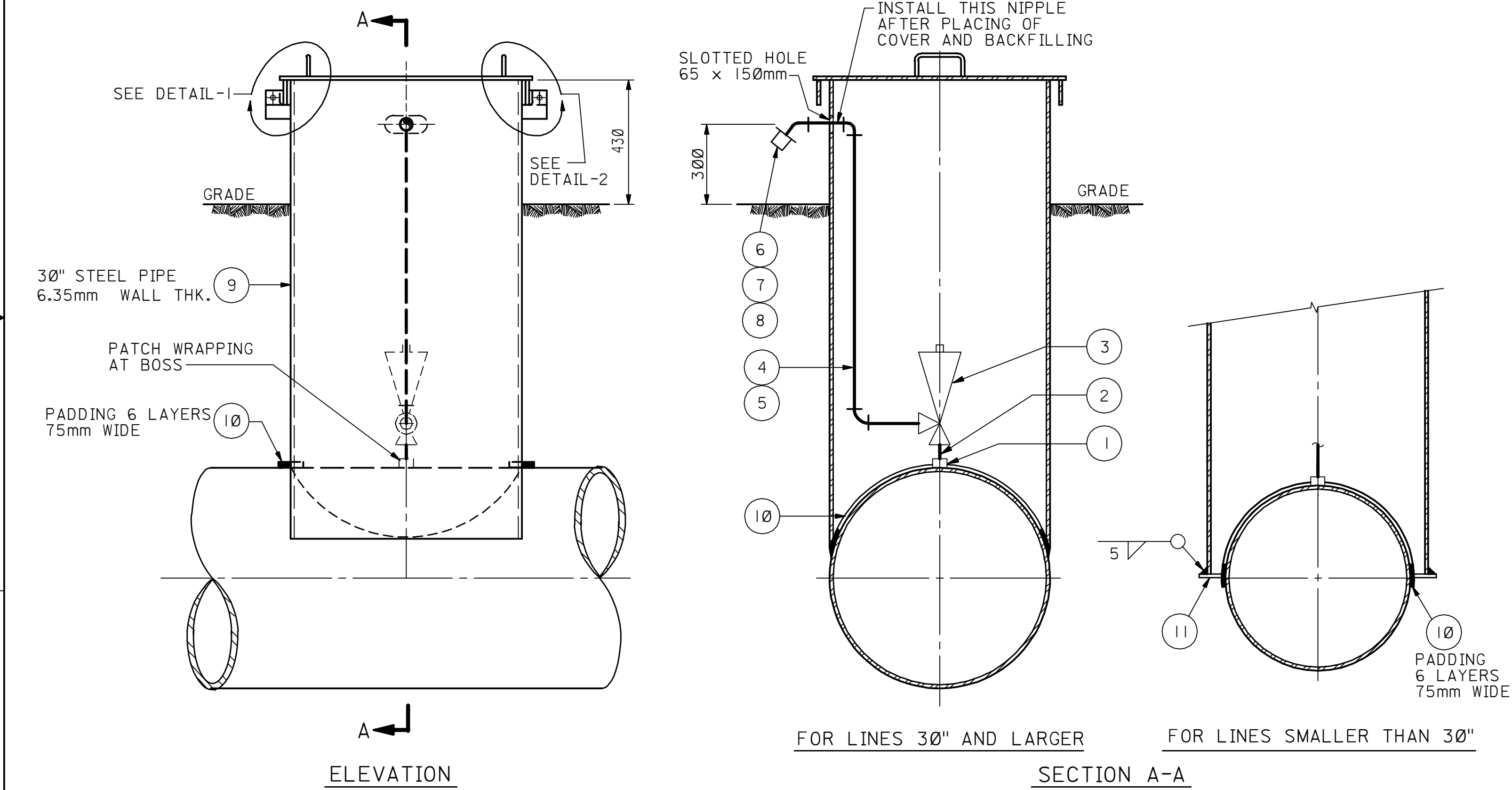
1. SEAL WELD THREADED CONNECTIONS BETWEEN PIPELINE AND VENT VALVE.
2. APPLY HEAVY GREASE TO NUTS AND BOLT THREADS BEFORE INSTALLING.
3. COAT ALL BURIED SURFACES IN ACCORDANCE WITH APCS-113 COATINGS SYSTEM.
4. COAT ALL ABOVE GROUND SURFACES IN ACCORDANCE WITH APCS-4 COATINGS SYSTEM.
5. LOCATE A KILOMETER MARKER IN ACCORDANCE WITH STD. DWG. AA-036907 ADJACENT TO EACH VENT.
6. PROVIDE GUARD RAIL SIMILAR TO TYPE 4 OF STD. DWG. AC-036081, FOR BURIED LINES ONLY.
7. PIPELINE UNDERNEATH THE VENT COVER AND EXTENDING TO 100mm BEYOND SHALL BE THOROUGHLY POWER WIRE BRUSHED, THEN COATED WITH 500  $\mu$ m DRY FILM THICKNESS OF APCS-113 MASTIC AMS. NO. 09-697-835 OR 09-697-831/832. THIS APPLICATION GENERALLY NOT NECESSARY ON PIPELINES WITH EXTERNAL COATINGS ALLOWED IN AES-H-002.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

| BURIED LINES | CLASS 150, 300 & 600 R.F. |            |                                                                 |                                    |          | CLASS 900 R.J. |                                                                 |                                    |          |            | CLASS 1500 R.J.                                                 |                                    |          |            |                                                                 | CLASS 2500 R.J.                    |  |  |  |  |
|--------------|---------------------------|------------|-----------------------------------------------------------------|------------------------------------|----------|----------------|-----------------------------------------------------------------|------------------------------------|----------|------------|-----------------------------------------------------------------|------------------------------------|----------|------------|-----------------------------------------------------------------|------------------------------------|--|--|--|--|
|              | CODE NO.                  | AMS NO.    | DESCRIPTION                                                     | QTY. FOR ONE EVENT                 | CODE NO. | AMS NO.        | DESCRIPTION                                                     | QTY. FOR ONE EVENT                 | CODE NO. | AMS NO.    | DESCRIPTION                                                     | QTY. FOR ONE EVENT                 | CODE NO. | AMS NO.    | DESCRIPTION                                                     | QTY. FOR ONE EVENT                 |  |  |  |  |
|              | 1                         | 02-455-408 | WELDING BOSS: HEAVY; 1"                                         | 1                                  | 1        | 02-455-408     | WELDING BOSS: HEAVY; 1"                                         | 1                                  | 1        | 02-455-408 | WELDING BOSS: HEAVY; 1"                                         | 1                                  | 1        | 02-455-408 | WELDING BOSS: HEAVY; 1"                                         | 1                                  |  |  |  |  |
|              | 2                         | 02-672-250 | NIPPLE: SEAMLESS; STEEL; X-STRONG; 1" x 75mm LG.                | 1                                  | 2        | 02-672-250     | NIPPLE: SEAMLESS; STEEL; X-STRONG; 1" x 75mm LG.                | 1                                  | 2        | 02-675-329 | NIPPLE: SEAMLESS; STEEL; XX-STRONG; 1" x 75mm LG.               | 1                                  | 2        | 02-675-329 | NIPPLE: SEAMLESS; STEEL; XX-STRONG; 1" x 75mm LG.               | 1                                  |  |  |  |  |
|              | 3                         | 04-053-935 | VALVE: ANGLE; THREADED; CLASS 600; 1"                           | 1                                  | 3        | XX-XXX-XXX     | VALVE: ANGLE; THREADED; CLASS 1500; 1"                          | 1                                  | 3        | XX-XXX-XXX | VALVE: ANGLE; THREADED; CLASS 1500; 1"                          | 1                                  | 3        | XX-XXX-XXX | VALVE: ANGLE; THREADED; CLASS 1500; 1"                          | 1                                  |  |  |  |  |
|              | 4                         | 01-165-056 | PIPE: SEAMLESS; STEEL; SCH. 80; 1"                              | <div>VARIES W/ PIPELINE SIZE</div> | 4        | 01-165-056     | PIPE: SEAMLESS; STEEL; SCH. 80; 1"                              | <div>VARIES W/ PIPELINE SIZE</div> | 4        | 01-160-060 | PIPE: SEAMLESS; STEEL; SCH. 160; 1"                             | <div>VARIES W/ PIPELINE SIZE</div> | 4        | 01-160-060 | PIPE: SEAMLESS; STEEL; SCH. 160; 1"                             | <div>VARIES W/ PIPELINE SIZE</div> |  |  |  |  |
|              | 5                         | 02-269-665 | ELBOW 90°; THREADED; CLASS 3000; 1"                             | 2                                  | 5        | 02-269-665     | ELBOW 90°; THREADED; CLASS 3000; 1"                             | 2                                  | 5        | 02-269-730 | ELBOW 90°; THREADED; CLASS 6000; 1"                             | 2                                  | 5        | 02-269-730 | ELBOW 90°; THREADED; CLASS 6000; 1"                             | 2                                  |  |  |  |  |
|              | 6                         | 02-672-258 | NIPPLE: SEAMLESS; STEEL; X-STRONG; 1" x 100mm LG.               | 1                                  | 6        | 02-672-258     | NIPPLE: SEAMLESS; STEEL; X-STRONG; 1" x 100mm LG.               | 1                                  | 6        | 02-675-333 | NIPPLE: SEAMLESS; STEEL; XX-STRONG; 1" x 100mm LG.              | 1                                  | 6        | 02-675-333 | NIPPLE: SEAMLESS; STEEL; XX-STRONG; 1" x 100mm LG.              | 1                                  |  |  |  |  |
|              | 7                         | 02-629-549 | ELBOW 45°; THREADED; CLASS 3000; 1"                             | 1                                  | 7        | 02-629-549     | ELBOW 45°; THREADED; CLASS 3000; 1"                             | 1                                  | 7        | 02-629-694 | ELBOW 45°; THREADED; CLASS 6000; 1"                             | 1                                  | 7        | 02-629-694 | ELBOW 45°; THREADED; CLASS 6000; 1"                             | 1                                  |  |  |  |  |
|              | 8                         | 02-120-461 | PLUG: STEEL; ROUND HEAD; THREADED; CLASS 6000; 1"               | 1                                  | 8        | 02-120-461     | PLUG: STEEL; ROUND HEAD; THREADED; CLASS 6000; 1"               | 1                                  | 8        | 02-120-461 | PLUG: STEEL; ROUND HEAD; THREADED; CLASS 6000; 1"               | 1                                  | 8        | 02-120-461 | PLUG: STEEL; ROUND HEAD; THREADED; CLASS 6000; 1"               | 1                                  |  |  |  |  |
|              | 9                         | 01-212-525 | PIPE: STEEL; 6.35mm WALL THICKNESS; 30"                         | <div>VARIES W/ PIPELINE SIZE</div> | 9        | 01-212-525     | PIPE: STEEL; 6.35mm WALL THICKNESS; 30"                         | <div>VARIES W/ PIPELINE SIZE</div> | 9        | 01-212-525 | PIPE: STEEL; 6.35mm WALL THICKNESS; 30"                         | <div>VARIES W/ PIPELINE SIZE</div> | 9        | 01-212-525 | PIPE: STEEL; 6.35mm WALL THICKNESS; 30"                         | <div>VARIES W/ PIPELINE SIZE</div> |  |  |  |  |
|              | 10                        | 09-389-257 | ROOFING FELT: FIBERGLASS MAT                                    | 5.02 SQ. m                         | 10       | 09-389-257     | ROOFING FELT: FIBERGLASS MAT                                    | 5.02 SQ. m                         | 10       | 09-389-257 | ROOFING FELT: FIBERGLASS MAT                                    | 5.02 SQ. m                         | 10       | 09-389-257 | ROOFING FELT: FIBERGLASS MAT                                    | 5.02 SQ. m                         |  |  |  |  |
|              | 11                        | 12-066-549 | PLATE: STEEL; 6mm                                               | <div>VARIES W/ PIPELINE SIZE</div> | 11       | 12-066-549     | PLATE: STEEL; 6mm                                               | <div>VARIES W/ PIPELINE SIZE</div> | 11       | 12-066-549 | PLATE: STEEL; 6mm                                               | <div>VARIES W/ PIPELINE SIZE</div> | 11       | 12-066-549 | PLATE: STEEL; 6mm                                               | <div>VARIES W/ PIPELINE SIZE</div> |  |  |  |  |
|              | 12                        | 01-220-607 | PIPE: STEEL; 6.35mm WALL THICKNESS; 31"-ALT. AMS NO. 01-200-607 | 75mm                               | 12       | 01-220-607     | PIPE: STEEL; 6.35mm WALL THICKNESS; 31"-ALT. AMS NO. 01-200-607 | 75mm                               | 12       | 01-220-607 | PIPE: STEEL; 6.35mm WALL THICKNESS; 31"-ALT. AMS NO. 01-200-607 | 75mm                               | 12       | 01-220-607 | PIPE: STEEL; 6.35mm WALL THICKNESS; 31"-ALT. AMS NO. 01-200-607 | 75mm                               |  |  |  |  |
|              | 13                        | 12-337-313 | BAR: ROUND; STEEL; 6mm                                          | 450mm                              | 13       | 12-337-313     | BAR: ROUND; STEEL; 6mm                                          | 450mm                              | 13       | 12-337-313 | BAR: ROUND; STEEL; 6mm                                          | 450mm                              | 13       | 12-337-313 | BAR: ROUND; STEEL; 6mm                                          | 450mm                              |  |  |  |  |
|              | 14                        | 10-206-466 | BOLT: MACHINE; WITH NUT; 1/2" x 38mm LG.                        | 2                                  | 14       | 10-206-466     | BOLT: MACHINE; WITH NUT; 1/2" x 38mm LG.                        | 2                                  | 14       | 10-206-466 | BOLT: MACHINE; WITH NUT; 1/2" x 38mm LG.                        | 2                                  | 14       | 10-206-466 | BOLT: MACHINE; WITH NUT; 1/2" x 38mm LG.                        | 2                                  |  |  |  |  |
|              | 15                        | 10-592-455 | NUT: JAM; HEAVY STEEL; 1/2"                                     | 2                                  | 15       | 10-592-455     | NUT: JAM; HEAVY STEEL; 1/2"                                     | 2                                  | 15       | 10-592-455 | NUT: JAM; HEAVY STEEL; 1/2"                                     | 2                                  | 15       | 10-592-455 | NUT: JAM; HEAVY STEEL; 1/2"                                     | 2                                  |  |  |  |  |
|              | 16                        | 09-967-572 | WRAPPING: 50mm WIDE; FOR PIPE                                   | Ø.1 ROLL                           | 16       | 09-967-572     | WRAPPING: 50mm WIDE; FOR PIPE                                   | Ø.1 ROLL                           | 16       | 09-967-572 | WRAPPING: 50mm WIDE; FOR PIPE                                   | Ø.1 ROLL                           | 16       | 09-967-572 | WRAPPING: 50mm WIDE; FOR PIPE                                   | Ø.1 ROLL                           |  |  |  |  |
|              | 17                        | 09-611-725 | COATING: MASTIC TYPE; COALTAR BASE; SELF PRIMING                | 1.90 LITERS                        | 17       | 09-611-725     | COATING: MASTIC TYPE; COALTAR BASE; SELF PRIMING                | 1.90 LITERS                        | 17       | 09-611-725 | COATING: MASTIC TYPE; COALTAR BASE; SELF PRIMING                | 1.90 LITERS                        | 17       | 09-611-725 | COATING: MASTIC TYPE; COALTAR BASE; SELF PRIMING                | 1.90 LITERS                        |  |  |  |  |

[illegible]

FOR BURIED LINES

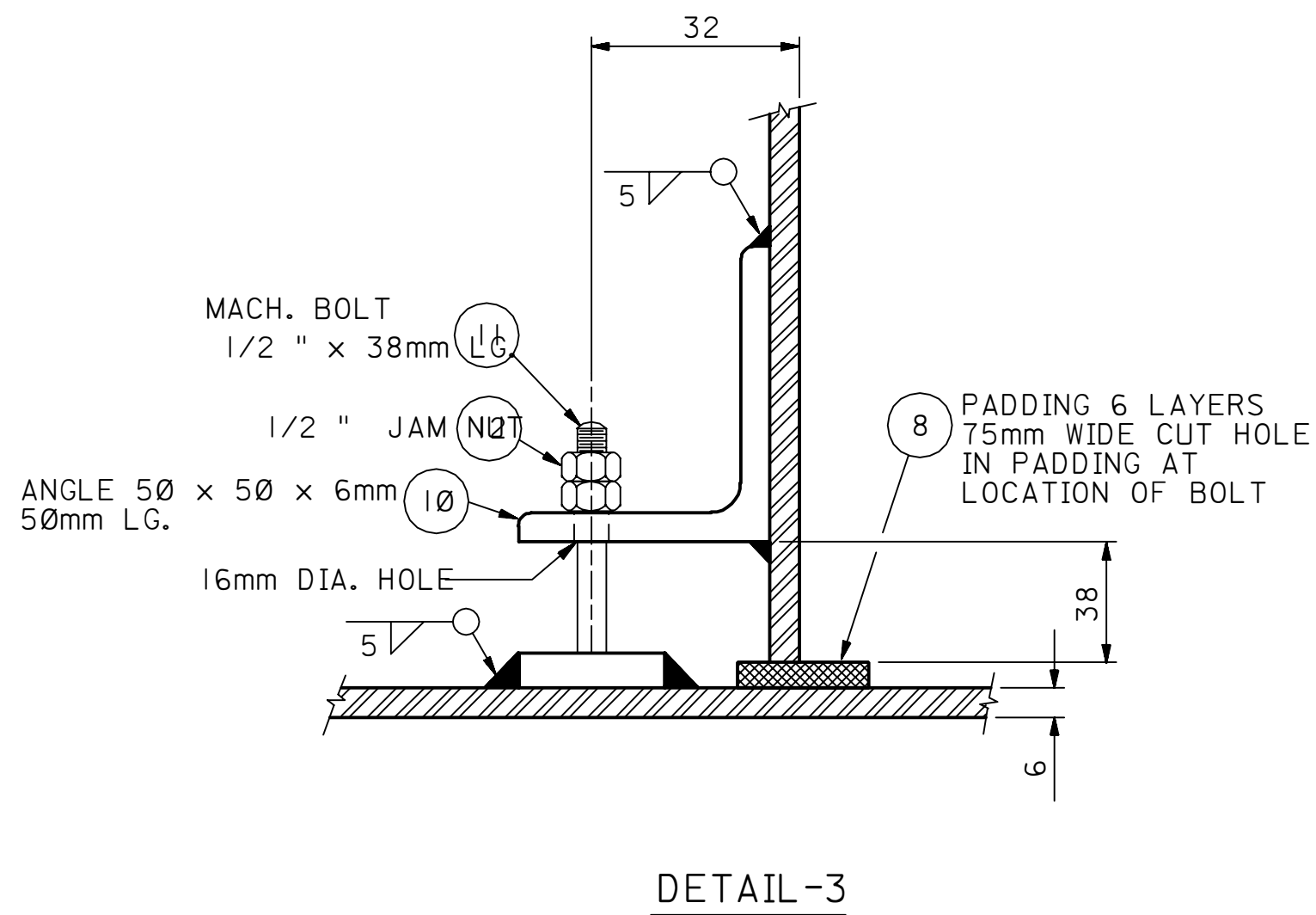
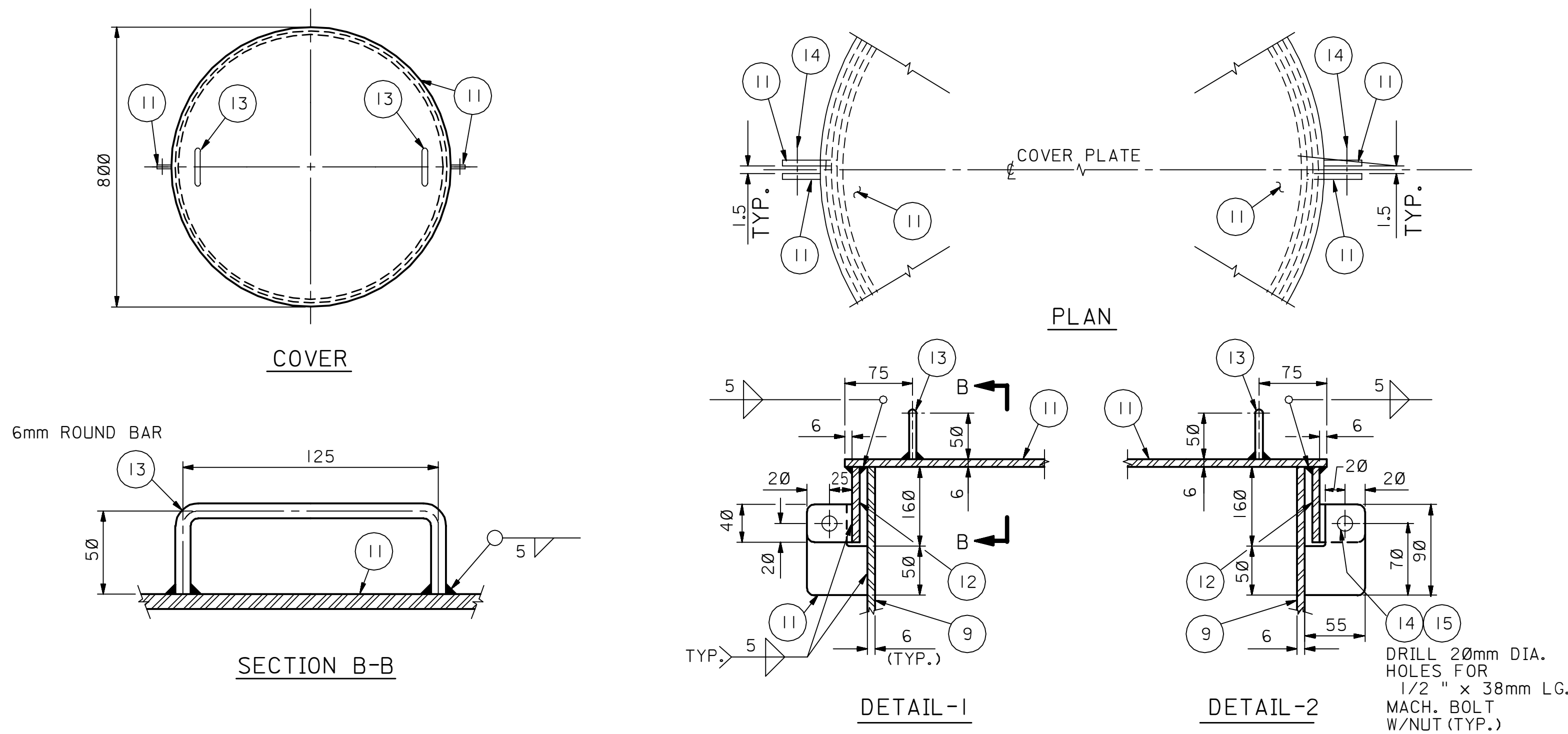
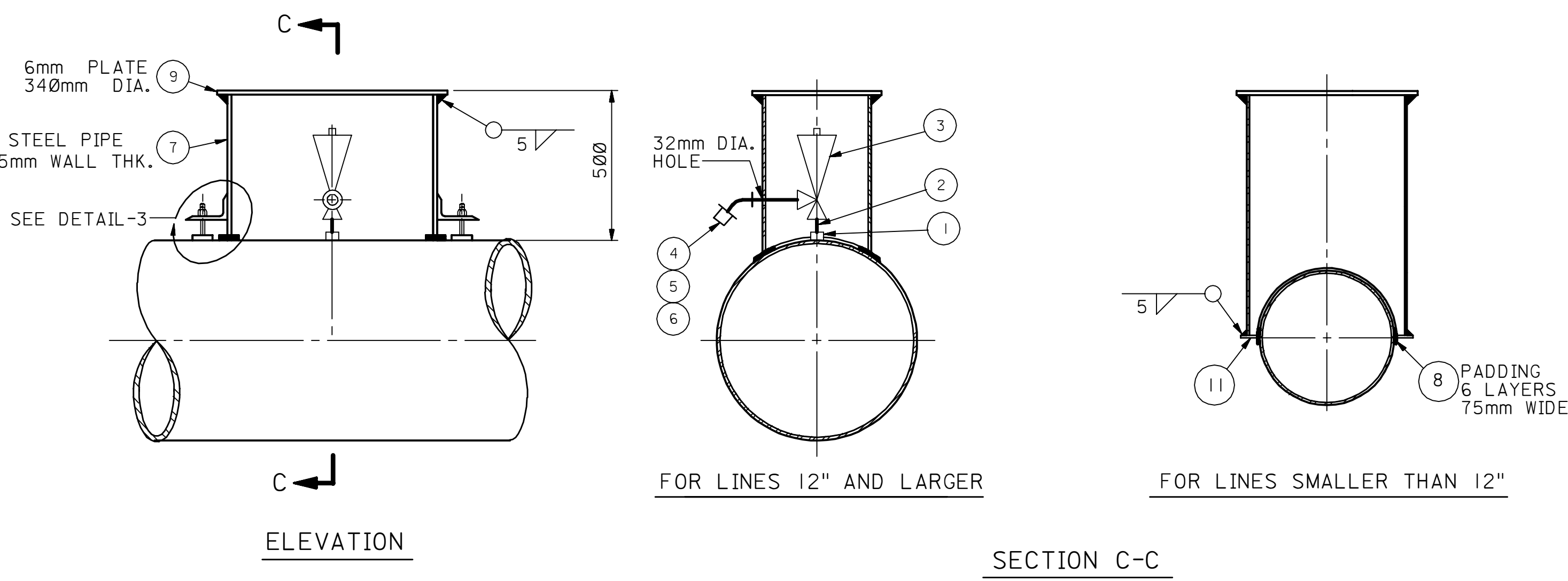
USE EXTENSION HANDLE TO OPERATE VALVE



FOR ABOVE GROUND LINES

( INSTALLATION OF PROTECTIVE COVER IS OPTIONAL )

METRIC DIMENSIONS OF STOCK ITEMS  
ARE A DIRECT CONVERSION OF  
CONVENTIONAL UNITS TO METRIC UNITS.



## TYPICAL INSTALLATION DRAWING

| 02          | 12-19-89 | RLO | CHANGED AMS NO. & MATERIAL DESCRIPTION OF ITEM NOS. 8 & 10.            |       |       |       |  |
|-------------|----------|-----|------------------------------------------------------------------------|-------|-------|-------|--|
| 01          | 09-18-88 | RLO | DWG. DIGITIZED INTO CADD DATABASE & ADDED TYPICAL INSTALLATION DRAWING |       |       |       |  |
| REV.<br>NO. | DATE     | BY  | DESCRIPTION                                                            | CHKD. | CERT. | APPD. |  |

**SAUDI ARABIAN OIL COMPANY**

DRAWN BY P.T. CHECKED BY MV SCALE: NONE

DATE STARTED \_\_\_\_\_ DATE COMPLETED 03-24-61

OPR'G. DEPT. \_\_\_\_\_ ENG. DEPT. JWB

APP'D. FOR CONST. \_\_\_\_\_

## PIPELINE VENTS

### ASSEMBLY AND DETAILS

| STD. DWG. |       |                | METRIC   |          |
|-----------|-------|----------------|----------|----------|
| PLANT NO. | INDEX | DRAWING NUMBER | SHT. NO. | REV. NO. |
| 990       | L     | AA-036873      | 002      | 02       |