* 1. Defect List of Inspected Pipe 250-PL-2019-151441С-M1

| ***№*** | ***Number***  ***of defect*** | ***Distance from section start, mm*** | ***Ref. Weld*** | ***Defect distance from ref. weld, mm*** | | ***Defect orientation*** | | | ***Defect dimensions, mm*** | | | ***Defect type*** | ***Internal/ External*** | ***Specified thickness, mm*** | ***Defect depth %,***  ***d (%) =  d/t × 100%*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***U/S*** | ***D/S*** | ***Rotations direction*** | ***Distance from 12 o'clock, mm*** | ***hh:mm*** | ***Length***  ***L*** | ***Width***  ***W*** | ***Max depth  d*** |
| 1 | DF-1 | 1090 | WJ 3 | 40 | - | Anticlockwise | 254 | 8:27 | 50 | 200 | 3.0 | CORR | External | 28.56 | 10.5 |
| 2 | DF-2 | 1100 | WJ 3 | 30 | - | Anticlockwise | 10 | 11:52 | 25 | 140 | 3.0 | CORR | External | 28.56 | 10.5 |
| 3 | DF-3 | 1160 | WJ 3 | - | 30 | Anticlockwise | 411 | 6:16 | 25 | 135 | 3.2 | CORR | External | 28.56 | 11.2 |
| 4 | DF-4 | 1165 | WJ 3 | - | 35 | Clockwise | 270 | 3:46 | 40 | 125 | 2.5 | CORR | External | 28.56 | 8.8 |
| 5 | DF-5 | 1210 | WJ 3 | - | 80 | Anticlockwise | 114 | 10:24 | 120 | 400 | 3.5 | CORR | External | 28.56 | 12.3 |
| 6 | DF-6 | 2175 | WJ 5 | 55 | - | Clockwise | 0 | 0:00 | 95 | 858 | 4.0 | CORR | External | 28.56 | 14.0 |
| 7 | DF-7 | 2255 | WJ 5 | - | 25 | Clockwise | 0 | 0:00 | 10 | 858 | 1.0 | CORR | External | 28.56 | 3.5 |
| 8 | DF-8 | 2840 | WJ 6 | - | 160 | Clockwise | 0 | 0:00 | 150 | 45 | 1.5 | CORR | External | 28.56 | 5.3 |
| 9 | DF-9 | 3185 | WJ 7 | 85 | - | Clockwise | 0 | 0:00 | 65 | 858 | 3.5 | CORR | External | 28.56 | 12.3 |
| 10 | DF-10 | 3295 | WJ 7 | - | 25 | Clockwise | 429 | 6:00 | 10 | 110 | 1.5 | CORR | External | 28.56 | 5.3 |
| 11 | DF-11 | 3300 | WJ 7 | - | 30 | Clockwise | 80 | 1:07 | 30 | 220 | 2.5 | CORR | External | 28.56 | 8.8 |
| 12 | DF-12 | 3300 | WJ 7 | - | 30 | Anticlockwise | 214 | 9:00 | 25 | 100 | 1.5 | CORR | External | 28.56 | 5.3 |
| 13 | DF-13 | 3370 | WJ 7 | - | 100 | Anticlockwise | 214 | 9:00 | 30 | 30 | 2.5 | CORR | External | 28.56 | 8.8 |
| 14 | DF-14 | 4020 | WJ 7 | - | 750 | Clockwise | 429 | 6:00 | 560 | 435 | 3.0 | CORR | External | 28.56 | 10.5 |
| 15 | DF-15 | 6775 | WJ 10 | 45 | - | Anticlockwise | 20 | 11:44 | 45 | 240 | 2.5 | CORR | External | 28.56 | 8.8 |
| 16 | DF-16 | 6790 | WJ 10 | 30 | - | Anticlockwise | 399 | 6:26 | 30 | 25 | 1.5 | CORR | External | 28.56 | 5.3 |
| 17 | DF-17 | 6790 | WJ 10 | 30 | - | Anticlockwise | 214 | 9:00 | 20 | 100 | 1.5 | CORR | External | 28.56 | 5.3 |
| 18 | DF-18 | 6795 | WJ 10 | 25 | - | Clockwise | 194 | 2:43 | 10 | 40 | 0.5 | CORR | External | 28.56 | 1.8 |
| 19 | DF-19 | 6795 | WJ 10 | 25 | - | Clockwise | 349 | 4:52 | 25 | 80 | 1.0 | CORR | External | 28.56 | 3.5 |
| 20 | DF-20 | 6845 | WJ 10 | - | 25 | Clockwise | 0 | 0:00 | 10 | 35 | 1.0 | CORR | External | 28.56 | 3.5 |
| 21 | DF-21 | 6845 | WJ 10 | - | 25 | Anticlockwise | 334 | 7:20 | 20 | 170 | 0.7 | CORR | External | 28.56 | 2.5 |
| 22 | DF-22 | 6850 | WJ 10 | - | 30 | Anticlockwise | 214 | 9:00 | 30 | 30 | 0.7 | CORR | External | 28.56 | 2.5 |
| 23 | DF-23 | 6860 | WJ 10 | - | 40 | Anticlockwise | 90 | 10:45 | 40 | 130 | 1.5 | CORR | External | 28.56 | 5.3 |
| 24 | DF-24 | 8260 | WJ 11 | - | 850 | Anticlockwise | 269 | 8:15 | 35 | 55 | 1.5 | CORR | External | 28.56 | 5.3 |
| 25 | DF-25 | 8950 | WJ 12 | 1160 | - | Clockwise | 359 | 5:01 | 55 | 20 | 1.5 | CORR | External | 28.56 | 5.3 |
| 26 | DF-26 | 9480 | WJ 12 | 630 | - | Clockwise | 349 | 4:52 | 50 | 50 | 2.5 | CORR | External | 28.56 | 8.8 |
| 27 | DF-27 | 10070 | WJ 12 | 40 | - | Clockwise | 0 | 0:00 | 160 | 858 | 4.0 | CORR | External | 28.56 | 14.0 |
| 28 | DF-28 | 12130 | WJ 14 | - | 60 | Clockwise | 429 | 6:00 | 50 | 100 | 0.5 | CORR | External | 28.56 | 1.8 |
| 29 | DF-29 | 12750 | WJ 15 | - | 90 | Clockwise | 0 | 0:00 | 25 | 15 | 0.5 | CORR | External | 28.56 | 1.8 |
| 30 | DF-30 | 13230 | WJ 16 | - | 130 | Anticlockwise | 130 | 10:11 | 20 | 45 | 1.0 | CORR | External | 28.56 | 3.5 |

* 1. Tracing of Inspected Pipe 250-PL-2019-151441С-M1

| ***No*** | ***Description*** | ***Distance between points, mm*** | ***Distance from the start of structure, mm*** |
| --- | --- | --- | --- |
| 1 | Outlet from V-2030; Flange #1; WJ 1; Start of inspection piping 250-PL-2019-151441C\_M1 | 0 | 0 |
| 2 | Elbow 90 deg | 305 | 305 |
| 3 | WJ 2 | 305 | 610 |
| 4 | Flange #2 | 260 | 870 |
| 5 | WJ 3 | 260 | 1 130 |
| 6 | WJ 4 | 510 | 1 640 |
| 7 | Elbow 90 deg | 295 | 1 935 |
| 8 | WJ 5 | 295 | 2 230 |
| 9 | WJ 6 | 450 | 2 680 |
| 10 | Elbow 90 deg | 295 | 2 975 |
| 11 | WJ 7 | 295 | 3 270 |
| 12 | Support S1 | 750 | 4 020 |
| 13 | 250x40 outlet | 620 | 4 640 |
| 14 | WJ 8 | 200 | 4 840 |
| 15 | Valve PL-2000 | 755 | 5 595 |
| 16 | WJ 9 | 755 | 6 350 |
| 17 | 250x40 outlet | 220 | 6 570 |
| 18 | WJ 10 | 250 | 6 820 |
| 19 | Elbow 90 deg | 295 | 7 115 |
| 20 | WJ 11 | 295 | 7 410 |
| 21 | Support S2 | 1 850 | 9 260 |
| 22 | WJ 12 | 850 | 10 110 |
| 23 | Valve #2 | 760 | 10 870 |
| 24 | WJ 13 | 760 | 11 630 |
| 25 | Tee #1 | 220 | 11 850 |
| 26 | WJ 14 | 220 | 12 070 |
| 27 | WJ 15 | 590 | 12 660 |
| 28 | Tee #2 | 220 | 12 880 |
| 29 | WJ 16 | 220 | 13 100 |
| 30 | Flange #3 | 260 | 13 360 |
| 31 | WJ 17 | 260 | 13 620 |
| 32 | Elbow 90 deg | 300 | 13 920 |
| 33 | WJ 18; End of inspection piping 250-PL-2019-151441C\_M1; Flange #4; Inlet to V-3010 | 300 | 14 220 |

* 1. Tally of Inspected Pipe 250-PL-2019-151441С-M1

| ***Distance between points, mm*** | ***Distance from section start, mm*** | ***Up weld distance, mm*** | ***L joint, mm*** | ***Feature type*** | ***Feature Identification*** | ***Defect type*** | ***Rotations direction*** | ***Distance from 12 o'clock, mm*** | ***hh:mm*** | ***Nominal thickness, mm*** | ***Length L, mm*** | ***Width W, mm*** | ***Depth d, mm*** | ***Defect depth percentage, d (%) = d/t x 100%*** | ***Surface location*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | - | 305 | Outlet from V-2030; Flange #1; WJ 1; Start of inspection piping 250-PL-2019-151441C\_M1 | - | - | - | - | - | - | - | - | - | - | - |
| 305 | 305 | - | 305 | Elbow 90 deg | - | - | - | - | - | - | - | - | - | - | - |
| 305 | 610 | - | 260 | WJ 2 | - | - | - | - | - | - | - | - | - | - | - |
| 260 | 870 | - | 260 | Flange #2 | - | - | - | - | - | - | - | - | - | - | - |
| - | 1090 | 480 | - | DF-1 | CORR | LML | Anticlockwise | 254 | 8:27 | 28.56 | 50 | 200 | 3.0 | 10.5 | External |
| - | 1100 | 490 | - | DF-2 | CORR | LML | Anticlockwise | 10 | 11:52 | 28.56 | 25 | 140 | 3.0 | 10.5 | External |
| 260 | 1130 | - | 510 | WJ 3 | - | - | - | - | - | - | - | - | - | - | - |
| - | 1160 | 30 | - | DF-3 | CORR | LML | Anticlockwise | 411 | 6:16 | 28.56 | 25 | 135 | 3.2 | 11.2 | External |
| - | 1165 | 35 | - | DF-4 | CORR | LML | Clockwise | 270 | 3:46 | 28.56 | 40 | 125 | 2.5 | 8.8 | External |
| - | 1210 | 80 | - | DF-5 | CORR | LML | Anticlockwise | 114 | 10:24 | 28.56 | 120 | 400 | 3.5 | 12.3 | External |
| 510 | 1640 | - | 295 | WJ 4 | - | - | - | - | - | - | - | - | - | - | - |
| 295 | 1935 | - | 295 | Elbow 90 deg | - | - | - | - | - | - | - | - | - | - | - |
| - | 2175 | 535 | - | DF-6 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 95 | 858 | 4.0 | 14.0 | External |
| 295 | 2230 | - | 450 | WJ 5 | - | - | - | - | - | - | - | - | - | - | - |
| - | 2255 | 25 | - | DF-7 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 10 | 858 | 1.0 | 3.5 | External |
| 450 | 2680 | - | 295 | WJ 6 | - | - | - | - | - | - | - | - | - | - | - |
| - | 2840 | 160 | - | DF-8 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 150 | 45 | 1.5 | 5.3 | External |
| 295 | 2975 | - | 295 | Elbow 90 deg | - | - | - | - | - | - | - | - | - | - | - |
| - | 3185 | 505 | - | DF-9 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 65 | 858 | 3.5 | 12.3 | External |
| 295 | 3270 | - | 750 | WJ 7 | - | - | - | - | - | - | - | - | - | - | - |
| - | 3295 | 25 | - | DF-10 | CORR | LML | Clockwise | 429 | 6:00 | 28.56 | 10 | 110 | 1.5 | 5.3 | External |
| - | 3300 | 30 | - | DF-11 | CORR | LML | Clockwise | 80 | 1:07 | 28.56 | 30 | 220 | 2.5 | 8.8 | External |
| - | 3300 | 30 | - | DF-12 | CORR | LML | Anticlockwise | 214 | 9:00 | 28.56 | 25 | 100 | 1.5 | 5.3 | External |
| - | 3370 | 100 | - | DF-13 | CORR | LML | Anticlockwise | 214 | 9:00 | 28.56 | 30 | 30 | 2.5 | 8.8 | External |
| 750 | 4020 | - | 620 | Support S1 | - | - | - | - | - | - | - | - | - | - | - |
| - | 4020 | 750 | - | DF-14 | CORR | LML | Clockwise | 429 | 6:00 | 28.56 | 560 | 435 | 3.0 | 10.5 | External |
| 620 | 4640 | - | 200 | 250x40 outlet | - | - | - | - | - | - | - | - | - | - | - |
| 200 | 4840 | - | 755 | WJ 8 | - | - | - | - | - | - | - | - | - | - | - |
| 755 | 5595 | - | 755 | Valve PL-2000 | - | - | - | - | - | - | - | - | - | - | - |
| 755 | 6350 | - | 220 | WJ 9 | - | - | - | - | - | - | - | - | - | - | - |
| 220 | 6570 | - | 250 | 250x40 outlet | - | - | - | - | - | - | - | - | - | - | - |
| - | 6775 | 425 | - | DF-15 | CORR | LML | Anticlockwise | 20 | 11:44 | 28.56 | 45 | 240 | 2.5 | 8.8 | External |
| - | 6790 | 440 | - | DF-16 | CORR | LML | Anticlockwise | 399 | 6:26 | 28.56 | 30 | 25 | 1.5 | 5.3 | External |
| - | 6790 | 440 | - | DF-17 | CORR | LML | Anticlockwise | 214 | 9:00 | 28.56 | 20 | 100 | 1.5 | 5.3 | External |
| - | 6795 | 445 | - | DF-18 | CORR | LML | Clockwise | 194 | 2:43 | 28.56 | 10 | 40 | 0.5 | 1.8 | External |
| - | 6795 | 445 | - | DF-19 | CORR | LML | Clockwise | 349 | 4:52 | 28.56 | 25 | 80 | 1.0 | 3.5 | External |
| 250 | 6820 | - | 295 | WJ 10 | - | - | - | - | - | - | - | - | - | - | - |
| - | 6845 | 25 | - | DF-20 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 10 | 35 | 1.0 | 3.5 | External |
| - | 6845 | 25 | - | DF-21 | CORR | LML | Anticlockwise | 334 | 7:20 | 28.56 | 20 | 170 | 0.7 | 2.5 | External |
| - | 6850 | 30 | - | DF-22 | CORR | LML | Anticlockwise | 214 | 9:00 | 28.56 | 30 | 30 | 0.7 | 2.5 | External |
| - | 6860 | 40 | - | DF-23 | CORR | LML | Anticlockwise | 90 | 10:45 | 28.56 | 40 | 130 | 1.5 | 5.3 | External |
| 295 | 7115 | - | 295 | Elbow 90 deg | - | - | - | - | - | - | - | - | - | - | - |
| 295 | 7410 | - | 1850 | WJ 11 | - | - | - | - | - | - | - | - | - | - | - |
| - | 8260 | 850 | - | DF-24 | CORR | LML | Anticlockwise | 269 | 8:15 | 28.56 | 35 | 55 | 1.5 | 5.3 | External |
| - | 8950 | 1540 | - | DF-25 | CORR | LML | Clockwise | 359 | 5:01 | 28.56 | 55 | 20 | 1.5 | 5.3 | External |
| 1850 | 9260 | - | 850 | Support S2 | - | - | - | - | - | - | - | - | - | - | - |
| - | 9480 | 2070 | - | DF-26 | CORR | LML | Clockwise | 349 | 4:52 | 28.56 | 50 | 50 | 2.5 | 8.8 | External |
| - | 10070 | 2660 | - | DF-27 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 160 | 858 | 4.0 | 14.0 | External |
| 850 | 10110 | - | 760 | WJ 12 | - | - | - | - | - | - | - | - | - | - | - |
| 760 | 10870 | - | 760 | Valve #2 | - | - | - | - | - | - | - | - | - | - | - |
| 760 | 11630 | - | 220 | WJ 13 | - | - | - | - | - | - | - | - | - | - | - |
| 220 | 11850 | - | 220 | Tee #1 | - | - | - | - | - | - | - | - | - | - | - |
| 220 | 12070 | - | 590 | WJ 14 | - | - | - | - | - | - | - | - | - | - | - |
| - | 12130 | 60 | - | DF-28 | CORR | LML | Clockwise | 429 | 6:00 | 28.56 | 50 | 100 | 0.5 | 1.8 | External |
| 590 | 12660 | - | 220 | WJ 15 | - | - | - | - | - | - | - | - | - | - | - |
| - | 12750 | 90 | - | DF-29 | CORR | LML | Clockwise | 0 | 0:00 | 28.56 | 25 | 15 | 0.5 | 1.8 | External |
| 220 | 12880 | - | 220 | Tee #2 | - | - | - | - | - | - | - | - | - | - | - |
| 220 | 13100 | - | 260 | WJ 16 | - | - | - | - | - | - | - | - | - | - | - |
| - | 13230 | 130 | - | DF-30 | CORR | LML | Anticlockwise | 130 | 10:11 | 28.56 | 20 | 45 | 1.0 | 3.5 | External |
| 260 | 13360 | - | 260 | Flange #3 | - | - | - | - | - | - | - | - | - | - | - |
| 260 | 13620 | - | 300 | WJ 17 | - | - | - | - | - | - | - | - | - | - | - |
| 300 | 13920 | - | 300 | Elbow 90 deg | - | - | - | - | - | - | - | - | - | - | - |
| 300 | 14220 | - | - | WJ 18; End of inspection piping 250-PL-2019-151441C\_M1; Flange #4; Inlet to V-3010 | - | - | - | - | - | - | - | - | - | - | - |