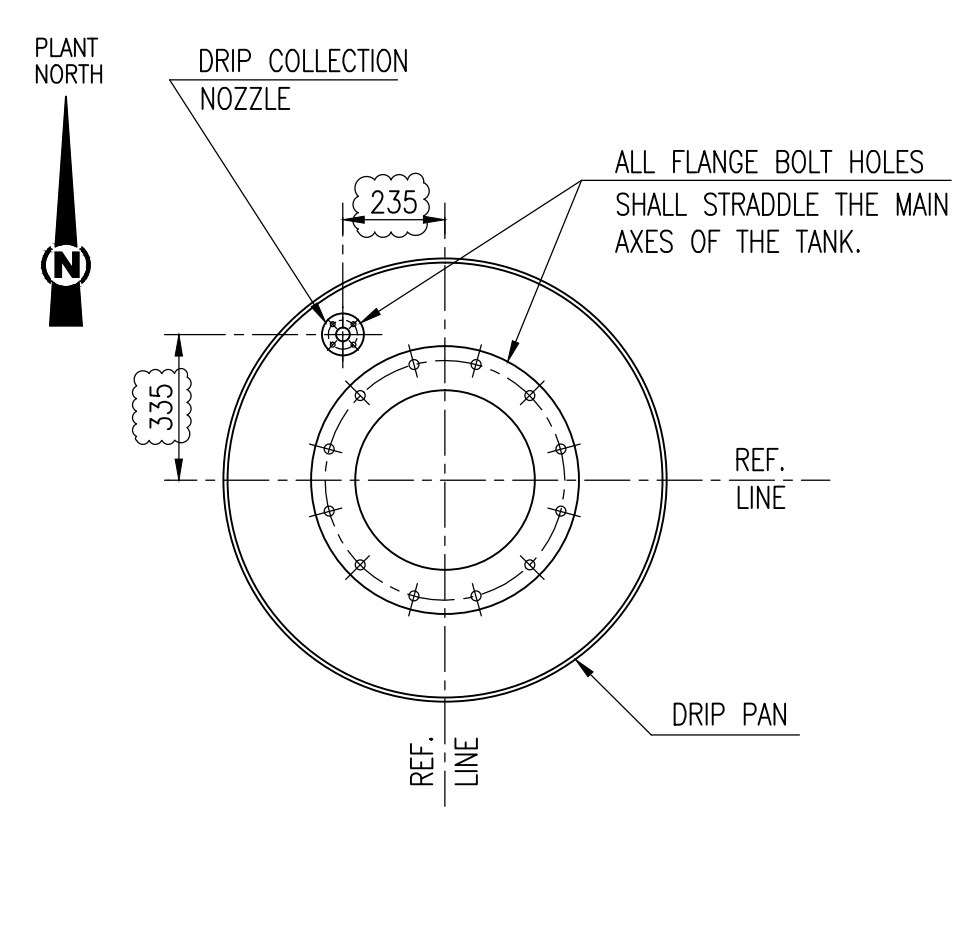
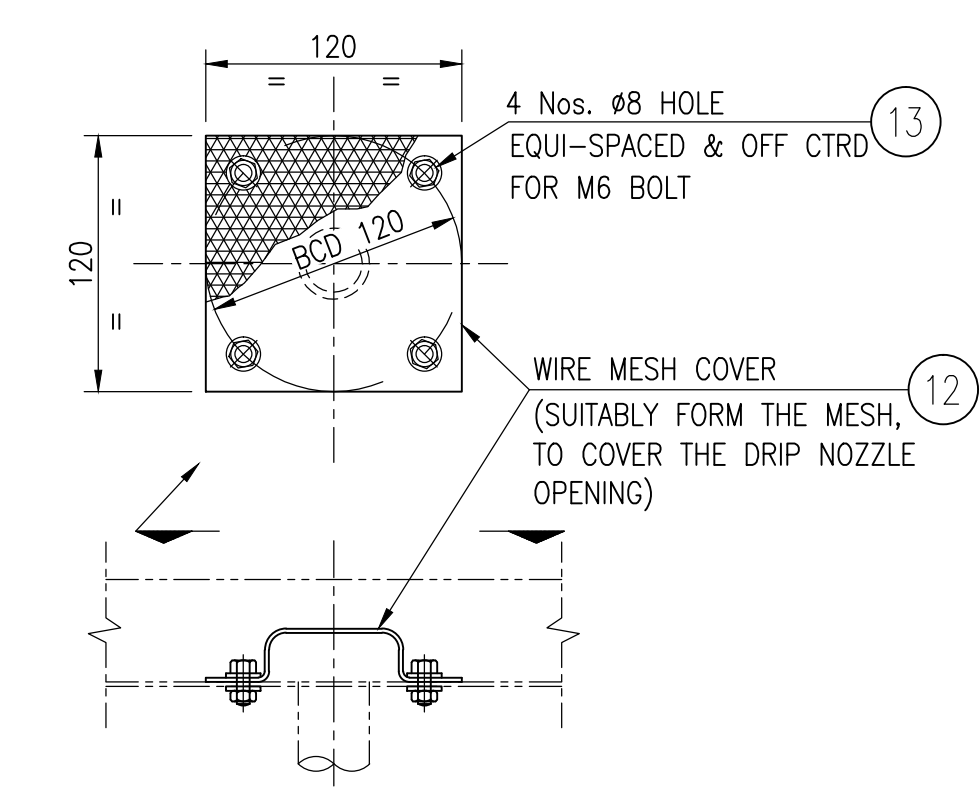


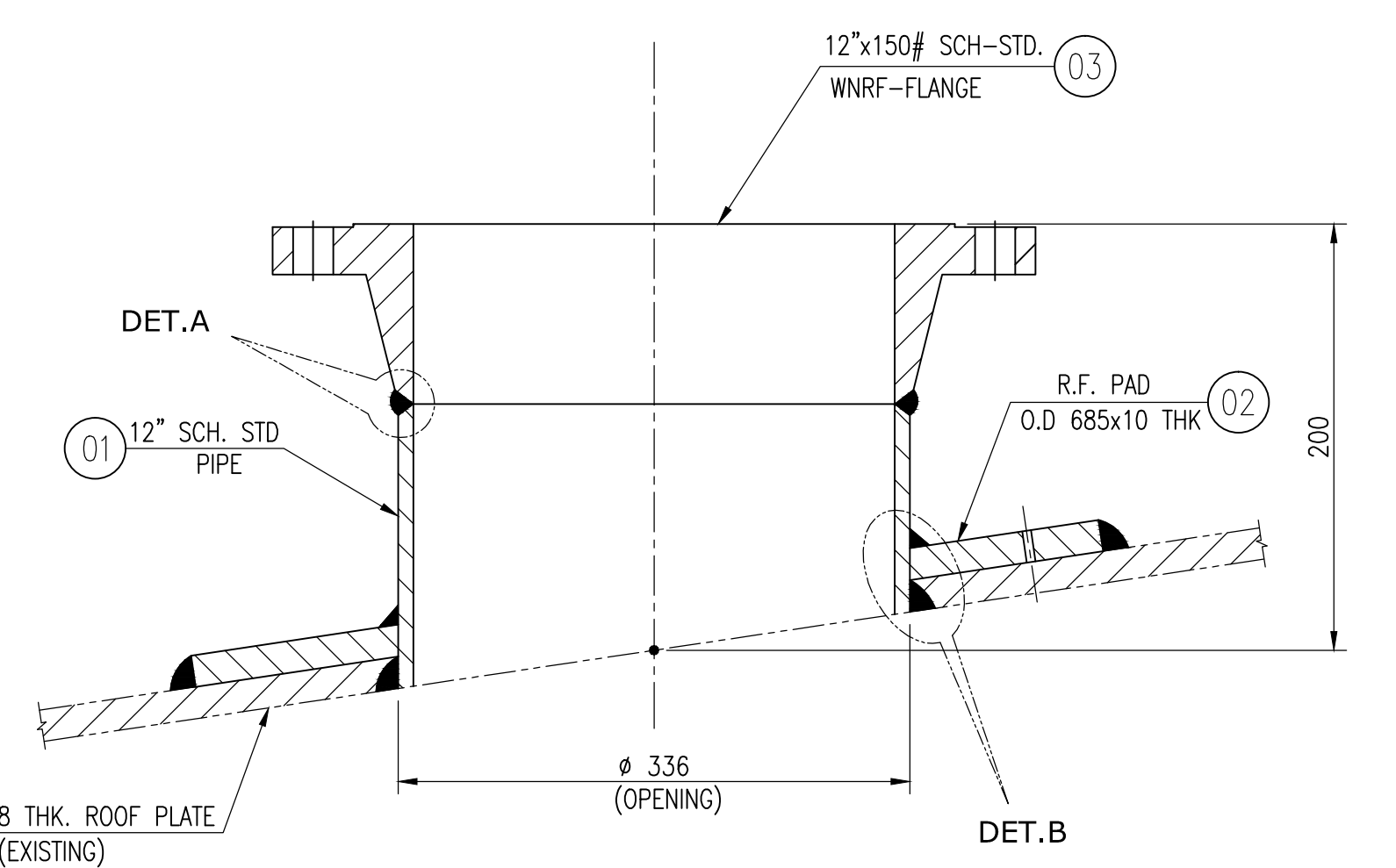
DETAIL OF NOZZLE 'N5E' (PVRV-201E)



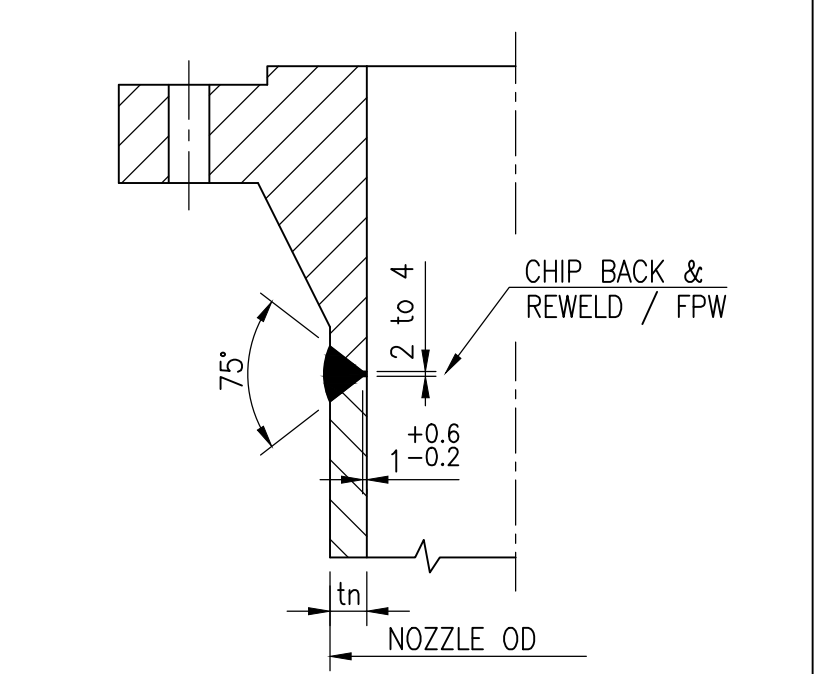
PLAN VIEW OF NOZZLE 'N5E'



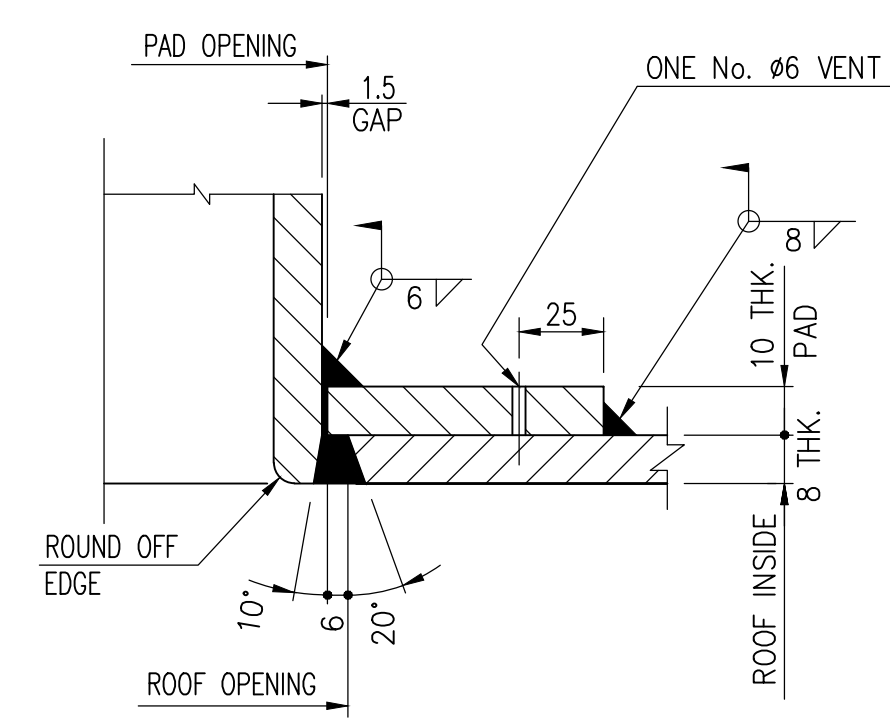
WIRE MESH COVER DETAIL FOR DRIP COLLECTION NOZZLE



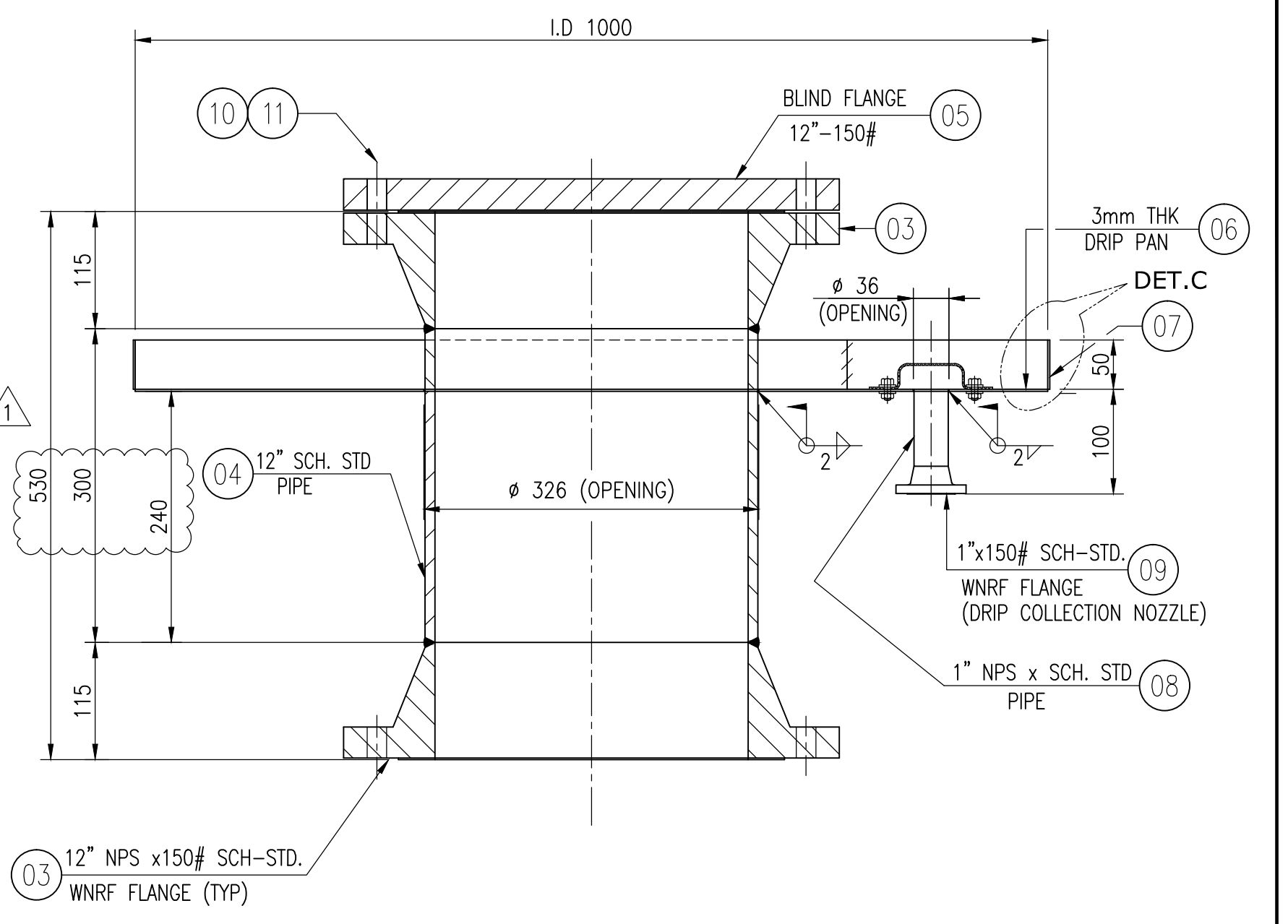
DETAIL - 01



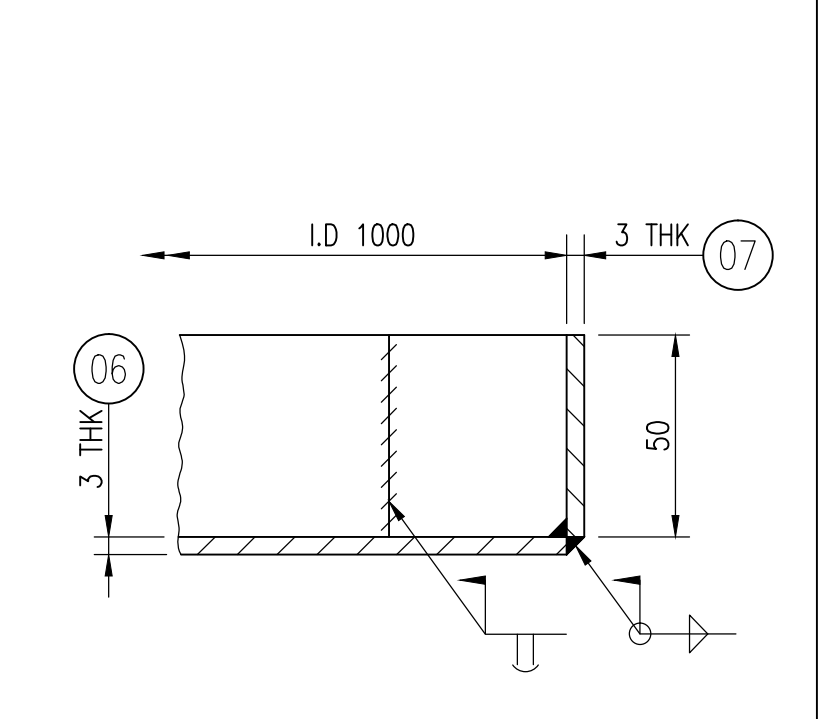
TYP. NOZZ. PIPE TO W.N. FLANGE (DETAIL - A)



NOZZ. PIPE TO ROOF WITH R.F PAD (DETAIL - B)



DETAIL - 02



DETAIL OF DRIP PAN (DETAIL - C)

- NOTES
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
 2. FOR GENERAL ASSEMBLY AND OTHER DETAILS REFER DRG. NO. 7313-F-02027-001 (K.O.C DRG. No. 18053024-GC09-DW-M-031628)
 3. NOZZLE 'N5E' SHALL BE PROVIDED WITH A BUTTERFLY VALVE INCLUDING GASKETS & FASTENERS AT BOTH ENDS (BY PIPING).
 4. VENT HOLE Ø6MM SHALL BE PROVIDED FOR ROOF NOZZLE REINF. PAD.
 5. LOCATION, ORIENTATION & PROJECTION OF NOZZLES / DRIP COLLECTION TO BE CHECKED AND CONFIRMED AT SITE PRIOR TO ASSEMBLY / WELDING OF NOZZLES. ANY CHANGES DONE AS PER SITE FEASIBILITY SHALL BE UPDATED IN 'AS-BUILT'.
 6. NEW NOZZLE 'N5E' LOCATION SHALL BE CAREFULLY CHECKED TO AVOID CLASHING WITH ROOF STRUCTURE.

© - ELECTRO-ZINC PLATED TO B633 SC4 TYPE 1 PASSIVATED.
 @@ - SS 316L SPIRAL WOUND C/W GRAPHITE FILLER & INNER/OUTER CENTERING RINGS

BOM WEIGHT : 225 kg

| P.No. | DESCRIPTION | MATERIAL SIZE | Qty. | WEIGHT in kgs | MATL. SPECN. | REMARKS |
|-------|-----------------------------|---------------------------------|------|---------------|-------------------------------|------------|
| 13 | M/C BOLT+1 H.NUT+ 2 WASHERS | M6 x 25MM LG. | 4 | 0.1 | SA 193 B8MA CL.1A/ SA 194 8MA | |
| 12 | WIRE MESH COVER | 500 x 500 (1.5MMx1.5MM SCREEN) | 1 | 0.1 | SS 316 | SEE DETAIL |
| 11 | STUD+2 HWY HEX. NUTS | Ø 7/8" UNC x 5.5" LG. | 12+2 | 8.9 | SA 193 B7M/SA 194 2HM | © |
| 10 | GASKET | 12" NPS x 150# x RF | 1+2 | - | @@ | |
| 9 | NOZZLE FLANGE | 1" NPS x SCH.STD x 150# x WNRF | 1 | 1.5 | SA 105N+NACE | |
| 8 | NOZZLE PIPE | 1" NPS x SCH. STD - 44 LG. | 1 | 0.2 | API 5L Gr.B PSL-2+NACE+HIC | |
| 7 | DRIP PAN PLATE | 3151 x 50 x 3 mm THK | 1 | 3.7 | SA 240 Gr.316L+NACE | |
| 6 | DRIP PAN PLATE | Ø1000 x 3 mm THK | 1 | 17.0 | SA 240 Gr.316L+NACE | |
| 5 | BLIND FLANGE | 12" NPS x 150# x RF | 1 | 40.0 | SA 105N+NACE | |
| 4 | NOZZLE PIPE | 12" NPS x SCH. STD - {300} LG. | 1 | 22.3 | API 5L Gr.B PSL-2+NACE+HIC | |
| 3 | NOZZLE FLANGE | 12" NPS x SCH.STD x 150# x WNRF | 3 | 111.0 | SA 105N+NACE | |
| 2 | R. F. PAD | OD 685 x 10 THK | 1 | 22.4 | SA 516 Gr.60N+NACE+HIC | |
| 1 | NOZZLE NECK (N5E) | 12" NPS x SCH. STD - 118 LG. | 1 | 8.7 | API 5L Gr.B PSL-2+NACE+HIC | |

BILL OF MATERIAL

FILE NAME: 7313-F-02029-001-1

| REF. DWGS NO. | REFERENCE DRAWINGS TITLE | REF. DWGS NO. | REFERENCE DRAWINGS TITLE | REV | KOC AMENDMENTS | DRAWN | APPR'D | DATE | REV | KOC AMENDMENTS | DRAWN | APPR'D | DATE |
|---------------|--------------------------|---------------|--------------------------|-----|----------------|-------|--------|------|-----|----------------|-------|--------|------|
| | | | | | | | | | | | | | |

| REV. No. | AMENDMENTS | DRAWN | CHECKED | APPRD | DATE |
|----------|----------------------------|-------|---------|-------|------------|
| 1 | RE-ISSUED FOR CONSTRUCTION | SV | SV/BPT | MFB | 31.08.2020 |
| 0 | ISSUED FOR CONSTRUCTION | AJS | SV/BPT | MFB | 17.03.2020 |
| B | RE-ISSUED FOR APPROVAL | AJS | SV/BPT | MFB | 24.02.2020 |
| A | ISSUED FOR APPROVAL | SV | SV/BPT | MFB | 21.11.2019 |

CONTRACTOR REVISION

| DESIGNATION - GROUP / TEAM | NAME | SIGNATURE | DATE |
|----------------------------|------|-----------|------|
| | | | |

KUWAIT OIL CO. K. S. C. شركة نفط الكويت ش.م.ك.

NPCC

| DRAWN | DESIGNED | BPT | CHECKED | SV | |
|----------|----------|------|------------|-------|-------|
| APPROVED | MFB | DATE | 21.11.2019 | SCALE | 1:100 |

INSTALLATION OF NEW DESALTER TRAIN AT GC-09, GC-10, GC-19 & GC-21 KOC CONTRACT NO. : 18053024

GC-09 (EAST KUWAIT-I) NEW DRY CRUDE TANK (09-D-001) ROOF NOZZLE MODIFICATION

| PROJ. No. | CONTRACTOR DRG. No. | REV | KOC DRG. No. | REV |
|-----------|---------------------|-----|---------------------------|-----|
| 7313 | 7313-F-02029-001 | 1 | 18053024-GC09-DW-M-031630 | 1 |

SHEET 1 OF 1