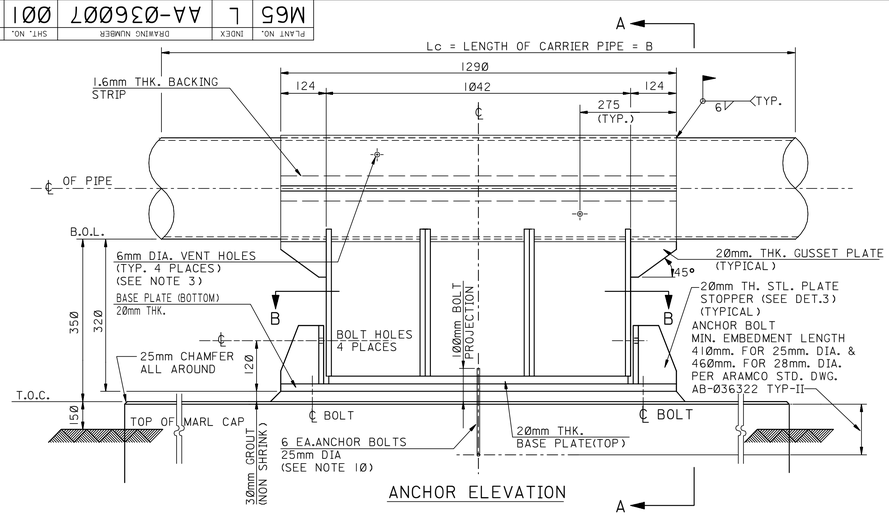
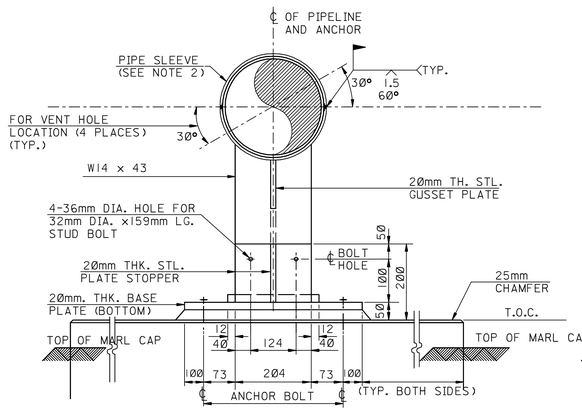
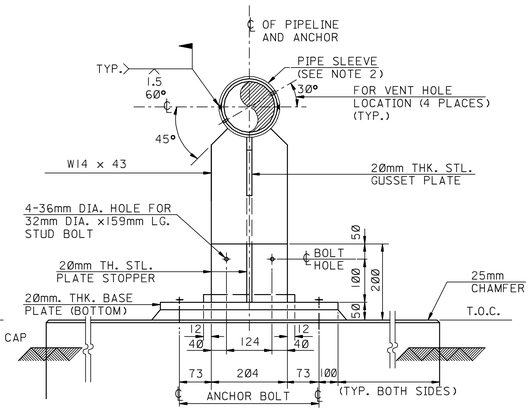
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
M65	L	AA-036007	001	00



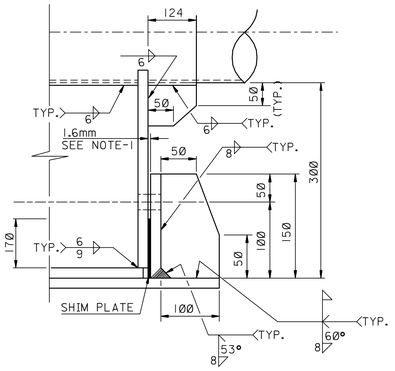
ANCHOR ELEVATION



SECTION A - A
10" & 12" DIA. PIPELINE

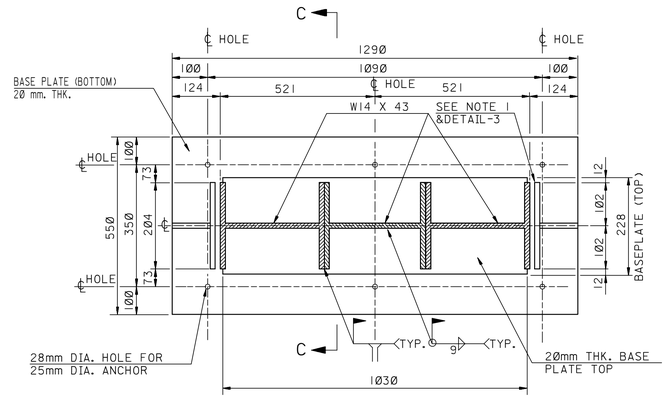


SECTION A - A
6" & 8" DIA. PIPELINE

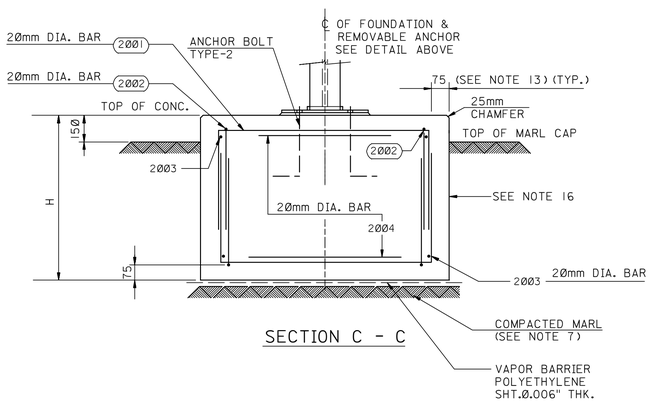


DETAIL-3

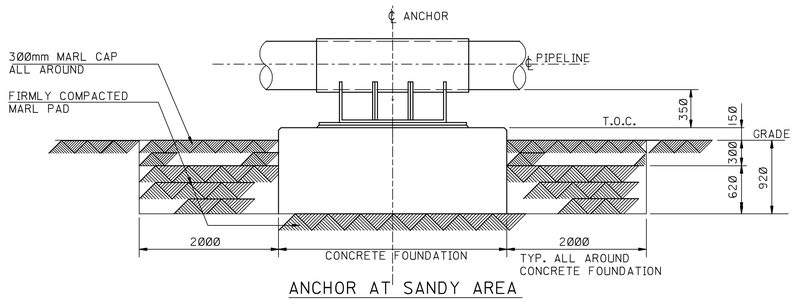
FOUNDATION PLAN



SECTION B-B



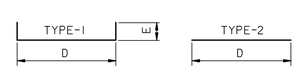
SECTION C - C



ANCHOR AT SANDY AREA

STEEL BENDING DETAILS

FDN TYPE	MARK NO.	TYPE	REBAR SIZE DIA. mm	NO. REQ'D	DIMENSION D	DIMENSION E	CUTTING LENGTH IN mm	TOTAL LENGTH IN MTS.
I	2001	1	20	18	1679	560	2800	50.40
	2002	1	20	12	2440	560	3560	42.72
	2003	2	20	4	2440	—	2440	9.76
	2004	2	20	4	1679	—	1679	6.80
II	2001	1	20	26	2745	560	3865	100.49
	2002	1	20	20	3660	560	4780	95.60
	2003	2	20	4	3660	—	3660	14.70
	2004	2	20	4	2745	—	2745	11.00



FOUNDATION SCHEDULE

FDN. TYPE	PIPE SIZE	DIMENSIONS (MM) A	B	H	VOL. CONC. CU. MT.	MAX. FULL THRUST FORCE
I	6" & 8"	1830	2590	1070	5.1	12K
II	10" & 12"	2900	3810	1070	11.8	27K

NOTES:

1. PROVIDE 1.6mm OR 1/16 " CLEARANCE BOTH SIDES TO ALLOW SMOOTH REMOVAL AND INSERTION. FILL GAP WITH SHIM PLATES.
2. THE PIPE BEING USED FOR THE SLEEVE SHALL BE EXPANDED AROUND THE CARRIER PIPE AND WELDED, BEFORE THE BASE IS WELDED ON.
3. SLEEVE TO PIPE CONNECTION SHALL BE AIRTIGHT, VENT HOLES TO BE FILLED WITH MASTIC AFTER WELDING.
4. ANCHOR SPOOL SHALL NOT BE WELDED TO PIPELINE UNTIL CONCRETE HAS ATTAINED THE REQUIRED MINIMUM COMPRESSIVE STRENGTH.
5. ALL STRUCTURAL STEEL FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH AES-M-001 AND 12-AMSS-007.
6. ALL WELDING SHALL BE IN ACCORDANCE WITH WITH AWS-D1.1 AND SAES-W-001 AND SAES-W-012.
7. BACKFILLING AND COMPACTION AROUND & UNDER CONCRETE SHALL BE IN ACCORDANCE WITH AES-M-100.
8. "REFER TO SAES-Q-001 PAR. 4.7.2 TO SPECIFY" ANCHOR BLOCK FOUNDATION SHALL HAVE A PLASTICIZED VAPOR BARRIER, MINIMUM 0.15 MM. (6 MILS) IN THICKNESS OR A 50 MM. SUB-SLAB PLACED BENEATH THE CONCRETE.
9. ALL REINFORCING BARS SHALL BE MILD STEEL DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF 50 KSI AND COATED PER 09-AMSS-106.
10. ANCHOR BOLTS SHALL BE TYPE-2 AS PER STANDARD DWG. AB-036322. ANCHOR BOLTS SHALL NOT TOUCH THE REINFORCEMENT & SHALL BE COATED 3" EITHER SIDES OF CONCRETE SURFACE PER SAES-H-101, APCS-1C.
11. CONCRETE SHALL BE MIXED, PLACED AND CURED PER SAES-Q-001 AND 09-AMSS-097. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa AFTER 28 DAYS REF. 09-AMSS-97 PAR.5.4.1.
12. GROUT SHALL BE 09-AMSS-092, TYPE II PER SAES-Q-010 AND SHALL BE POURED IN A HIGH FLUIDITY RANGE, PER THE MANUFACTURERS INSTRUCTIONS.
13. MINIMUM CONCRETE COVER FOR REBARS SHALL BE 75mm.
14. ALL STEEL WORK SHALL BE COATED PER SAES-H-101, 26B. GROUT AND BASE PLATE SHALL BE COATED PER SAES-H-101, APCS-1B.
15. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
16. THE SIDES AND TOP OF THE CONCRETE THAT COMES IN DIRECT CONTACT WITH EARTH SHALL BE COATED WITH TWO COATS COAL TAR OR BITUMEN COATING THAT CONFORMS TO APCS-10 OF SAES-H-101. A PLASTICIZED SHEET VAPOR BARRIER SHALL BE PLACED AROUND THE SIDES OF CONCRETE THAT IS PLACED DIRECTLY INTO EXCAVATION WITHOUT THE USE OF FORMWORK, WHERE BITUMEN CAN NOT BE APPLIED.
17. THESE ANCHORS ARE FOR ABOVE GRADE INSTALLATION AND DESIGNED FOR MAXIMUM FULL THRUST FORCE OF 27 KIPS.

DESIGN PARAMETERS

FULL THRUST ANCHOR & FLANGE DESIGN IS ADEQUATE FOR PARAMETERS SHOWN BELOW AND LIMITATIONS AS SHOWN ONTO THE DRAWING.

	DES. PR: (PSIG)	DES. TEMP: (°F)	TEMP: (°C)
OIL LINES	1350	210	70
WI/WS LINES	3000	180	70

REFERENCE DRAWINGS

ANCHOR BOLTS DETAIL	AB-036322

TYPICAL INSTALLATION DRAWING

REV. NO.	DATE	BY	JO/EWO	DESCRIPTION	CHKD.	CERT.	APPD.

SAUDI ARABIAN OIL COMPANY

DRAWN BY ESSD/MAQ/RLO CHECKED BY MMD SCALE: NONE

DATE STARTED APR. 95 DATE COMPLETED APR. 95

OPR'G. DEPT. ENG. DEPT.

APP'D. FOR CONST.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CERTIFIED BY DATE

FLOWLINE REMOVABLE ANCHOR
6"-12" PIPE
SANDY AREAS

PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	L	AA-036007	001	00