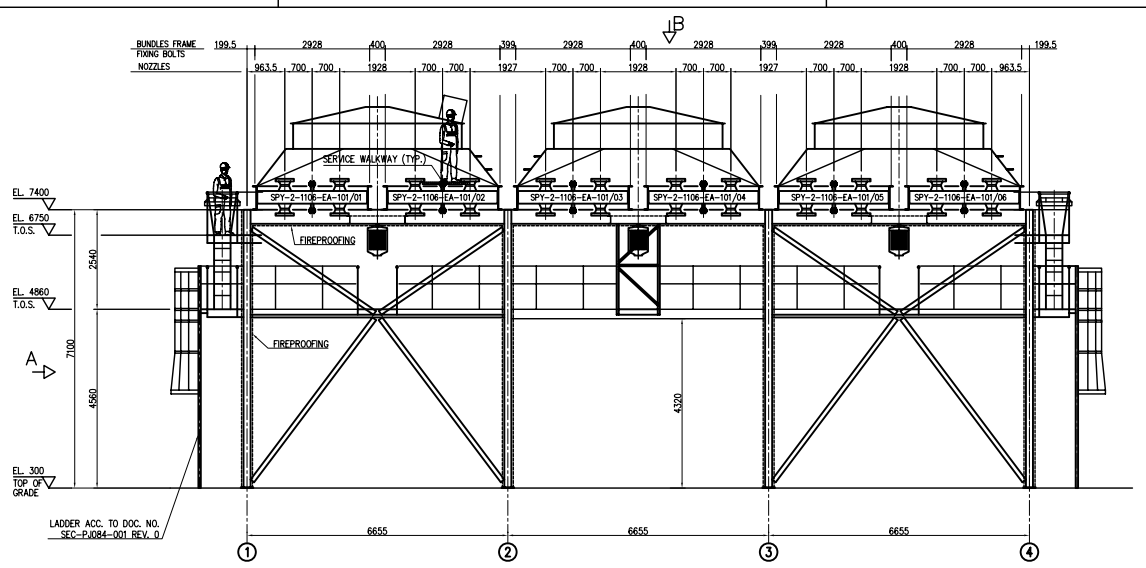
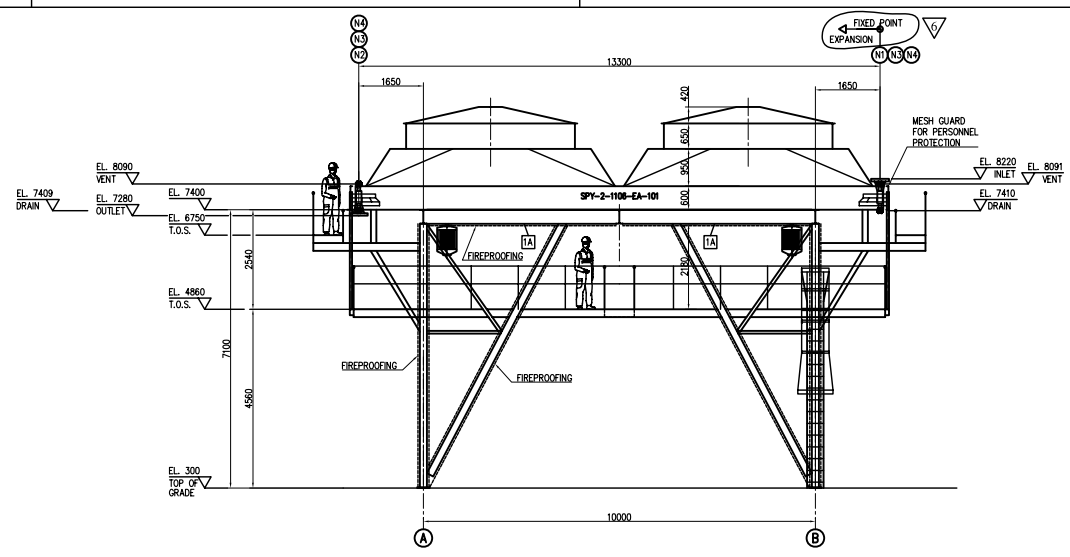
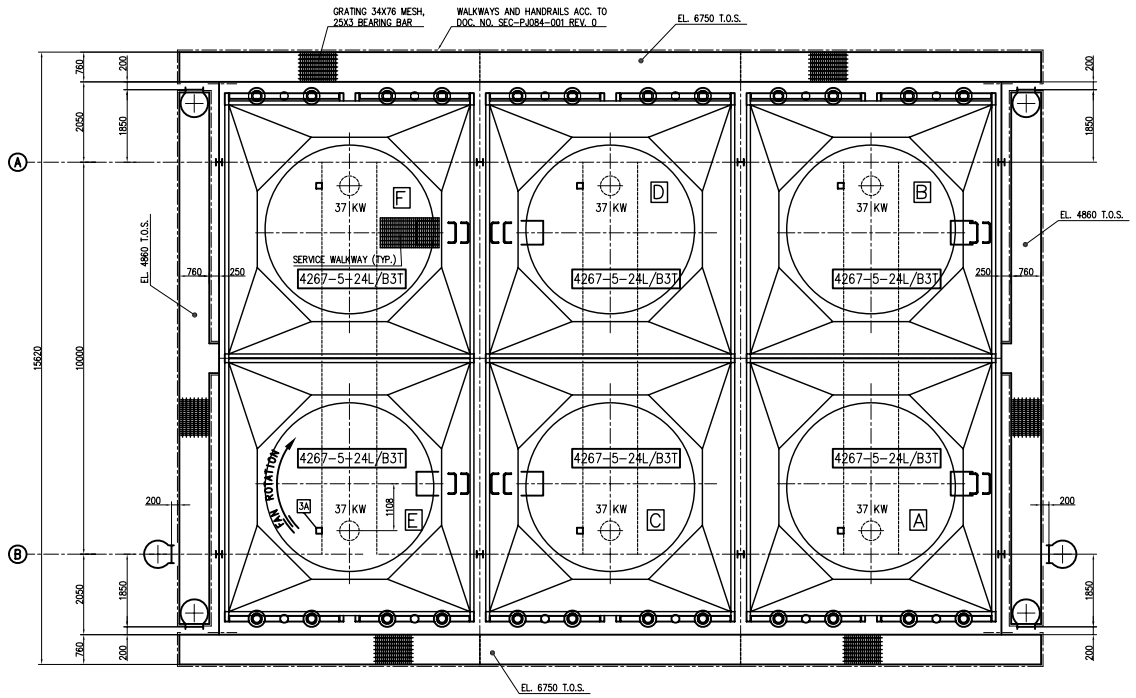
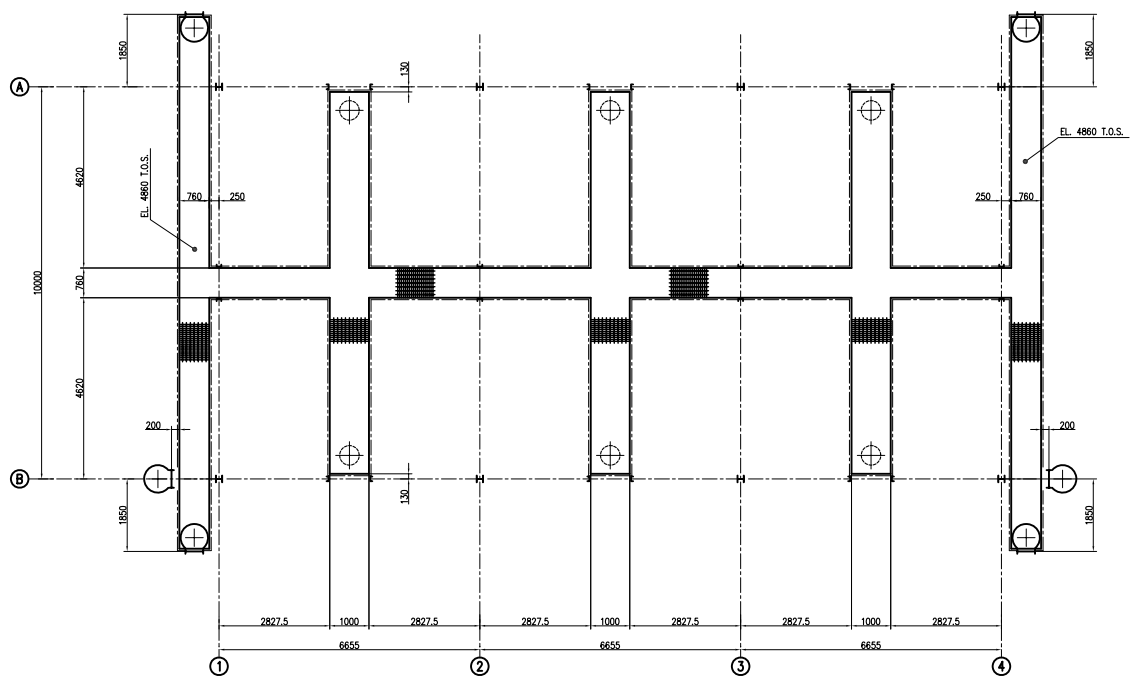




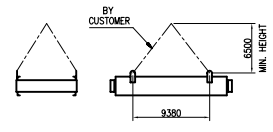
VIEW FROM –A–



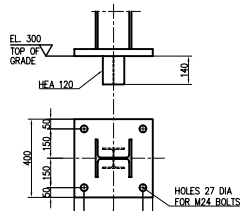
VIEW FROM –B–



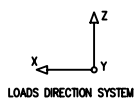
MOTOR WALKWAY



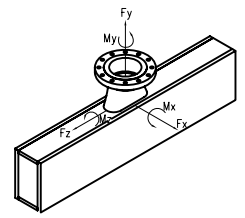
BUNDLE LIFTING ARRANGEMENT



COLUMN BASE PLATE (THK=25mm)



LOADS DIRECTION SYSTEM



UTILITIES CONNECTIONS
1A GREASE NIPPLES FOR FAN SHAFT BEARING No. 2 NIPPLES FOR EACH FAN
1A VIBRATION SWITCH TYPE : METRIX 5550

–ALL DIMENSION IN mm
UNLESS OTHERWISE NOTED
–PAINTING SYSTEM AS
PER 602–000–PI–SP–014–D00

ITEMS SPY-2-4106-EA-101 ;
SPY-2-3106-EA-101 ;
SPY-2-2106-EA-101 ;
ARE DUPLICATES OF ITEM SPY-2-1106-EA-101

NOZZLE LOAD TABLE

No.	SIZE (in)	INLET NOZZLE FX (N)	FY (N)	FZ (N)	MX (N.m)	MY (N.m)	MZ (N.m)	No.	SIZE (in)	OUTLET NOZZLE FX (N)	FY (N)	FZ (N)	MX (N.m)	MY (N.m)	MZ (N.m)*
2	8	11392	26700	16020	6076	12150	4456	2	8	11392	26700	16020	6076	12150	4456

SUM OF FX NOT OVER 20026 N EACH HEADER
SUM OF FY NOT OVER 40050 N EACH HEADER
SUM OF FZ NOT OVER 33376 N EACH HEADER
SUM OF MX NOT OVER 12150 N.m EACH HEADER
SUM OF MY NOT OVER 16200 N.m EACH HEADER
SUM OF MZ NOT OVER 8100 N.m EACH HEADER

VIBRATION SWITCH TAG NO.	MOTOR TAG NO.
Y106–VSH–002–A~F (6 OFF)	EM–1106–EA–101–A~F (6 OFF)
Y206–VSH–002–A~F (6 OFF)	EM–2106–EA–101–A~F (6 OFF)
Y306–VSH–002–A~F (6 OFF)	EM–3106–EA–101–A~F (6 OFF)
Y406–VSH–002–A~F (6 OFF)	EM–4106–EA–101–A~F (6 OFF)

GENERAL DATA	
ITEM NO.	SPY–2–1106/2106/3106/4106–EA–101
WORKING PRESSURE	63.5 barg
DESIGN PRESSURE	82 barg
HYDROSTATIC TEST PRESSURE	106.6 barg
TEMPERATURE IN	65.7 °C
TEMPERATURE OUT	55 °C
DESIGN TEMPERATURE	160 °C
CORROSION ALLOWANCE	3 mm
ULTRASONIC TEST	YES
RADIOGRAPHY	YES
STRESS RELIVING	YES
BARE/ FINNED SURFACE PER UNIT	1260.8 / 26643 m2
NUMBER OF BUNDLE / BAY	2 (TOTAL PER UNIT)
SIZE OF INLET/ OUTLET/ RATING/ TYPE	2x8" Sch 120 / 2x8" Sch 120 / #600 / RF
SERVICE	EXPORT GAS COMPRESSOR RECYCLE COOLER
PASSES PER BUNDLE	1
FINNED– TUBES / BUNDLE	203 NO. TUBES OD 25.4 (14 BWG–2.11 mm thk)x13200 mm Lg FIN, EXTRUDED 10 FPI 57.15 OD, THK 0.45 (root thk.)
STEAM COIL	NO
LOUVER	NO
VIBRATION SWITCH	YES, (FLAME PROOF ENCLOSURE IP65)
FAN SPECIFICATION: RPM/ DIAMETER	231 / 4267
	MODEL : MANUAL
BLADE MATERIAL	ALUMINUM
AIR QUANTITY/ FAN	471500 m3/ h
STATIC PRESSURE	0.114 KPa
AIR TEMPERATURE	48 / 54.4
SPEED REDUCER TYPE	HTD– BELT
REDUCTION RATIO	6.28 / 1
MOTOR TYPE	TEFC / SQUIRREL CAGE
VOLTS/ CYCLES/ PHASE	400 / 50 / 3
INSTALLED MOTOR: RPM / SIZE (KW)	1450 / 37
NOISE LEVEL	SOUND PRESSURE LEVEL (S.P.L.) 90BD(A) MEASURED ON THE SERVICE WALKWAY, 85 DB(A) ON GRADE @ EAR LEVEL
Bundle Weight Dry:	10887 Kg
Bundle Weight full of Water:	12387 Kg

EARTHQUAKE : UBC ZONE 4 Z=0.4 | WIND SPEED : 125 Km/ hr | NOZZLES LOADS : 2 TIMES API 661

TOTAL GROUP WEIGHT EMPTY METRIC TONS= 137 TONS INCLUDING FIREPROOFING WEIGHT (DENSITY 800 KG/M3)

TOTAL GROUP WEIGHT FULL OF WATER = 146 TONS

PLATFORM DEAD LOAD = 250 Kg/ m2 ; PLATFORM LIVE LOAD = 250 Kg/m2

LOAD COND. 1	DEAD LOAD
LOAD COND. 2A	OPER. PROCESS FLUID LOADS + WALKWAY LIVE LOAD + VERTICAL NOZZLES LOADS + DYNAMIC LOADS
*) LOAD COND. 2B	HORIZONTAL NOZZLES LOADS – DIRECTION X
*) LOAD COND. 2C	HORIZONTAL NOZZLES LOADS – DIRECTION Z
*) LOAD COND. 3	EARTHQUAKE X
*) LOAD COND. 4	EARTHQUAKE Z
*) LOAD COND. 5	WIND X
*) LOAD COND. 6	WIND Z

NOTE *) : ALL THE THE LOADS DIRECTIONS ARE REVERTABLE

REFERENCE DRAWING :	
HEADER	602–106–TSH–VD–023
BUNDLE STRUCTURE	602–106–TSH–VD–024
PLENUM	602–106–TSH–VD–025
ROTATING PARTS	602–106–TSH–VD–027
PLAN & ELEVATION	602–106–TSH–VD–028
NAME PLATE	602–106–TSH–VD–029

TABLE OF COLUMN LOADS IN METRIC TONS:

COLUMN NO.	(TON.) LOAD CONDITION 1 VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 2A VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 2B VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 2C VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 3 VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 4 VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 5 VER. Y	HOR. X	HOR. Z	(TON.) LOAD CONDITION 6 VER. Y	HOR. X	HOR. Z
B1	11.5	0.0	–2.1	7.6	0.0	0.0	1.6	0.8	0.0	–3.0	0.0	2.1	13.5	5.0	0.0	–1.0	0.0	3.4	1.5	0.7	0.0	–1.0	0.0	0.7
B2	22.9	0.0	–4.1	11.7	0.0	0.0	–1.6	0.8	0.0	–6.0	0.0	4.1	–13.5	5.0	0.0	–1.9	0.0	6.7	–1.5	0.7	0.0	–1.9	0.0	1.3
B3	22.9	0.0	–4.1	11.7	0.0	0.0	1.6	0.8	0.0	–6.0	0.0	4.1	13.5	5.0	0.0	–1.9	0.0	6.7	1.5	0.7	0.0	–1.9	0.0	1.3
B4	11.5	0.0	–2.1	7.6	0.0	0.0	–1.6	0.8	0.0	–3.0	0.0	2.1	–13.5	5.0	0.0	–1.0	0.0	3.4	–1.5	0.7	0.0	–1.0	0.0	0.7
A1	11.5	0.0	2.1	7.6	0.0	0.0	1.6	0.8	0.0	3.0	0.0	2.1	13.5	5.0	0.0	1.0	0.0	3.4	1.5	0.7	0.0	1.0	0.0	0.7
A2	22.9	0.0	4.1	11.7	0.0	0.0	–1.6	0.8	0.0	6.0	0.0	4.1	–13.5	5.0	0.0	1.9	0.0	6.7	–1.5	0.7	0.0	1.9	0.0	1.3
A3	22.9	0.0	4.1	11.7	0.0	0.0	1.6	0.8	0.0	6.0	0.0	4.1	13.5	5.0	0.0	1.9	0.0	6.7	1.5	0.7	0.0	1.9	0.0	1.3
A4	11.5	0.0	2.1	7.6	0.0	0.0	–1.6	0.8	0.0	3.0	0.0	2.1	–13.5	5.0	0.0	1.0	0.0	3.4	–1.5	0.7	0.0	1.0	0.0	0.7

REV.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
6	04/01/2006	MODIFIED FOR APPROVAL	M.C.	F.P.	M.C.
5	15/11/2005	MODIFIED FOR APPROVAL	A.B.	F.P.	M.C.
4	18/10/2005	MODIFIED FOR APPROVAL	A.B.	F.P.	M.C.
3	18/09/2005	ISSUED FOR APPROVAL	A.JA.	MSKH	MSKH
2	13/08/2005	ISSUED FOR APPROVAL	A.JA.	MSKH	MSKH

OWNER : NATIONAL IRANIAN GAS COMPANY
شرکت ملی گاز ایران
NIGC
PROJECT : IGAT V Gas Compressor Stations
PURCHASER : OTC
CONSULTANT : OTEC
TITLE : GENERAL ARRANGEMENT FOR SPY-2-(1~4)106-EA-101
VENDOR : TASHA
DESIGNER : Sabz Engineering Company شرکت مهندسی سبز
SCALE : –
SHEET : 1 OF 1
OWNER PROJECT NO. :
PURCHASER PROJECT NO. : 602
DRAWING NO. : 602-106-TSH-VD-026
REV. : 6

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BANK 130403

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