

NOTES:

THE FOLLOWING NOTES SHALL BE APPLIED TO ALL STRUCTURE STEEL DESIGN DRAWINGS UNLESS OTHERWISE SPECIFIED IN EACH DESIGN DRAWING.

1. APPLICABLE SPECIFICATIONS AND DRAWINGS.

- 1.1 SPECIFICATIONS.
PROJECT SPECIFICATION FOR STEEL STRUCTURE.

1.2 DRAWINGS.

STANDARD DRAWINGS FOR STRUCTURAL STEEL SHALL BE USED DURING CONSTRUCTION WITH DESIGN DRAWINGS.

2. PLANT COORDINATES AND ELEVATIONS

2.1 COORDINATES.

ALL COORDINATES ARE EXPRESSED IN METER IN ACCORDANCE WITH PLANT COORDINATES SYSTEM.

2.2 ELEVATIONS.

ALL ELEVATION ARE EXPRESSED IN METERED IN ACCORDANCE WITH PLANT ELEVATION SYSTEM (EL).

2.3 DIMENSIONS.

ALL DIMENSION ARE EXPRESSED IN MILLIMETER.

3. MATERIALS.

3.1 STRUCTURE STEEL.

ASTM A36 OR EQUIVALENT.

3.2 STRUCTURE PIPES.

ASTM A53 GRADE 8 OR API 5L GRADE 8.

3.3 HIGH STRENGTH BOLTS.

ASTM A325M.

3.4 MILD STEEL BOLTS.

ASTM A307 GRADE 4.6

3.5 WELDING ELECTRODES.

AWS A5.1 E70 SERIES.

AWS A5.1 E60 SERIES FOR LADDER, HANDRAIL AND FLOORING ONLY.

3.6 GRATING FLOOR AND STAIR TREADS.

GRATING FLOOR AND STAIR TREADS SHALL BE IN ACCORDANCE WITH DWG. NO. NGP-000-SCW-15.01-0017-00.

4. CONNECTION.

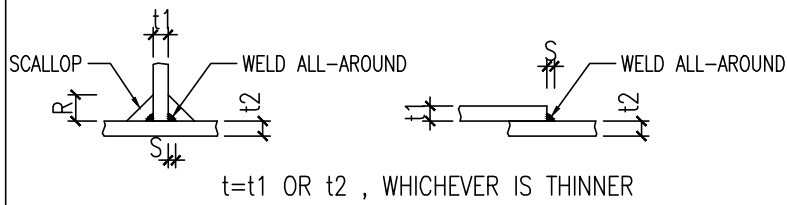
4.1 HIGH STRENGTH BOLT CONNECTION SHALL BE OF BEARING TYPE WITH THREAD IN SHEAR PLANE.

4.2 HOLES FOR HIGH STRENGTH BOLTS AND FOR MILD STEEL BOLTS SHALL NOT BE 2mm LARGER THAN DIAMETER OF BOLTS. UNLESS OTHERWISE SPECIFIED.

4.3 UNLESS OTHERWISE SPECIFIED, THE FOLLOWING FILLET WELD SHALL BE PROVIDED.

WELD SIZE NEED NOT EXCEED THE THICKNESS OF THE THINNER MATERIAL BEING JOINED.

PLATE THICKNESS (t)	WELD SIZE(S)		SCALLOP SIZE
	T JOINTS	LAP JOINTS	R
LESS THAN 6	S=T	S=T	25
LESS THAN 6 TO 8	6	5	25
OVER 8 TO 11	6	6	25
OVER 11 TO 15	9	6	30
OVER 15 TO 18	9	9	30
OVER 18	12	12	35



5. PAINTING AND GALVANIZING

ALL STRUCTURAL STEEL PAINTING AND SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH NGP-000-PAI-15.03-0001-00 SPECIFICATION FOR COATING AND PAINTING.

6. ABBREVIATIONS

APPROX	APPROXIMATE
BCD	BOLT (PITCH) CIRCLE DIAMETER
BOS	BOTTOM OF STEEL
BP	BASE PLATE
BOB	BOTTOM OF BASE PLATE
BOP	BOTTOM OF PIPE
CH PL	CHEQUERED PLATE
CL	CENTER LINE
COL	COLUMN
COV PL	COVER PLATE
C/C	CENTER TO CENTER
D	DEPTH
DIA	DIAMETER
DO	DIITTO
DWG	DRAWING
EL	ELEVATION (LEVEL)
EMB PL	EMBEDDED PLATE
EXP JT	EXPANSION JOINT
EQ	EQUAL
EQ P	EQUAL PITCH(SPACING)
FB	FLAT BAR
FCJ	FIELD CONSTRUCTION JOINT
FL	FLOOR
FLG	FLANGE
FP	FIREPROOFING OR FIREPROOFED
FL PL	FLOOR PLATE
FS	FAR SIDE
GALV	GALVANIZED
GRTG	GRATING
G PL	GUSSET PLATE
GWT	GRATING WITH TOE PLATE
H BR	DIAGONAL BRACING IN HORIZONTAL PLANE
HR	HANDRAILING
HSB	HIGH STRENGTH BOLT
LAD	LADDER
LG	LENGTH
MAX	MAXIMUM
MIN	MINIMUM
M BOLT	MILD STEEL BOLT
NF	NOT FURNISHED BY STEEL FABRICATOR
NGL	NATURAL GROUND LEVEL
NO.	NUMBER
NS	NEAR SIDE
OPN	OPENING
DPP	OPPOSITE
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
REQD	REQUIRED
SEC	SECTION
SPL PL	SPLICE PLATE
STD	STANDARD
STIFF PL	STIFFENER(RIB) PLATE
SYM	SYMMETRICAL
S BOLT	SET BOLT FOR EQUIPMENT etc.
SQ	SQUARE
STWY	STAIRWAY
THK/t/T	THICKNESS
THRU	THROUGH
TOC	TOP OF CONCRETE
TO COL	TOP OF COLUMN
TO FL	TOP OF FLOOR
TOGR	TOP OF GRATING
TOG	TOP OF GROUT
TOPL	TOP OF PLATE
TPO	TOE PLATE ONLY
TPR WASHER	TAPERED WASHER
TYP	TYPICAL
TOB	TOP OF BEAMS
TOS	TOP OF STEEL
UNO	UNLESS NOTED OTHERWISE
V BR	DIAGONAL BRACING IN VERTICAL PLAN
W	WIDTH
WP	WORKING POINT

7. SYMBOLS

UB,UC	H-SHAPE
C	CHANNEL
L	ANGLE
=	BISECTION
CT	STRUCTURE TEE
FB	BOTTOM OF PIPE
PL	PLATE
@	AT OR PITCH
FP	FIREPROOFED MEMBER BY CONCRETE WITH TOP FLANGE EXPOSED
	CONCRETE ENCASED FIREPROOFED MEMBER
	HADRAILING
	GRATING FLOORING
	GRATING (DENOTES DIRECTION OF LOAD BEARING BARS)
	STEEL FLOOR PLATE
	LADDER WITHOUT CAGE AND HOOP GUARD
	LADDER WITH HOOP GUARD
	STAIRWAY
	EQUIPMENT SADDLE (BOLSTER)
	INCLINATION
	CAMBER("50" MEANS CAMBER BY 50mm)

9. CROSS REFERENCE SYSTEM FOR DETAILS AND SECTIONS.

	DETAIL REFERENCE MARK
	SECTIONAL VIEW REFERENCE MARK
	CHEQUERED PLATE
	OPENING

		<i>Wen Anshun</i>	<i>Chen ChQ</i>	<i>Li Zhiguang</i>	<i>Zhang WH</i>	
00	Approved for Construction	Wen Anshun	Chen ChQ	Li Zhiguang	Zhang WH	23/05/2016
C	Issued for Approval	Wen Anshun	Chen ChQ	Li Zhiguang	Zhang WH	19/05/2016
B	Issued for Review	Wen Anshun	Chen ChQ	Li Zhiguang	Zhang WH	28/03/2016
A	Internal Discipline Check	Wen Anshun	Chen ChQ	Li Zhiguang	Zhang WH	03/03/2016
REV.	DESCRIPTION	PRPD	CHKD	REVD	APPD	DATE

CLIENT:	OIL&GAS DEVELOPMENT COMPANY LTD. OGDCL HOUSE TOWER-B, FIRST FLOOR F6/G6, BLUE AREA, JINNAH AVENUE ISLAMABAD PAKISTAN FAX: +92 051 2623033, PHONE: +92-051-9209859
---------	--

CONSULTANT:	Zishan Engineers (Pvt.) Ltd. An ISO 9001-2008 certified company 47/F Block 6, PECHS, Karachi-Pakistan Tel: (92-91) 34393045-48, & 34310151-54, Fax: (92-91) 34533430 & 34510156 E-Mail: contact@zishanengineers.com Website: www.zishanengineers.com
-------------	---

CONTRACTOR:	HONG KONG HUIHUA GLOBAL TECHNOLOGY LIMITED	PROJECT NO. NASHPA 1247
-------------	---	----------------------------

PROJECT TITLE:	NASHPA GAS PROCESSING AND LPG RECOVERY PLANT PROC-FC-CB/NASHPA/PROJ-1247/2015	DRAWING NO. NGP-000-SCW-15.01-0002-00
----------------	---	--

DRAWING TITLE:	General Notes for Structural Steel Works	REV.	SCALE	SHEET
		00	NTS	1 OF 1