

BILL OF QUANTITY

ITEM NO.	QUANTITY	DESCRIPTION	MATERIAL	NOTE
1	22 m	DOWN CONDUCTOR - CABLE 120 mm ²	COPPER	TINNED
2	57 m	LOOP CONDUCTOR - CABLE 120 mm ²	COPPER	TINNED
3	380 m	DOWN CONDUCTOR - CABLE 120 mm ²	COPPER	-
4	350 m	LOOP CONDUCTOR - CABLE 120 mm ²	COPPER	-
5	18 m	BONDING CONDUCTOR - CABLE 50 mm ²	COPPER	TINNED
6	65 m	BONDING CONDUCTOR - CABLE 50 mm ²	COPPER	-
7	20 m	BONDING CONDUCTOR - CABLE 240 mm ²	COPPER	-
8	10	CABLE LUG FOR 120 mm ² CABLE CONDUCTOR	BRASS	NICKEL PLATED
9	100	CABLE LUG FOR 50 mm ² CABLE CONDUCTOR	BRASS	NICKEL PLATED
10	4	CABLE LUG FOR 240 mm ² GROUNDING CONDUCTOR	BRASS	NICKEL PLATED
11	2	STRAIGHT CABLE SPLICER FOR 120 mm ² CABLE COND.	BRASS	NICKEL PLATED
12	25	PARALLEL CABLE SPLICER FOR 120 mm ² CABLE COND.	BRASS	NICKEL PLATED
13	20	4 WAY CABLE CONNECTOR	COPPER	-
14	350	CABLE SUPPORT L-SHAPED PLATE 40x3	AISI 316	-
15	400	CABLE SUPPORT U-SHAPED PLATE 40x3	AISI 316	-
16	750	CABLE SUPPORT STRAP 40x3	AISI 316	-
17	2	EQUIPOTENTIAL PLATE L=500 mm WITH D14 HOLES	AISI 316	-
18	2	EQUIPOTENTIAL PLATE L=300 mm WITH D14 HOLES PROTECTED BY PLASTIC BOX	AISI 316	-
19	4	GUARD PIPE D50 mm - L=1.00 m	PVC	-
20	8	CLAMPS FOR GUARD PIPE	AISI 316	-
21	2	SUPPORT ANGLE L75x6 OR EQUIVALENT - L=2.00 m	AISI 316	-
22	50	PLATE 50x50x5 mm	AISI 316	-
23	10	EARTHING PLATE 150x150x5 mm	AISI 316	-
24	2	LIGHTNING COUNTER	-	-
-	1500	M6x30 BOLT FOR SUPPORT STRAP	ASTM A325	GALVANIZED
-	10	M12x30 BOLT FOR 120 mm ² CABLE LUGS	AISI 316	-
-	100	M8x30 BOLT FOR 50 mm ² CABLE LUGS	ASTM A325	GALVANIZED
-	4	M16x40 BOLT FOR 240 mm ² CABLE LUGS	ASTM A325	GALVANIZED
-	775	ANCHOR BOLT HILTI HSA-R M8x57 OR EQUIVALENT	AISI 316	-

NOTES

- REFERENCE ELEVATION: T.O.G. = TOP OF GRATING
 - ALL WELDS SHALL BE IN ACCORDANCE WITH SPEC. AWS D1.1
- ALL WELDS SHALL BE CONTINUOUS ACCORDING TO THE SCHEME EXCEPT WHERE OTHERWISE INDICATED
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- THE SYMBOL Γ IS REFERRED TO A SITE WELD
 - THE NUMBER OF EACH SIZE OF LOOSE BOLTS, NUTS AND WASHERS FURNISHED FOR FIELD ERECTION SHALL BE 5% MORE THAN THE NUMBERS INDICATED AS REQUIRED IN THE BILL OF QUANTITY

REFERENCE DRAWINGS

NO.	DESCRIPTION	NO.
VA1-CRI-00100-GE-C1-DAL-0002	STACK GENERAL LAYOUT	0204001
VA1-CRI-00100-E-C1-DES-0550	LIGHTNING PROTECTION SYSTEM AND GROUNDING - GEN. ARR.	0204550
VA1-CRI-00100-E-C1-CAL-0555	PROTECTION AGAINST LIGHTNING RISK ASSESSMENT CALC.	0204555

All levels designated GL. + .. are in metres above Plant Grade Level

GL+0.00 = 8.00 m above MSL

All levels designated EL. + .. are in metres above MSL

EL+0.00 = MSL

DRAWING SUBMISSION STATUS: FC

REV.	DATE	DESCRIPTION	DRWN.	CHKD.	APPD.
0	2012-10-04	ISSUED AS PER COMMENT SHEET CSCLC-0004	Tapasa	Brannalla	Di Pa
B	2011-11-04	REVISED ACCORDING TO COMMENT SHEET VA1-CRI-SCLC-LEM-000001 DATED 2011-05-18	Tapasa	Brannalla	Di Pa
A	2011-01-25	ISSUED FOR APPROVAL	Tapasa	Brannalla	Di Pa

OWNER	OWNER'S CONSULTANT
VIETNAM OIL AND GAS GROUP (PVN)	POYRY ENERGY LTD
EPC CONTRACTOR	EPC CONTRACTOR'S CONSULTANT
LILAMA	FICHTNER
VIETNAM MACHINERY INSTALLATION CORPORATION (LILAMA)	FICHTNER GmbH & Co. KG

VUNG ANG 1 THERMAL POWER PLANT 2 x 600MW

CONTRACT No. 12510/LILAMA-CRI

DRAWING TITLE
STACK LIGHTNING PROTECTION SYSTEM AND GROUNDING DETAILS

SUB-CONTRACTOR	FUNCTION	NAME	SIGN.	DATE
CRI INTERNATIONAL	DRWN.	Tapasa	[Signature]	2012-10-05
	CHKD.	Brannalla	[Signature]	2012-10-05
	APPD.	Di Pa	[Signature]	2012-10-05

DOCUMENT NO. VA1-CRI-00100-E-C1-DES-0551 SCALE 1:25 REV 0

