

# National Development Engineers Ltd.

## December 14, 2016

To CROSS WORLD POWER LIMITED House-6, Road-92, Gulshan-2, Dhaka-1212.

Attn: Shohel Uddin Bhuiyan, Manager, Sales.

**Subject:** Work Order for supplying, Installation, Testing and Commissioning of 4x630 & 1x150KVA Generator Exhaust & Cooling system, 10000 liter under ground fuel storage tank pipe line and Electrical system of NDE steel structure Factory Ltd. At Valuka, Mymensingh.

### Dear Sir,

In response to your quotation date December 01, 2016, and our subsequent discussion on December 08,2016, we are pleased to give you the work order for the above mentioned job under following terms and condition.

A: Rates and items of works

SI. No.	DESCRIPTION	TECHNICAL DETAILS/Brand	Unit	QTY	Unit Rate	Amount
1	PART: 1, EXHAUST	SYSTEM (4X630kVA DG)				
1.1	Exhaust silencer straight pipe	MS pipe bore 200mm (20 Schedule MS ERW Pipe) -6mm	feet	70	1,598.00	111,860.00
1.2	Exhaust Bends/ Elbow with Flange	Long Radius 90 deg L bow 200mm bore	Pcs	12	2,084.00	25,008.00
1.3	Exhaust Flange	200mm bore MS Flange	Pcs	32	1,042.00	33,344.00
1.4	Exhaust Insulation	Material- Rockwool, Thickness 50mm; Jacketing material-Aluminium Sheet 26SWG Thickness	Job	1	24,317.00	24,317.00
1.5	Exhaust Fitting	U Stripe 75mm MS flat bar, MS threaded rod & SS Anchor bolt for Fixing	Job	1	19,453.00	19,453.00
	EXHAUST SYSTEM	(1X150kVA DG)		a e		= '
1.6	Exhaust silencer straight pipe	MS pipe bore 127mm (40 Schedule MS ERW Pipe)	feet	25	1,181.00	29,525.00
1.7	Exhaust Bends/ Elbow with Flange	Long Radius 90 deg L bow 127mm bore	Pcs	3	1,181.00	3,543.00
1.8	Exhaust Flange	127mm bore MS Flange	Pcs	8	764.00	6,112.00
1.9	Exhaust Insulation	Material- Rockwool, Thickness 50mm; Jacketing material-Aluminium Sheet 26SWG Thickness	Job	1	6,948.00	6,948.00
1.10	Exhaust Fitting	U Stripe 75mm MS flat bar, MS threaded rod & SS Anchor bolt for Fixing	Job	1	5,211.00	5,211.00
	Cooling System:	,				
1.11	Radiator Dutching	As per layout with 20/22 SWG MS Sheet, Angle bar, Flat bar support, Canvas cloth etc as required.	Sq-ft	700	278.00	194,600.00
					Total=	459,921.00
				Special	discount 13% =	59,789.73
	95				1	400,131.27



# NDE

# National Development Engineers Ltd.

SI. No.	DESCRIPTION	TECHNICAL DETAILS/Brand	Unit	QTY	Unit Rate	Amount
2	PART: 2, FUEL STO	RAGE TANK			*	
2.1	Fuel pipe	Ø37 mm (inner), seamless Mild steel pipe; Including Welding Joint, leak testing, outside Red oxide & Enamel painted.	Meter (Appro x.)	25	1,525.00	38,125.00
2.2	Fuel/ water Separator	Separ, SWK, 2000/18	Pcs	1	130,800.00	130,800.00
2.3	Fuel Pump (Electric)	1HP Brand: Pedrollo, Flow Rate up tp 50 l/min	Pcs	1	18,167.00	18,167.00
2.4	Fuel Pipe Plumbing works & Accessories	Plumbing of fuel pipe with necessary fitting at delivery & refueling as per design.	Job	1	35,000.00	35,000.00
2.5	Ball Valve	MS, 1" dia (6 pc) & 1.5" dia (6 pc), made in china	Pcs	12	315.00	3,780.00
2.6	Fuel Strainer		Pcs	1	3,543.00	3,543.00
2.7	PVC Flexible Ring Hose Pipe	Pipe bore 25.4mm	Meter	22	496.00	10,912.00
2.8	Installation Charge		Job	1	26,887.00	26,887.00
					Total=	267,214.00
			,	Special Dis	scount: (6.40%)	17,101.70
					-	250,112.30
3		system (Only installation work as per all material supply by NDE)	Job	1	Free of cost	Only NDE will help by manual labour for cable drawing.

# B. Mode of Payment:

- i) Tk.4,50,000/= Advance payment shall be made along with work order.
- ii) Tk.2,00,000/= Payment shall be made after successfully installation, testing and commissioning (The amount may be vary subject to quantity of goods as per actual site requirement).
- C. Warranty Period: 12 months for all equipment's from the date of commissioning.
- D. Work Completion time: 15 days from the date of work order.
- E. Specification: As per enclosed quotation.
- F. Drawing: As per enclosed Approved drawing.

We would therefore, request you to supply, install, test and commission of the work within stipulated time.

Thanking you

RAIHAN MUSTAFIZ Director

Signature as Taken of Acceptance

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UOM         Unit         Qty         Unit Sale           Feet         70         1,598           Pcs         12         2,084           Pcs         32         1,042           Job         1         24,317           Fixing         Job         1         19,453           Feet         25         1,181         -           Pcs         3         1,181         -           Fixing         Job         1         6,948           Fixing         Job         1         5,211           Fixing         Sq-ft         700         278           Total (BDT):         Special Discount:         Grand Total (BDT)	De	= 4 Lac		×			F THIS BOQ	<u>NOTE:</u> - DG CABLE TRENCH SUPPLY & INSTALLATION OUT OF THIS BOQ - DG ROOM VENTILATION SYSTEM (INLET & EXIT) CLIENT SCOPE	NOTE: - DG CABI - DG ROO
MS Pipe bore 200mm (20 Schedule MS ERW Pipe) -6 mm		443,862	DT)	Total (B	Grand				
MS Pipe bore 200mm (20 Schedule MS ERW Pipe) -6 mm	1	18,000	nt:	al Discou	Speci				
MS Pipe bore 200mm (20 Schedule MS ERW Pipe)-6 mm         Feet         70         1,598         111,856           Long radius 90 deg L bow 200mm bore         200mm bore MS Flange         Pes         12         2,084         25,011           Material - Rockwool, Thickness 50mm;Jacketing material-Aluminium Sheet 26SWG         Job         1         24,317         24,317           U Stripe 75 mm MS flat bar, MS Threaded Rod & SS Achor bolt for Fixing         Job         1         19,453         19,453           Long radius 90 deg L bow 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           Long radius 90 deg L bow 127mm bore         Feet         25         1,181         29,527           Long radius 90 deg L bow 127mm bore         Pcs         3         1,181         29,527           Long radius 90 deg L bow 127mm bore         Pcs         3         1,181         29,527           Long radius 90 deg L bow 127mm bore         Pcs         3         1,181         29,527           Long radius 90 deg L bow 127mm bore         Pcs         8         764         6,114           Material - Rockwool, Thickness 50mm;Jacketing material-Aluminium Sheet 26SWG         Job		459,862		tal (BDT)	70				
MS Pipe bore 200mm (20 Schedule MS ERW Pipe) -6 mm         Feet         70         1,598         111,856           Long radius 90 deg L bow 200mm bore MS Flange         Pcs         12         2,084         25,011           Material - Rockwool, Thickness 50mm;Jacketing material-Aluminium Sheet 26SWG         Job         1         24,317         24,317           MS Pipe bore 127mm MS flat bar, MS Threaded Rod & SS Achor bolt for Fixing         Job         1         19,453         19,453           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         29,527           MS Pipe Bore 127mm (40 Schedule MS ERW Pipe)         Feet         25         1,181         3,543           10 mg radius 90 deg L bow 127mm bore         Feet         25         1,181         3,543           10 mg radius 90 deg L bow 127mm bore         Feet         3         1		194,533	278	700	Sq-ft		As per layout with 20/22 SWG MS sheet, Angle bar, flat bar support, Canvas cloth etc	Radiator Ducting	4.1
UOM         Unit         Qty         Unit Sale         Total Sale           1         Feet         70         1,598         111,856           1         Pcs         12         2,084         25,011           1         Pcs         32         1,042         33,348           1         Job         1         24,317         24,317           1         Job         1         19,453         19,453           1         Pcs         3         1,181         29,527           1         Pcs         3         1,181         3,543           1         Pcs         3         764         6,114           3         Job         1         6,948         6,948           3         Job         1         5,211         5,211								Cooling System:	04
UOM         Unit         Qty         Unit Sale         Total Sale           Image: Control of the con		5,211	5,211	Ъ	Job		U Stripe 75 mm MS flat bar, MS Threaded Rod & SS Achor bolt for Fixing	Exhasut Fitting	3.2.5
UOM         Unit         Qty         Unit Sale         Total Sale           10         Feet         70         1,598         111,856           11         Pcs         12         2,084         25,011           12         2,084         25,011         24,317           13         1,042         33,348         3,348           14         1,317         24,317         24,317           15         1,19,453         19,453         19,453           16         Feet         25         1,181         29,527           17         Pcs         3         1,181         3,543           16         Pcs         8         764         6,114		6,948	6,948	ы	Job		Material - Rockwool, Thickness 50mm;Jacketing material-Aluminium Sneet 265VVG thickness	Exhaust Insulation	3.2.4
UOM         Unit         Qty         Unit Sale         Total Sale           1         Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348           Job         1         24,317         24,317           Job         1         19,453         19,453           Feet         25         1,181         29,527           Pcs         3         1,181         3,543		0,1	/64	œ	PCS		127mm bore MS Flange	Exhaust Flange	3.2.3
UOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348           Job         1         24,317         24,317           Job         1         19,453         19,453           Feet         25         1,181         29,527           1,181         29,527         3,513		6 114	7,101	o U	PCS		Long radius 90 deg L bow 127mm bore	Exhaust Bends / Elbow with Flange	3.2.2
UOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348           Job         1         24,317         24,317           Job         1         19,453         19,453           Job         1         19,453         19,453		25,327	1,181	, C	Feet		MS Pipe bore 127mm (40 Schedule MS ERW Pipe)	Exhaust Silencer straight Pipe	3.2.1
UOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348           Job         1         24,317         24,317           Job         1         19,453         19,453		20 527	,	3				EXHAUST SYSTEM (1X150kVA DG)	3.2
UOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348           Job         1         24,317         24,317		19,453	19,453	Ъ	Job		U Stripe 75 mm MS flat bar, MS Threaded Rod & SS Achor bolt for Fixing	Exhasut Fitting	3.1.5
UOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856           Pcs         12         2,084         25,011           Pcs         32         1,042         33,348		24,317	24,317	ь	doc		Material - Rockwool, Thickness 50mm;Jacketing material-Aluminium Sheet 265WG thickness	Exhaust Insulation	3.1.4
Pcs 12 2,084 Total Sale    DOM   Unit   Qty   Unit Sale   Total Sale		35,540	1,042	32	Pcs		200mm bore MS Flange	Exhaust Flange	3.1.3
DOM         Unit         Qty         Unit Sale         Total Sale           Feet         70         1,598         111,856		110,62	2,084	3 2	Pcs		Long radius 90 deg L bow 200mm bore	Exhaust Bends / Elbow with Flange	3.1.2
UOM Unit Qty Unit Sale Total Sale		25 011	2,598	3 6	Feet		MS Pipe bore 200mm (20 Schedule MS ERW Pipe) -6 mm	Exhaust Silencer straight Pipe	3.1.1
UOM Unit Qty Unit Sale Total Sale		111 056		3	d d			EXHAUST SYSTEM (4X630kVA DG)	3.1
	REVIARNO	l otal Sale	Unit Sale	Qŧ	Unit	MOU	TECHNICAL DETAILS/ BRAND	JOB DESCRIPTION	SL NO
MECHANICAL INSTALLATION	25.0000						MECHANICAL INSTALLATION		

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<b>CROSS WC</b>	CROSS WORLD POWER LIMITED						
BOQ FOR I	BOQ FOR FUEL LINE PIPING						
SI No.	Description		Unit	Qty	Unit Sale	Total Sale	Remarks
בן	FUEL STORAGE TANK						The state of the s
		Ø37mm (inner), Seamless Mild Steel Pipe;					
1.1	Fuel Pipe	Including Welding Joint, leak testing, outside Red-oxide & Enamel	Meter(Approx)	25	1,525	38,135	
		Painted.					
1.2	Fuel/Water Separator	Separ, SWK, 2000/18	Pcs	Ь	130,800	130,800	
1.3	Fuel Pump (Electric)	1Hp Brand: Pedrollo, Flow Rate up to 50 l/min	Pcs	ъ	18,167	18,167	
1 17	Fuel Pipe Plumbimg works &	Plumbing of fuel pipe with necessary fitting at delivery & refualing	Job	<u>در</u>	35,000	35,000	
\ e.T	Accessories	as per design.					
1.6	Ball Valve	MS, 1" dia (6 pc) and 1.5" dia (6 pc), made in china	Pcs	12	315	3,780	
1.7	Fuel Stainer		Pcs	Ь	3,543	3,543	
1.8.7	PVC Flexible Ring Hose Pipe	Pipe bore 25.4mm.	Meter(Approx)	22	496	10,911	
1.9	Installation Charge		Job	1	26,887	26,887	•
4			Total			267,222	



"7.5 lac

# BOQ of 4X630KVA & 1X150KVA DG INSTALLATION Client Name :- NDE STEEL STRUCTURE LTD Address :-**CROSS WORLD POWER LIMITED**

Alternator Model : Date: 30-10-2016

-		7-1: M)-L)		J. 10. 0	,000			
Gen Model:		TECHNICAL DETAILS/ BRAND	Scope Of	MON	QTY	RATE	RATE	REMARKS
SF NO			Juppy					
_	Electrical System				206			
		8X1C 240 rm N2XY DG-1 TO ATS			200			8
		8X1C 240 rm N2XY DG-2 TO ATS		-	202			
٠.	Down Cable (30°C Ambient on Underground )	8X1C 240 rm N2XY DG-3 TO ATS		Meter	202			
-		8X1F 740 rm N2XY DG-4 TO ATS		-	230			
-		CAIC OF THE NORTH TO IT-6			160			
		#XIC 93 III NZXI DG-5 To Electro Timped		Pcs	70			
<u>ــ</u> د	Dower Cable Line	240 rm , Material -copper , Suridice-Liectly Times		Pcs	10			
11		95 rm , Material -Lopper , Surface-Electro Hiller		ر ان	u			
1	Control cable For Sensing	4 X 1.2 rm (40/0.19 mm) Flexible Cable		Motor	0.4			
1.4	Communication Shield Cable	2 X 1.2 rm		ָרָהָּוּ הַ יוֹני	2			
1.5	PVC Flexible Pipe	1" dia		Prs	36			
1.6	Royal Bolt	12 no		PCS .	24			
1.7	PVC Tape	Adhesive Tape 04 color (R-Y-B-B-b)						
	Heat Shrink Tube				ω			
	Red	For 240rm Power Cable				2.2		
	Yellow	For 240rm Power Cable		N D D	ין ע			
π.α	Blue	For 240rm Power Cable			-			
	Black	For 240rm Power Cable			. س			
	Green	For 240rm Power Cable		Dark	10			
1.9	Cable Tie	L = 10"/12"						
		185rm N2XY & 95rm N2XY Power Cable Laying Exicution Work by LWFL		Meter	980			
1.10	Power capie raying	through Cable Drain						



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