

NDE

National Development Engineers Ltd.

Date - 30.08.2017.
Cross World Power Ltd.
House #6, Road # 90, Gulshan-2
Dhaka-1212. Bangladesh

Attn: Sabbir Ahmed
Asstt. General Manager

Sub: Work Order for Supply, Installation, Testing and Commissioning of 1 X 630kVA Dry Type Cast Resin Step-Up Transformer (0.4kV/11kV) at BATB project, Savar.

Dear Sir,

Following our discussion with you on 30.08.2017, we are pleased to give you the provisional work order for the above mentioned subject under following terms and conditions.

1) Rate and items:-

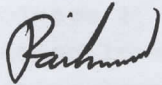
SL	Name of Equipment	Qty	Unit	Standard	Rate in TK	Amount
1	Supply installation, testing and commissioning of 1 unit of 0.4 kV/11 kV dYN11 Cast Resin Siemens Transformer complete.	1	Set	IEC 60076-11: 2004.	3475000.00	3475000.00
					Sub Total TK =	3475000.00
					Special Discount =	75000.00
						3400000.00
In word: Taka Thirty Four Lac Only						

Terms and conditions:

2) Specification : Attached herewith (Page: 1 to 2)

- 50% shall be made along with the work order.
- 30% shall be made after the arrival of the materials at site & submission of shipping documents, all factory test report & country origin certificate.
- 10% shall be made after the installation, successfully testing & commissioning.
- 10% Security Money payment will be made after 1 year from the date of commissioning

Thanking you,



Raihan Mustafiz
Director

Signature as token of
Acceptance

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Specification of the 630kVA, 0.4/11kV, dYN11 transformer (GEAFOL, SIEMENS)
will be as follows:

MLFB: 4GX58433DC050AA0

Three-phase-cast-resin transformer GEAFOL Neo

according to IEC 60076-11: 2004

environmental class : E2

climatic class : C2

(for outdoor installation an IP23 protective housing is necessary)

fire behaviour class : F1

installation : indoor

site altitude up to : 1,000 m

temp. at any time : 40 °C

monthly average of the hottest month : 30 °C

yearly average : 20 °C

temperature rise hv : 100 K

temperature rise lv : 100 K

insulation class hv : F

insulation class lv : F

Winding material HV : aluminium

Winding material LV : aluminium

frequency : 50.00 Hz

type of duty : continuous duty

cooling method : AN

Vector group : dYN11

Primary/ Low voltage side: Delta connected

Secondary/ High voltage side: wye connected

high voltage : 11.000 kV

hv tappings : +2*2.5%/-2*2.5%

position of the hv tappings : on hv terminal side

insulation level hv AC : 28 kV

insulation level hv LI : 75 kV

low voltage 1 (no load) : 0.400 kV

insulation level lv 1 AC : 3 kV

insulation level lv 1 LI : - kV

no-load losses (P0) : 1,400 W

tolerance : 15.0 %

load losses (Pk75) : 6,400 W

tolerance : 15.0 %

load losses (Pk120) : 7,400 W

tolerance : 15.0 %

impedance voltage (uz) : 6.000 %

tolerance : + 10 %

tolerance : - 10 %

sound power level (LWA) : 70 dB

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dimensions approx.:

length (A1)	: 1,390 mm
width (B1)	: 840 mm
height (H1)	: 1,390 mm
center distance of wheels lengthwise	: 670 mm
wheels	: with wheels

weight approx.:

total weight : 1,540 kg

Remarks:

position hv terminals	: top
position lv terminals	: top
country of origin	: Germany

It will be proven by tests that the windings are free from partial discharge up to twice the rated voltage (measuring sensitivity ≤ 5 pC) including:

- 1.0 PC Temperature protection system consisting of:
- 3.0 PC Pt100 3-wire resistor sensor
- 1.0 PC Temperature relay for Pt100 sensors, type T154, AC/DC 24 - 240 V, 0°C to 240°C, Input: 4 x 3-wire Pt100 sensors, Output: 2 relais ALARM/TRIP, 1 relay FAN, 1 relay FAULT panel cutout: 92X92 mm, depth 140 mm
- 1.0 PC Standard housing IP23, size 2, indoor installation kit, not mounted, housing data (aprox.): L/W/H mm 1860/1280/1595, weight 0,21t coating RAL 7032, incl. rating plate