بسم الله الرحمن الرحيم

FENAKA CORPORATION LIMITED

ؤسَرَىَ ئاسرِبَرَمَشوَسْ جِرِدِةْ

جِرؤرِسْمَةْ

FNK-K(T)/FNK/IUL/2017/185 :سَرْسَةَسْ

هَسْمَةْسِوِسْةْ ةَسْسْؤةْ

دِبْسْؤْسْبَسْ جِرِدَهِؤ دَهْةْدَةْمَةِ هْهْدَةْمَسْ 400 بِرِةْ ةْةْدَ 01 (هْبْهْ) بَسْسْةَبَسْ سْةْ دَسْسَسْ ةَسْسْؤةْ.

#	Description	Brand	Qty	Unit
1	500/kVA 400 kW prime rated Diesel Generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 Wires, 50 Hz at 1500 r.p.m. Powered by Cummins engine coupled with Stamford Alternator. The Generator set shall be powered by a Cummins engine origin (UK, USA) or assembled/manufactured by an Original Cummins's Licensed OEM manufacturer/assembler. The engine must produce a mechanical power output (kW_m) which should meet the required electric power (kW_e) of 400 KW and must be coupled with a 400 kW Stamford Alternator with pre-installed Droop CT, with remote mounted control panel. The controller should be Deep-sea model: 8810 engine controller. Motorized TP, 800A ACB c/w UVT Coil AC 230 V, brand ("MERLIN GERIN") or equivalent.		1	No
	Engine to be complete with following auxiliary items : • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine			
	• **Starting equipment fitted to engine, consisting of :** ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition			

	• Governing System			
	The engine to be fitted with a close tolerance Cummins Electronic Governing system, which should include efc, actuators, magnetic pickups, etc., including wiring			
	• Cooling Equipment Cooling equipment compromising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Copper plated radiators are acceptable. The radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations. Radiator must be designed to adequately cool the generator at an ambient temperature of 50 degree Celsius.			
	• Exhaust system 450 mm of stainless steel below type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer.			
	• Alternator The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator.			
	• Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item.			
	• Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set.			

1.2	**Fuel system**		1	No
	A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.			
1.3	**Factory testing** The generator should be fully tested at the manufacturer workshop in the presence of client/appointees to check the ratings, overload, functional tests on a dummy load prior to dispatch ***in case the bidder is unable to provide factory test*** as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 10 of this document.		1	No
1.4	**Literature and drawings consisting of :** • 1No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual		1	Lot
1.5	**Accessories** The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.			
1.5.1	Primary silencer barrel**(to match engine exhaust)**		1	No
1.5.2	Secondary silencer barrel**(to match engine exhaust)**		1	No
1.5.3	3m Exhaust pipe dia**(to match engine exhaust)**		4	No
1.5.4	Elbows having dia **(to match the engine exhaust)**		3	No
1.5.5	Flanges having dia **(to match the engine exhaust)**		8	No
1.5.6	Bolts, Nuts and Washers for the flanges. (Each set shall include 1 bolt, 2 washers			
1.5.7	Split type Rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with high Quality Aluminum Foil.			

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ءِرؤرِىَرْةْ

	Warranty
1.6	Generator set should carry a warranty of one year from the date of commissioning the equipment.

ئىىَرىَىَشْءِ ھَىْاءِ:

- ءِھَىْاءِ سَةْءِرَءِىْاىْرْةْءِشْ ھَىْ: ءِسْةْءِىَءِگ ئىءِرً ھَىْاھْھَىْش ھَىْ ئىىَرىَىْھَىْشْگًشْھْ. ءِ.ھْسْ.ءِھَىْگً ةْءِرَ ھَرَةْ، ھَرِ ءِھْءِىْ رَىَرْةْھَھْ ءِسْىَسْگًسِ وَىءِسْ ءِسىًىْىْىْشْ.
- سَةْءِرَءِىْاىْرْةْءِشْ ةْھْرَةْ: ةْھْرَةْ ئىىَرىَىْشْگًسِ ةْرَوَىْشْ.
- ىْاىْؤْسِىً دَھْةْؤْگًھْ (ىْاىْؤْسِىً ءْىْرْؤَءِھْ، ىْاىْؤْسِىً ىَرَءِسْةَىَىً ىْاءِ، ءِ.ھْسْ.ءِ ىَرَءِسْةَىَىً ىْاءِ، ءِدَسَھْىَىَءِ ىْاىْؤْسِىً ؤَىَگًھْش ةْھًدَىَگًھْ ىْىَگًش ؤَىَگًھْىً ىَرَش، دَؤًةْ ھَرِ ؤْش ىَرَشْھَىْ)
- سَةْءِرَءِ ىْىَگً ةَىَرَىْةَىَىً ةْاىْسِىَىْ سْءِىْءِسءِؤْىْشَىْش
- سْةْءِىْاىْ ھْؤْ ھْءِىْشْءِسءِ: (ءْىْرْؤْسَىْ گًءِھْىْ ھْىْءِرَءِسَىْ سْةْءِىْاىْىً ىْاءِ ىْرَىَءِىَشْگًشْھْ. سَرَىْؤْسْ سْةْءِىْاىْىً ھْىْءِرَءِسَىْ ھْىْءِرَةْشْةْىَءِ سْءِىْاىْرَھْىَىْش ىَءَءِىَىْسَرَگًءِىْ ىْشْسَرَىَىْش گًشْھْ.)

ھَشْگًسِىْسِىً ةْءِىْشْةْؤْگً ىْةْ:

- ھَىْ: 60 ةْءِىْشْةْ

(ىْرَىْىْگً ھْشْرْىْىْرْ ھَىْ / ىْرَىْىْءِ ھَىْ) × 60

- سْةْءِىْاىْ ھْؤْ ھْءِىْشْءِسءِ: 05 ةْءِىْشْةْ (ءْىْرْؤْسَىْ گًءِھْىْ ھْىْءِرَءِسَىْ سْةْءِىْاىْىً ىْاءِ ىْرَىَءِىَشْگًشْھْ. سَرَىْؤْسْ سْةْءِىْاىْىً ھْىْءِرَءِسَىْ ھْىْءِرَةْشْةْىَءِ سْءِىْاىْرَھْىَىْش ىَءَءِىَىْسَرَگًءِىْ ىْشْسَرَىَىْش گًشْھْ.)
- ةْاىْسِىَىْ ىْاةْؤْشْىْشْةْ: 10 ةْءِىْشْةْ (ةْاىْسِىَىْ ءِىَوَىْھْةْ ىْىَگًسِ ىْاىْؤْسِىً ىِىْىَىْشْةْ گًءِ ھْءِىْؤَىْشْ)
- ھَىْاءِ ؤْىْىْىْشْگًشْھْ ةْھْرَةْ (ةْرَوَسْ): 25 ةْءِىْشْةْ

(ىْرَىْىْگً ھْشْرْ ىْىْ ةْھْرَةْ / ىْرَىْىْءِ ةْھْرَةْ) × 25

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ؤسَرَىَ ئاىرىَرَىٌشةَسْ جِرِدِةْ

جِرؤرِىَّرْةْغ

هَسْةَّرْسِوِرِسَّةْ رْىَرَىَرْةْةَّرْ جِىِجِىَرِ جِةَرَسْىَرَّ ؤَةَىْ هْةْىَرْسْ ئَسْرَوَرْةْ.

ذْسْتْرِجِسْرْى ةِىَرْىْةَىر

ؤسَرَىَ ئاىَرىَرْىٌشةَسْ جِرِدِةْ

هِةْرْةَّرْ سَرْسْةَىر: FNK-K(T)/FNK/IUL/2017/185

ئْىَرةْ ئَةْرْىَرْىَرْىْسْ، 7وَسَ ؤَسْرِ ؤَرْىِؤَّ

رِةَّرْجِرْدَرْ، دَّؤَسْرْ

دَّؤَ

هِةْ رْىَرْةْدَسْ رَدَةْرِىَرَهِ وَسِ 17 ةِسْةْةَىر 2017 وَّ هَّةِرْهَمَ ةْرْوَرْىْ 11:00 ىَهِ ؤسَرَىَ ئاىَرىَرْىٌشةَسْ جِرِدِةْ (ئْىَرةْ ئَةْرْىَرْىْسْ، 7 وَسَ ؤَسْرِ ؤَرْىِؤَّ) هَّؤِرْىْ ةَؤْسَّ ىْىَّ دَّةَرْدْىَهِ جِدَسَةْىَىَسْ هَسْةَّرْسِوِرِسَّةْ رْىَرَىَرْةْةَسْ وَىَةِىَسْسَرَوَّ ؤَىَّةْةَىَىْىْ رَّسْىِىْرْىَةْ. جِوَّ، جِ دَسَةْىَىَةْ ئَسْرْةْةْدَسْ هْةِرْوَىَةِىَسْسَرَوَّ ؤَىَّةْةَىَىْسْ 17 ةِسْةْةَىر 2017 وَّ هَّةِرْهَمَ ةْرْوَرْىْ 11:00 هَسْ هَسْةَّرْسِوِرِسَّةْ رْىَر رْىَرْةْدْسْ هْةْرْدْةْ.

سْرْةْ: دَةْةْةَّرْةْ ؤْىِرَرَدَ سْرْسْ هِةْةَةْ ةَّةِةْ ىْىَرْدْىْ ؤْىِرَرَدَ هِرْىِةَّرْ ؤسَرَىَ ئاىَرىَرْىٌشةَسْ جِرِدِةْىَسْ جِةِىْسْةْةْ. هَةِر هِةْ ىَسْرْدْ ةَرْىْةْةَىَهِ ةَّةِةْىْىَرْدْىْ هِرْةِةَّرْىْةْسَّ جِ ئاىَرىَرْىٌشةَسَسْ جِةِىْسْةْةْ. جِ هِةْرْةَّرْ ىْىِىْسْ هِةْةْ دَةْةْةَّرْةْ سَّؤْ ىْىَرْةْةْدَسْ ىْىْةْةَّرْ سَةْرْىَّرْ هَسْةْرْسْسْ ىَسْرْدْ ةْرْوَرَىْ هَرْسَّةِ ىَةِىْىَهِ 3018124 سْرْوَهَ 3018260 سَرْسْةَىر ئْىَرْ دْةْرْةْةِىَسْ ةَسْةْةْ هَسْةْرْسْسْ ىَسْرْدْ ةْرْوَرَىْ هَرْسَّةِ ىَةِىْىَهِ tender@fenaka.com.mv هَسْ هِةْدِهِرْىْ ىَهِىْةْةَّهِسْسْةْ.

11 ةِسْةْةَىر 2017