



وسرا مریومیمی وجع

سرَسْرَهُ من بن FNK-K(T)/FNK/IUL/2017/190

## תהלתת תוקלית

600 مِنْ وَجُوْدُ عَسَمَةُ عَمَدُ مُنْفَوْدِ دُوْ:

Description	Unit	Quantity
The Standard of the genset shall meet the relevant British Standards. 600 kW prime rated diesel generator set. 0.8 P.F, 415 Volts, 3 Phase, 4 Wires, 50 Hz at 1500 r.p.m. Powered by Cummins engine origin (UK, USA) and supplier must submit certificate conforming they are Licensed OEM Cummins manufacturer or assembler. The engine must Produce a mechanical Power output which should meet the required 600 KW and must be coupled with 600 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, 1000 A, ACB c/w UVT Coil AC 230 V, ("MERLIN GERIN") or equivalent.	Nos.	1
Engine to be complete with  Heavy electrical flywheel  SAE flywheel housing Air filters  Lubricating oil filters  Low lubricating oil pressure switch  High engine temperature switch  Lub oil sender  water Temperature Sender  Together with all necessary items to run and to protect the engine		
Starting equipment The engine should be fitted with the following equipment 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 The engine to be fitted with a close tolerance Cummins Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring		
	600 kW prime rated diesel generator set. 0.8 P.F, 415 Volts, 3 Phase, 4 Wires, 50 Hz at 1500 r.p.m. Powered by Cummins engine origin (UK, USA) and supplier must submit certificate conforming they are Licensed OEM Cummins manufacturer or assembler. The engine must Produce a mechanical Power output which should meet the required 600 KW and must be coupled with 600 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, 1000 A, ACB c/w UVT Coil AC 230 V, ("MERLIN GERIN") or equivalent.  Engine to be complete with Heavy electrical flywheel SAE flywheel housing Air filters Lubricating oil filters Low lubricating oil pressure switch High engine temperature switch Lub oil sender water Temperature Sender Together with all necessary items to run and to protect the engine  Starting equipment The engine should be fitted with the following equipment 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 The engine to be fitted with a close tolerance Cummins Electronic Governing system, which should include efc, actuators, magnetic	600 kW prime rated diesel generator set. 0.8 P.F, 415 Volts, 3 Phase, 4 Wires, 50 Hz at 1500 r.p.m. Powered by Cummins engine origin (UK, USA) and supplier must submit certificate conforming they are Licensed OEM Cummins manufacturer or assembler. The engine must Produce a mechanical Power output which should meet the required 600 kW and must be coupled with 600 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, 1000 A, ACB c/w UVT Coil AC 230 V, ("MERLIN GERIN") or equivalent.  Engine to be complete with Heavy electrical flywheel SAE flywheel housing Air filters Lubricating oil filters Low lubricating oil pressure switch High engine temperature switch Lub oil sender water Temperature Sender Together with all necessary items to run and to protect the engine  Starting equipment The engine should be fitted with the following equipment 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 The engine to be fitted with a close tolerance Cummins Electronic Governing system, which should include efc, actuators, magnetic





وُسُرِيا يَا يَرِيُ يُرْجُعُ شُرْ وِرِجَاءً

**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. Coupon plated radiators are acceptable. The radiator has to be mounted on the vibration mounts and it should have enough strength to with stand the radiator. 1.1.4 **Exhaust system** 450 mm of stainless steel below type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. 1.1.5 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. 1.1.6 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. 1.1.7 **Fuel system** 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 Nos. 1 to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram. 1.2 **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 mentioned, the bidder shall provide an extended warranty of one extra year than mentioned in item no 10 of this document. 1.3 **Finishing** After assembling the genset zinc coated self-etching primer should be applied to the complete set. Warrantv 1.4 Generator set should carry a warranty of one year from the date of commissioning the equipment. 1.5 Literature and drawings 1.5.1 How to handle the generation equipment Nos. 1 1.5.2 Electrical wiring diagram Nos. 1.5.3 Engine operation and maintenance manual Nos. 1 1.5.4 Engine parts catalogue Nos. 1 1.5.5 Generator parts catalogue Nos. 1 **1.5.6** Generator operation and maintenance manual Nos.





# وسرك كالمركز برسطاس ورجاء

00111		ہ ہ برروح	<i>ב</i> עפר
1.5.7	Generator AVR manual	Nos.	1
1.5.8	Governor control unit manual	Nos.	1
1.5.9	Engine shop manual	Nos.	1
	*Two separate manuals for the generator set shall be supplied and all		
	the manuals to be enclosed in a fiber box file and the file should be		
	labeled as "FENAKA CORP. LTD.600kW Generator Manuals".		
1.6	Accessories		
	The Components shall meet the British Standard and ISO standards.		
	Items are for the above mentioned generator sets.		
1.6.1	Primary silencer barrel(to match engine exhaust)	Nos.	2
1.6.2	Secondary silencer barrel(to match engine exhaust)	Nos.	2
1.6.3	3m Exhaust pipe dia( to match engine exhaust)	Nos.	8
1.6.4	Elbows having dia (to match the engine exhaust)	Nos.	8
1.6.5	Flanges having dia (to match the engine exhaust)	Nos.	16

#### رْسُرُرُوَسُومٍ حَمَا مِيَ

- - سؤور مریم عسره یم عرس ای مرمور سورسورسشس

### مرسرو مرساه کار پرسرع فرو کاه:

• رُدُ: 60 بَرْسِرْغُ

60 × (בֿה'נֵצ' המפלחת הצ' / בנילע הצ')

- سَهُ دِنْ هُ دُو دُمُوسُ ہِ عِنْ اَلَٰ اِلْمِرْ اَلَٰ اِلْمِرْ اَلْمُ اِلْمُ اِلْمُ الْمُرْدُ اللهُ اللهُ
  - - مُرَامِ وَيُرْكُرُونُونُ وَرُورُمُ (وَرُونُ ): 25 بُرِيرُهُ

( ترتري مسرو لا و وهري / تربي وهري ( دري و دري )





#### وُسِرُمَا کا مرفی مراضی مروج ع ورفر مرافی ورفر مرافی

### رووسرسات درزودوس وبردر ورسرو دور دعير معرف

ט מו פ די מו גם של אל על של אל

وسركا كالميك موسوط

جربر عرب سركان المركان FNK-K(T)/FNK/IUL/2017/190

بريم مورورس، 7وسر وسرورور

30/1 3/2/2

£5

وَ الْوُوْرَ الْوَوْرَ الْوَلَمُ اللَّهُ الللَّهُ اللَّهُ اللَّالِمُ اللَّهُ اللَّهُ اللَّالِمُ اللَّهُ الللَّالِمُ اللَّالِمُ اللَّهُ اللَّهُ اللَّه

سع: دَرَوْدَهُ وَمِرَدُ بَرْمُ هِا هُوهُ مُا هُوهُ مُا يُودَ وَمِرَدُ رِدُمِهُ وَسُرَا مَا يُرَاسَهُ وَدِعَاءً وَهَا وَهُوهُ وَالْمَا عَلَى اللّهُ وَمِرَدُ وَمِرَدُوهُ مَا وَمُورُوهُ مَا وَمُ وَمُورُوهُ مَا وَمُ عَالَمُ وَهُو مَرْدُوهُ مَا مُرَادُ وَمُورُوهُ مَا مُرَادُ وَمُورُوهُ مَا مُرَادُ وَمُورُونُ مَا مُرَادُ وَمُورُونُ مَا مُرَادُ وَمُورُونُ مَا مُرَادُ وَمُورُونُ مَا مُرَادُوهُ وَمُرْدُوهُ مَا مُرَادُوهُ مَا مُرادُوهُ مَا مُؤْمُ وَالْمُوهُ وَالْمُوهُ وَمُرادُوهُ مَا مُرادُوهُ مَا مُورِدُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مُرادُوهُ مَا مُرادُوهُ مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مَا مُرادُوهُ مُرادُوهُ مَا مُورِدُوهُ مَا مُرادُوهُ مُرادُوهُ مُرادُوهُ مَا مُورُوهُ مُرادُوهُ مُولِمُ مُرادُوهُ مُولِمُ مُولِمُ مُرادُوهُ مُرادُوهُ مُولِمُ مُولِم

14 ء ڪڙيء 2017