

Background

As the fuel cost getting higher and higher, diesel fuel saving action has been taken into RTGC daily operation. About 50% of the total engine running hours on the RTGC is running under light load model (lighting air conditioner control power).

If the engine can run at low speed (idle speed), and still give out standard power (50Hz, 380V) for auxiliary power supply, it can save lots of fuel during idling time.

Traditional engine can run in two speed model with small modification: full speed at 1500RPM and idle speed at less than 900RPM, but the generator is designed to give out 50Hz, 380V power to other equipment at full speed, when in idle model the generator output is not the standard power source, it can't be applied directly. So, it needs a device which can convert this nonstandard power source into standard power.

We call it two-step fuel saving system, The two-step fuel saving system has been taken into operation on Dual Speed Diesel Engine Generator to convert 30Hz-60Hz/ 260V-480V variable input to stable 50 Hz 380V output. When the engine generator on RTGC runs in two speed model, the fuel saving is significant.

Application (on Dual Speed Engine) – Scope of Work

Supply, Install, commissioning, engine programming, startup , Connecting , modifying test and hand over the two-step regulator system (Capacity 40~ 70kVA)in the existing electrical room,(As follow Component, inverter, reactor, transformer, filter capacitor and so on)no matter the engine from idle to full speed , engine from full to idle speed, idle speed or full speed status the auxiliary power will be stable output, it can supply the power for the auxiliary part including control system, lighting, air conditional and so on especially running at idle speed to get the fuel saving.

Noted: The automatic voltage regulating (AVR) board of the generator also Supplier Scope.

ENGINE-GENERATOR SET		ENGINE: CATERPILLAR C18ATAAC 706BHP/527BKW 1500rpm PRIME	
		GENERATOR: Stamford HCI 634 K1	
柴油发电机组主要技术参数 Main Data of Diesel Generator			
	柴油机 Diesel	发电机 Generator	
型号与规格 Type	CATPILLAR C18 ATAAC	STAMFORD HCI 634 K1 440V 3PH 50HZ CLASS F IP23	
额定功率 Prime power rating	527BKw	840KVA	
转速 Speed	1500r.p.m		

