

Research Development of Rare Earth Permanent Magnetism Energy-Conserved Appliance

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Abstract: The design optimizes, the oil-saving rate of the rare earth permanent magnetism energy conservation strengthened by the electric field is higher than domestic similar ones not adding the electric field and not to optimize the design magnetization. The gantry empirical datum indicated that on the condition that the power is under 42–52 horsepower condition, does not add electric field, saving oil rate is 5.2%–10.5%, after adding the electric field, saving oil rate is 5.7%–11.3%. The gantry experiment indicated that the motive installing this magnetization saving gas oil appliance will have higher operating speed, compared with not installing magnetization saving oil appliance in the same power. This saving oil, volume small, the structure is compact, is easy to operate, designed bravely and innovated, receives the welcome of the users and the factories.

Key words: rare earth minuses dirty save energy utensil; platform shelf experience; electric field strengthen

1 Introduction

Energy sources is the material basis of national economy construct, saves energy is a basic national policy of four modernize construct in our country. According to average per person calculation, our country average per person occupies petroleum about 100 kg, far under world average level. Because northwest oil field's exploitation still mustache some times.

Petroleum output annual growth rate of our country at present is only 2%–3%, but the quantity hold of car near in several annual growths is above 15%. Traffic department gasoline breach is about 20%. But diesel oil breach is bigger about 60%–70%. According to expert forecast, Goes petroleums breach will much big in 2006. Therefore petroleum supplying nervously on 5 to 10 year in the world could not get lysis. A day has been nervous than a day. Our country brings up following aim: Fume emission accords with national standard, and oil consumption descends 5%–10%. Therefore the development of high power save energy device is much extremely urgent. Text reports magnetize saving gas and oil author develop author

developed.

Calls magnetization saves gas and oil, that be let fuel oil by certain magnetic field, fuel oil ameliorate oil quality target under magnetic field's effect, enhances fog melt performance, enhances heating value, makes oil plenarily burn in engine cylinder, thus enhances engine's power, debases oil consumption, thus alleviates exhaust smoke degree. People weigh above this a kind of technology for magnetize save gas and oil technology, weighs accomplish this a kind of technical corresponding device call as magnetize saving gas and oil or magnetize save gas and oil minus smoke utensil^[1.5.6.].

2 Experiment

2.1 Model machines platform experience

Laboratory apparatus equipment:

- (1) YG100 type mobile hydraulic plus carry measure achievements machine;
- (2) Volume style oil consumption meter;
- (3) Electron stopwatch;
- (4) Empties style atmosphere manometer;
- (5) Hair style hygrometer, Digital hygrometer;

(6) Iron ox- 55 tractor [4115 engine].

Experimental condition and experimental method:

(1) Engine cooling water temperature 75–90 °C.

(2) Measure achievements and hydraulic pressure oil temperature 50±5 °C.

(3) Environmental temperature, air pressure, humidity at contrasts close in experience, laboratory uses diesel oil the name of a shop same.

(4) Engine installs magnetize front and back saving gas and oil, it throttle lever's position same, At formal has determined before let engine at plus carry run for 30 minute under condition.

(5) This experiments for diesel-powered motor's modulate velocity characteristic experiment. First of all makes do not install magnetize saving gas and oil burn use-10 No.s diesel oils modulate velocity characteristic experiment, determines twice record two groups of test datas (Similarly hereinafter). A in turn make install magnetize saving gas and oil not plus electric field sum install magnetize saving gas and oil plus 12 V direct voltage modulate velocity characteristic experiment. Experiments in three kinds of conditions parallel each

dot motivity output axis rotate speed same.

2.2 Experiences result

According to tests result draw modulate velocity characteristic curve. Sees Fig.1 same powers time fuel consumption rate and rotate speed contrast curve (as power for abscissa, as rotate speed sum oil rate for ordinate) sees Fig.2, same power time fuel consumption rate and rotate speed contrast data table one. Contrast saves gas and oil rate: Only pluses magnetic field not plus electric field save gas and oil rate for 5.2%–10.5%, magnetizes save gas and oil rate add electric field [12-24V] save gas and oil rate for 5.7%–11.3% I contrast at all point rotate speeds and II contrast at all point rotate speed average ens increase. But II contrasts increased rotate speed compare I contrast increased extent want big, illustrates magnetize saving gas and oil do not install magnetize saving gas and oil there is compare high run speed at same engine, but installs magnetize saving gas and oil join 12 V voltages effect much good.

Modulate Velocity Characteristic Curve (Fig.1); Some Power time Fuel Consumption Rate and Rote Speed (Fig.2); Speed Contrast Curve (Table 1).

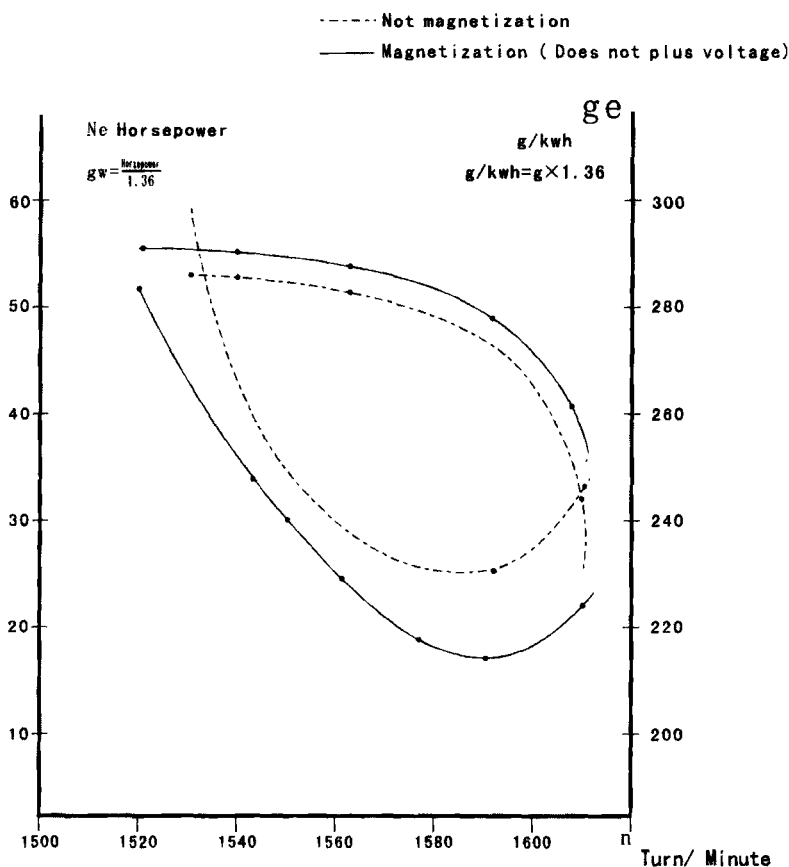


Fig. 1 Modulate velocity characteristic curve

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