

Another Concept of Three Phase High Frequency High Voltage Supply

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Abstract: Get your electrostatic precipitator boosted with “GNP 800”.

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The performing high voltage GNP (generator negative of power) is more than a generator; it's a concentrate of latest technologies in electronics and power designed thanks to the know-how of Sames Technologies, an Exel industries group company. Among all the advantages of a high frequency generator, well known from everybody, the GNP 800 brings something more. Its particular feature is the dual voltage ability, 80kV-1Amp or 60 kV-1, 3 Amp are the two native switching tunable voltages. The useful power of the GNP 800 is 80 kW with an efficiency of 94%.

One model for all fields of the ESP. Except the fact that the 3 phase low voltage allows an easy balancing of customer panel boards, the 3 phase high voltage design, unique in the word, enable to reach 72 kHz ripple. This allows you to managed easily sparks and back corona emission with a ripple rate less than 0,1%. The management of sparks is done within two stratégies: The first is the strategy A: Periodic slope regulation. The problem of erratic sparks remains. So you can use the strategy B: Periodic check regulation.

The average value of tension or current is less optimum than in strategy A, but the reaction with erratic sparks is better. Concerning the back corona its management is done as followed:

According to the periodic check by analysis a current pulse reply the first step is the data acquisition.

Then comes the analysis from which two actions can be managed:

(1) The electrostatic rapping through the square waves mode.

(2) The thickness measurement to optimize and start the rapping.

In add of these functions there are others advantages as:

A short-circuit switch integrated into the high voltage unit, allowing you an earth connection, is one other advantage.

It's a “concentrate of technologies” because GNP800 does not require any control or automatism panel boxes; all is integrated in only one case.

No fixing platform, for a weight unit less than 300 kg, no rigid connection is required to install the HV cable issued from robotic experience.

The GNP connected to low and high voltage network is operational within one hour.

As customers said, a user friendly PC software control package, with values and instruction adjustments, is available.

